

July 7, 2017

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

**Re: California Independent System Operator Corporation  
Amendment No. 1 to Market Efficiency Enhancement Agreement  
CAISO Service Agreement No. 3443  
Docket No. ER17-\_\_\_\_\_000**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) submits for filing with the Commission Amendment No. 1 to the Market Efficiency Enhancement Agreement (Amendment) between the CAISO and the Western Area Power Administration – Sierra Nevada Region (Western)<sup>1</sup>. The CAISO respectfully requests that the Amendment be made effective on September 6, 2017.

## **I. Background**

The CAISO filed the Market Efficiency Enhancement Agreement (Agreement) between Western and the CAISO on August 31, 2015 in Docket No. ER15-2583-000. By letter order issued October 19, 2015, the Commission accepted the Agreement. The Agreement sets to model and price interchange transactions between the CAISO and Western in a manner that reflects the resources that support those transactions.

## **II. Purpose of the Amendment to the Agreement**

The purpose of this Amendment to the Agreement is two-fold. First, the parties desire to revise Schedule 1 to model the New Melones Powerhouse injections and withdrawals at the Tracy 230 kV Substation, rather than at the New Melones Substation. Second, due to this modification, the Parties desire to revise Schedule 2 to replace New Melones Substation with the Tracy 230 kV Substation as a high voltage substation where the resource is represented in the CAISO's Full Network Model. Recently the parties determined that the

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<sup>1</sup> The CAISO submits the Amendment pursuant to Section 205 of the Federal Power Act, 16 U.S.C. § 824d.

distribution of the resource schedules combined with Western's New Melones pseudo-tie schedules has caused the market software, using the full network model, to have the appearance of congestion even though congestion would not occur in real-time. The parties agreed that a workable solution would be to model the New Melones Powerhouse resource to the Tracy 230 kV Substation for purposes of this Agreement.

### **III. Effective Date**

The CAISO respectfully requests that the Commission accept the Amendment, effective September 6, 2017, in support of the expected implementation timeline to align the CAISO's systems to accommodate this modification.

### **IV. Service**

The CAISO has served copies of this filing upon all parties to Docket ER15-2583-000, the California Public Utilities Commission, and the California Energy Commission. The CAISO has also posted this filing on the CAISO website.

### **V. Communications**

Pursuant to Rule 203(b)(3) of the Commission's Rules of Practice and Procedure,<sup>2</sup> the CAISO requests that all correspondence, pleadings, and other communications concerning this filing be served upon the following:

John C. Anders  
Assistant General Counsel  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 608-7278  
Fax: (916) 608-7222  
Email: [janders@caiso.com](mailto:janders@caiso.com)

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<sup>2</sup> 18 C.F.R. § 385.203(b)(3).

## VI. Contents of Filing

In addition to this transmittal letter, this filing includes the following attachments:

Attachment A	Amendment No. 1 to the Market Efficiency Enhancement Agreement;
Attachment B	Clean version of the Market Efficiency Enhancement Agreement; and
Attachment C	Marked red-line version of the Market Efficiency Enhancement Agreement.

## VII. Conclusion

The CAISO respectfully requests that the Commission accept the Amendment to the Agreement as requested, with an effective date of September 6, 2017. If there are any questions concerning this filing, please contact the undersigned.

Respectfully submitted,

**By: /s/ John C. Anders**

Roger E. Collanton

General Counsel

John C. Anders

Assistant General Counsel

California Independent System

Operator Corporation

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[janders@caiso.com](mailto:janders@caiso.com)

Attorneys for the California Independent  
System Operator Corporation

**Attachment A – Amendment No. 1 to the Market Efficiency Enhancement Agreement  
between the Western Area Power Administration – Sierra Nevada Region and the  
California Independent System Operator Corporation**

**AMENDMENT No. 1 TO THE  
MARKET EFFICIENCY ENHANCEMENT AGREEMENT  
BETWEEN  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION  
AND  
WESTERN AREA POWER ADMINISTRATION, SIERRA NEVADA REGION**

This Amendment No. 1 (“Amendment No. 1”) to the Market Efficiency Enhancement Agreement (“Agreement”) is dated this 22<sup>nd</sup> day of June 2017, and is entered into, by and between:

- (1) **United States of America, acting by and through the Western Area Power Administration, Sierra Nevada Region** having its business address at 114 Parkshore Drive, Folsom, California 95630 (the “MEEA Entity”);  
  
and
- (2) **California Independent System Operator Corporation**, 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, initially 250 Outcropping Way, Folsom, California 95630 (the “CAISO”).

The MEEA Entity and the CAISO are hereinafter referred to individually as “Party” or collectively as the “Parties”.

**Whereas:**

- A.** The Parties are signatories to the Agreement dated August 27, 2015 which FERC accepted an effective of November 1, 2015 in Docket No. ER15-25-83-000 proceeding.
- B.** The Parties desire to revise Schedule 1 to model the New Melones Powerhouse supply resource’s injections and withdrawals at the Tracy 230 kV Substation, rather than at the New Melones Substation. In conjunction with this modification the Parties desire to revise Schedule 2 to replace New Melones Substation with the Tracy 230 kV Substation as a high voltage substation where the New Melones Powerhouse resource is represented in the CAISO’s Full Network Model.

**NOW THEREFORE**, in consideration of the mutual covenants set forth herein, the Parties agree as follows:

**1. Effective Date**

This Amendment No. 1 shall be effective on the date accepted for filing and made effective by the Federal Energy Regulatory Commission (FERC).

**2. Termination**

The terms of this Amendment No. 1 shall remain in full force and effect, unless subsequently amended, until the termination of the Agreement.

**3. Amendment to the Agreement**

The Agreement shall be amended as follows:

**3.1** Schedule 1 (“MEEA Entity Specific Information”) is deleted in its entirety and Schedule 1 attached to this Amendment No. 1 is substituted in its place.

**3.2** Schedule 2 (“Modeling Information”) is deleted in its entirety and Schedule 2 attached to this Amendment No. 1 is substituted in its place.

**4.** This Amendment No. 1 constitutes the complete and final agreement of the Parties with respect to the purpose of this Amendment No. 1 as described in the Recitals hereto and supersedes all prior understandings, whether written or oral, with respect to such subject matter.

**5.** Except as expressly modified in this Amendment No. 1, the Agreement shall remain in full force and effect in accordance with its terms, and the unmodified terms of the Agreement shall apply to any new rights and/or obligations established by this Amendment No. 1.

**6.** This Amendment No. 1 may be executed in one (1) or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one (1) and the same agreement.



**IN WITNESS WHEREOF**, the Parties have caused this Amendment No. 1 to the Agreement to be duly executed by and through their respective authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: DocuSigned by:  
*Mark Rothleder*  
D56567B78E79463...  
Name: Mark Rothleder  
Title: VP Market Quality and Renewable Integra  
Date: 6/21/2017

**Western Area Power Administration, Sierra Nevada Region**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**SCHEDULE 1**  
**MEEA ENTITY SPECIFIC INFORMATION**  
**[Sections 4.1 and 4.2]**

1. The MEEA Portfolio comprises the following supply resources within the IBAA over which the MEEA Entity has control or serves.
  1. Injections and withdrawals modeled at Folsom Substation
    - i. Folsom Powerhouse
    - ii. Nimbus Powerhouse
  2. Injections and withdrawals modeled at Keswick Substation
    - i. J.F. Carr Powerhouse
    - ii. Keswick Powerhouse
    - iii. Trinity Powerhouse
    - iv. Spring Creek Powerhouse
  3. Injections and withdrawals modeled at Tracy 230 kV Substation
    - i. New Melones Powerhouse
  4. Injections and withdrawals modeled at Shasta Substation
    - i. Shasta Powerhouse
  
2. Non-default LMPs will be calculated for these resource locations as described in Schedule 2.
  
3. The appropriate Resource IDs assigned to specific Scheduling Coordinators that apply for the MEEA transactions using non-default LMP.



**SCHEDULE 2**  
**MODELING INFORMATION**  
**[Section 4.1.1]**

The supply resources controlled by the MEEA Entity will be represented in the CAISO's Full Network Model (FNM) as aggregated resources at high-voltage (230 kV) substations located within the MEEA Entity's network that are electrically close to the underlying physical resources, as follows:

- Folsom Substation,
- Keswick Substation,
- Tracy 230 kV Substation, and
- Shasta Substation.

Distribution factors used in the FNM for representing the MEEA Entity's import bids to the CAISO, and for calculating the weighted average price among these resource locations in the CAISO's settlements, will be established by the CAISO through consultation with the MEEA Entity. The distribution factors will vary by season and time-of-use period based on representative actual output, and be updated at least twice per year to reflect recent years' actual production and expected hydroelectric conditions during the period in which the factors will be applicable. Distribution factors may include values representing CVP generation and other imports modeled as originating from the Northwest for the purpose of the MEEA.

Initially, the seasons used in the distribution factors will be October through March, and April through September. Time-of-use periods will follow standard definitions established for the WECC region. These seasons and periods may be adjusted as needed during consultations between the CAISO and the MEEA Entity.

The same distribution factors will represent the MEEA Entity's export bids in the CAISO's FNM and for settlements.

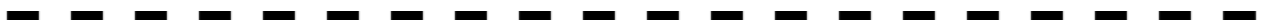
**Attachment B – Clean Market Efficiency Enhancement Agreement**  
**between the Western Area Power Administration – Sierra Nevada Region and the**  
**California Independent System Operator Corporation**

**CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION**

**AND**

**WESTERN AREA POWER ADMINISTRATION,  
SIERRA NEVADA REGION**

**MARKET EFFICIENCY ENHANCEMENT  
AGREEMENT**



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## MARKET EFFICIENCY ENHANCEMENT AGREEMENT

**THIS AGREEMENT** is dated this 27th day of August, 2015 and is entered into, by and between:

(1) **United States of America, acting by and through the Western Area Power Administration, Sierra Nevada Region** having its business address at 114 Parkshore Drive, Folsom, California 95630 (the "MEEA Entity");

and

(2) **California Independent System Operator Corporation**, 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, initially 250 Outcropping Way, Folsom, California 95630 (the "CAISO").

The MEEA Entity and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

- A.** The CAISO seeks to model and price interchange transactions between the CAISO and the MEEA Entity, which resides within an Integrated Balancing Authority Area ("IBAA"), in a manner that reflects the resources that support those interchange transactions. The CAISO needs certain information in order to perform this modeling and pricing for the MEEA Entity.
- B.** The MEEA Entity seeks alternative pricing for interchange transactions. Accordingly, the MEEA Entity agrees to provide the CAISO with certain information.
- C.** The MEEA Entity has Federal preference and project use customers (Federal Customers) in the CAISO Balancing Authority Area that receive Federal hydropower located in the IBAA that desire to schedule their share of the Federal hydropower output from MEEA Portfolio resources using a MEEA Resource ID.
- D.** The Parties are entering into this Agreement in order to establish the terms and conditions upon which the CAISO and the MEEA Entity will discharge their respective duties and responsibilities under the CAISO Tariff, namely the modeling and pricing for imports and exports between the IBAA and the CAISO Balancing Authority Area.

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

## ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All capitalized terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff unless otherwise defined in this Agreement.

**1.2** Special Definitions for this Agreement. In this Agreement, the following words and expressions shall have the meaning set forth below:

**“Control”** means ownership or any contractual arrangements that provide authority to schedule and or receive the financial benefits of a resource.

**“Identified Transaction”** means those transactions described in Section 5.1 of this Agreement.

**“MEEA Portfolio”** means the supply resources set forth in Schedule 1 of this Agreement.

**“MEEA Resource ID”** means those Resource IDs described in Section 4.3 of this Agreement.

**“MEEA Transaction”** means an interchange transaction between the CAISO and MEEA Entity or Federal Customer supported from the MEEA Entity’s MEEA Portfolio, as further described in Section 5.1.

**“Ongoing MEEA Data”** means that data provided by the MEEA Entity on an ongoing basis as set forth in Schedule 3 of this Agreement.

**1.3 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article or Schedule shall mean a Section, Article

or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

- (f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;
- (g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;
- (h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;
- (i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;
- (j) any reference to a day, week, month or year is to a calendar day, week, month or year; and
- (k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## **ARTICLE II**

### **ACKNOWLEDGEMENTS OF MEEA ENTITY AND CAISO**

- 2.1 Reliability Standard Compliance.** The Parties acknowledge that they are each responsible for compliance with the Reliability Standards consistent with their registered functions.

## **ARTICLE III**

### **TERM AND TERMINATION**

- 3.1 Effective Date and Term.** This Agreement shall be effective as of the date set forth above, unless accepted for filing and made effective by the Federal Energy Regulatory Commission (“FERC”) on some other date, and shall remain in full force and effect for two (2) years from the effective date or until terminated pursuant to Section 3.2 of this Agreement (“Effective Date”). Except as limited below, one year prior to the expiration of the two-year term, each Party shall determine in its sole discretion whether to extend the Agreement for another two (2) year term. If the Parties agree, they may extend the term of this Agreement for two (2) years by entering into a written instrument extending the term, up to a maximum of two such extensions for a six (6) year term after the Effective Date.

Further extensions of this Agreement shall constitute an amendment in accordance with Section 11.8 of this Agreement.

## **3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 3.2.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the MEEA Entity commits any material default under this Agreement which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the MEEA Entity, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC. This Agreement shall terminate upon acceptance by FERC of such a notice of termination. In addition, the CAISO also will notify all Federal Customers that have executed a Schedule 5 to this Agreement of the CAISO's intent to terminate this Agreement and take the necessary actions to ensure that any future schedules from such Federal Customers using MEEA Resource IDs under this Agreement will not be accepted after the effective date of the termination.

**3.2.2 Termination by MEEA Entity.** In the event that the MEEA Entity no longer wishes to be eligible for MEEA pricing, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC. This Agreement shall terminate upon acceptance by FERC of such a notice of termination. Although the CAISO must file the termination of this Agreement with FERC, since the MEEA Entity does not require authorization from FERC to terminate, the CAISO shall stop providing and the MEEA Entity shall stop taking any service under this Agreement on the effective date of the termination provided by the MEEA Entity regardless of any action or inaction by FERC in response to the CAISO's filing to terminate. The CAISO will notify all Federal Customers that have executed a Schedule 5 to this Agreement of the MEEA Entity's intent to terminate this Agreement and take the necessary actions to ensure that any future schedules from such Federal Customers using MEEA Resource IDs under this Agreement will not be accepted after the effective date of the termination provided by the MEEA Entity.

## **ARTICLE IV**

### **GENERAL TERMS AND CONDITIONS**

**4.1 Market Efficiency Enhancement Agreement Portfolio and Modeling.** Through the provision of information by the MEEA Entity to the CAISO in accordance with CAISO Tariff Section 27.5.3.2, the CAISO and the MEEA Entity have established a MEEA Portfolio which comprises the supply resources

specified in Schedule 1 of this Agreement and which shall be modeled in accordance with Schedule 2 of this Agreement.

**4.1.1 Use of Information Required to Implement this Market Efficiency**

**Enhancement Agreement.** The CAISO shall use the information specified in Schedule 1, in addition to modeling information set forth in Schedule 2 of this Agreement, solely to model and price imports and exports between the MEEA Entity and the CAISO in accordance with CAISO Tariff Section 27.5.3.2.

**4.1.2 Updates of Information Provided to Implement a Market Efficiency**

**Enhancement Agreement.** Each Party may request in writing an update to the data specified in Schedule 1 and Schedule 2 of this Agreement. The Parties agree to meet and confer as soon as practicable but not more than within thirty (30) days of any such request for an update to discuss and resolve any such request.

**4.1.3 Post-Operations Provision of Data by the MEEA Entity**

After the Effective Date, the MEEA Entity has agreed to provide ongoing data to the CAISO ("Ongoing MEEA Data") in order to establish the MEEA price and assist the CAISO in evaluating MEEA Transactions, including "Identified Transactions," as set forth in Section 5.1 of this Agreement. The Parties agree to meet and confer at least on an annual basis to assess any changes to the Ongoing MEEA Data. The protocol for providing Ongoing MEEA Data and any change management thereto shall be fully set forth in Schedule 3 of this Agreement.

**4.2 Market Efficiency Enhancement Agreement-Specific Price.** The CAISO shall calculate a MEEA-specific LMP that reflects the nodes where the supply resources are located as specified in Schedule 1 in accordance with CAISO Tariff Section 27.5.3.2 and which applies the modeling information in accordance with Schedule 2 of this Agreement. The CAISO will replace the Marginal Cost of Losses with the Marginal Cost of Losses at the Tracy substation or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system pursuant to CAISO Tariff Appendix C, H.1.

**4.3 Application of Market Efficiency Enhancement Agreement-Specific Pricing in any Settlement Interval or Settlement Period.**

The CAISO will establish Resource IDs that are to be used by a Scheduling Coordinator only to submit Bids, including Self-Schedules in the CAISO's Day-Ahead Market, for the purpose of obtaining MEEA-specific pricing ("MEEA Resource ID"). MEEA Entity's Federal Customers whose Scheduling Coordinator has executed Schedule 5 may obtain a MEEA Resource ID. Use of a MEEA Resource ID shall not preclude the Federal Customer's Scheduling Coordinator from using other Resource IDs to submit Bids, including Self-Schedules, that are not covered by this Agreement. Prior to obtaining and settling MEEA Resource



ID(s), if the Federal Customer either schedules its own resources as the Scheduling Coordinator or has a third party schedule its resources on its behalf as the Scheduling Coordinator, such Federal Customer's Scheduling Coordinator shall agree that use of its MEEA Resource ID(s) means that the MEEA Transaction is supported by the Federal Customer's share of a resource identified in the MEEA Portfolio. This agreement is included in Schedule 5 in the form of an attestation to be executed under oath by an officer of the Federal Customer with knowledge of their respective operations and by the respective Scheduling Coordinators. With respect to Federal Customers, full load service customers and project use customers as defined in Attachment A to Schedule 5, the MEEA Entity as the Scheduling Coordinator shall execute the attestation.

- 4.4 Measures to Preserve Confidentiality of Data.** Data provided by the MEEA Entity to the CAISO pursuant to Sections 4.1 and 4.3 shall be treated as confidential data in accordance with CAISO Tariff Section 27.5.3.5 and used solely by the CAISO for the purposes set forth in this Agreement.

## **ARTICLE V**

### **MEEA Pricing**

- 5.1 MEEA-Specific Settlement Pricing.** Except as provided in Sections 5.1.1 and 5.1.2 below, transactions conducted by the MEEA Entity or authorized Federal Customers using its MEEA Resource ID(s) shall be considered a "MEEA Transaction" and settled by the CAISO at the MEEA-specific price. For purposes of this Agreement and validation, a transaction shall be deemed to be a MEEA Transaction if the amount of Energy scheduled under a MEEA Resource ID is equal to or less than the amount of energy made available to that authorized Federal Customer from the MEEA Portfolio by the MEEA Entity. This amount will vary hourly, daily, weekly and monthly depending on the amount of resources available under the MEEA Portfolio. The MEEA Portfolio primarily consists of hydro-generation, which can fluctuate significantly and will impact the amount of Energy an authorized Federal Customer will be allocated.
- 5.1.1 Identified Transactions.** Notwithstanding Section 5.1 above, and without waiving the CAISO's formal right to audit MEEA Transactions described in Section 11.10 below, certain pre-identified hourly MEEA Transactions using the MEEA Resource ID(s) ("Identified Transactions") may, at the CAISO's discretion, trigger the need for additional verification by the CAISO through a less formalized meet and confer process, as further described in Section 5.2 below. Identified Transactions to be evaluated based on final real time Energy include:
- (a) MEEA Transactions not supported by an E-tag from the MEEA Portfolio; or
  - (b) Misuse of a MEEA Resource ID (e.g., incorrect time-of-use period associated with a MEEA Resource ID).

**5.1.2 Informal Review of Identified Transactions.** The CAISO may request to meet and confer with the MEEA Entity for any Identified Transaction prior to the issuance of a T+12B recalculation settlement statement for the relevant settlement period. If such a request is made by the CAISO, the MEEA Entity shall cooperate and provide additional information to the CAISO as soon as practicable to support why any of the Identified Transactions are valid MEEA Transactions. If the Parties mutually agree, as evidenced by an email or other form of mutual written confirmation with sufficient description to identify the subject transaction, that the MEEA Transaction(s) subject to this Section are invalid, the CAISO shall not apply the MEEA-specific price to the portion of the agreed-upon transaction(s) that is not eligible for the MEEA-specific price for the incremental T+ 55B settlement statement (i.e., the CAISO shall settle the transaction at the IBAA price). If the Parties are unable to agree that the MEEA Transaction(s) subject to this Section are invalid, the CAISO may conduct an audit, as provided in Section 11.10, or institute Dispute Resolution, as provided in Section 7.1 with respect to the Identified Transactions, however, until resolved, the MEEA-specific price shall apply. If there are MEEA Transactions, or portions of MEEA Transactions, that are reversed to IBAA transactions the Parties will meet and confer as soon as practicable. If there are two (2) or more reversal events per quarter, up to a maximum of four (4) per year after the Effective Date, the Parties shall additionally meet to consider changes to the MEEA Transaction definition. If the Parties are unable to agree within sixty (60) calendar days, then the CAISO shall have the right to terminate this Agreement in accordance with Section 3.2.1, or suspend one or more MEEA Resources IDs.

**5.2 MEEA Entity Authorized Federal Customers.** The MEEA Entity's Federal Customer that is either a CAISO certified Scheduling Coordinator or has another entity besides the MEEA Entity as their certified Scheduling Coordinator, shall be authorized to schedule MEEA Transactions using a MEEA Resource ID upon written notice by the MEEA Entity and execution by the Federal Customer and Scheduling Coordinator of the form of agreement attached as Schedule 5.

## ARTICLE VI

### COSTS

- 6.1 Operating and Maintenance Costs.** The MEEA Entity shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement. Except that the MEEA Entity shall not be responsible for any costs associated with MEEA Transactions scheduled by the MEEA Entity's Federal Customers that have executed a Schedule 5 to this Agreement as provided in Section 5.2 above. The CAISO shall invoice and settle directly with those Federal Customers.

## ARTICLE VII

### DISPUTE RESOLUTION

- 7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

### REPRESENTATIONS

- 8.1 Representation.** Each Party represents that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

## ARTICLE IX

### LIABILITY

- 9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

### UNCONTROLLABLE FORCES

- 10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references

in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

### MISCELLANEOUS

- 11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.
- 11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 4. A Party must update the information in Schedule 4 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.
- 11.3 Waivers.** Any waivers 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 other 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.
- 11.4 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 United States of America. 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 federal court of the United States of America with appropriate jurisdiction or, (iii) where subject to its jurisdiction, before the Federal Energy Regulatory Commission.
- 11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

- 11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.
- 11.7 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.
- 11.8 Amendments.** Except as provided in Section 4.1.3, this Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO 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.
- 11.9 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.
- 11.10 Audit Rights.** The CAISO reserves the right to audit data supplied pursuant to Section 4.1 for the limited purposes of verifying that the MEEA Entity or authorized Federal Customers accurately represented available resources and met the requirements specified for MEEA-specific LMP pricing in accordance with CAISO Tariff Section 27.5.3.7. The CAISO shall make every effort to provide a reasonable time period for which it chooses to audit the MEEA Entity or authorized Federal Customers and further agrees that its audits under this Section shall be limited to those MEEA Transactions that occurred no greater than one (1) year prior to the date of the written audit request provided to the MEEA Entity or authorized Federal Customers. Notwithstanding the foregoing, nothing in this Agreement, including specifically the foregoing limitation, shall limit the CAISO's rights under the CAISO Tariff with respect to the Rules of Conduct.
- 11.11 No-Precedent.** The terms and conditions reached by the Parties herein are not intended to limit or otherwise restrict future MEEA negotiations with other entities within the existing IBAA that are not Parties to this Agreement.

## ARTICLE XI

### MISCELLANEOUS

- 12.1 Covenant Against Contingent Fees.** The CAISO warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the CAISO for the purpose of securing business. For breach or violation of this warranty, the MEEA Entity shall have the right to annul this Agreement without liability or in its discretion to deduct from the price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.
- 12.2 Contingent Upon Appropriations.** Where activities provided for in this Agreement extend beyond the current fiscal year, continued expenditures by the United States are contingent upon Congress making the necessary appropriations required for the continued performance of the MEEA Entity's obligations under this Agreement. In case such appropriation is not made, the CAISO hereby releases the MEEA Entity from its obligations and from all liability due to the failure of Congress to make such appropriation.
- 12.3 Contract Work Hours and Safety Standards.** This Agreement, to the extent that it is of a character specified in Section 103 of the Contract Work Hours and Safety Standards Act, 40 U.S.C.A. § 3701, is subject to the provisions of the Act, 40 U.S.C.A. §§ 3701-3708, and to regulations promulgated by the Secretary of Labor pursuant to the Act.
- 12.4 Equal Opportunity Employment Practices.** Section 202 of Executive Order No. 11246, 30 Fed. Reg. 12319 (1965), as amended by Executive Order No. 12086, 43 Fed. Reg. 46501 (1978), as amended or supplemented, which provides, among other things, that the CAISO will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin, is incorporated herein by reference the same as if the specific language had been written into this Agreement, except that Indian Tribes and tribal organizations may apply Indian preference to the extent permitted by Federal Law.
- 12.5 Use of Convict Labor.** The CAISO agrees not to employ any person undergoing sentence of imprisonment in performing this Agreement except as provided by 18 U.S.C. § 3622 (c) (2) and Executive Order 11755, December 29, 1973.

[Signature page to follow]

**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 hereinabove written.

**California Independent System Operator Corporation**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Western Area Power Administration, Sierra Nevada Region**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**SCHEDULE 1**  
**MEEA ENTITY SPECIFIC INFORMATION**  
**[Sections 4.1 and 4.2]**

1. The MEEA Portfolio comprises the following supply resources within the IBAA over which the MEEA Entity has control or serves.
  1. Injections and withdrawals modeled at Folsom Substation
    - i. Folsom Powerhouse
    - ii. Nimbus Powerhouse
  2. Injections and withdrawals modeled at Keswick Substation
    - i. J.F. Carr Powerhouse
    - ii. Keswick Powerhouse
    - iii. Trinity Powerhouse
    - iv. Spring Creek Powerhouse
  3. Injections and withdrawals modeled at Tracy 230 kV Substation
    - i. New Melones Powerhouse
  4. Injections and withdrawals modeled at Shasta Substation
    - i. Shasta Powerhouse
2. Non-default LMPs will be calculated for these resource locations as described in Schedule 2.
3. The appropriate Resource IDs assigned to specific Scheduling Coordinators that apply for the MEEA transactions using non-default LMP.



**SCHEDULE 2**  
**MODELING INFORMATION**  
**[Section 4.1.1]**

The supply resources controlled by the MEEA Entity will be represented in the CAISO's Full Network Model (FNM) as aggregated resources at high-voltage (230 kV) substations located within the MEEA Entity's network that are electrically close to the underlying physical resources, as follows:

- Folsom Substation,
- Keswick Substation,
- Tracy 230 kV Substation, and
- Shasta Substation.

Distribution factors used in the FNM for representing the MEEA Entity's import bids to the CAISO, and for calculating the weighted average price among these resource locations in the CAISO's settlements, will be established by the CAISO through consultation with the MEEA Entity. The distribution factors will vary by season and time-of-use period based on representative actual output, and be updated at least twice per year to reflect recent years' actual production and expected hydroelectric conditions during the period in which the factors will be applicable. Distribution factors may include values representing CVP generation and other imports modeled as originating from the Northwest for the purpose of the MEEA.

Initially, the seasons used in the distribution factors will be October through March, and April through September. Time-of-use periods will follow standard definitions established for the WECC region. These seasons and periods may be adjusted as needed during consultations between the CAISO and the MEEA Entity.

The same distribution factors will represent the MEEA Entity's export bids in the CAISO's FNM and for settlements.

**SCHEDULE 3**  
**ONGOING MEEA DATA PROVISION PROTOCOL**  
**[Section 4.1.3]**

**1. General Description of Data**

MEEA Entity will provide historical generation hourly system data and E-tags associated with CVP generation and other imports modeled as originating from the Northwest for the purpose of the MEEA for which sales occurred to the CAISO while using its MEEA Resource ID.

**2. Format and Delivery of Data**

The data provided shall be formatted to comply with agreed upon format, such as comma separated value file format. The data shall be provided no less than annually.

**3. No Warranties**

Any data provided to the CAISO pursuant to this Schedule carries no warranty or representation of any kind, either express or implied.

**4. Confidentiality**

All data provided under this Schedule shall be treated as confidential data, consistent with Section 4.4 of this Agreement.

**5. Modification(s)**

The MEEA Entity reserves the right to modify this Schedule 3, after the Parties meet and confer, to the extent it deems it inconsistent with its ongoing business practices or it becomes unduly burdensome. The MEEA Entity will meet and confer with the CAISO at least seven (7) business days prior to making any modifications to Schedule 3 or terminating this Agreement.

**SCHEDULE 4**  
**NOTICES**  
**[Section 11.2]**

**MEEA Entity**

Name of Primary

Representative: Sonja Anderson  
Title: Power Marketing Manager  
Company: Western Area Power Administration  
Sierra Nevada Region  
Address: 114 Parkshore Drive  
City/State/Zip Code Folsom, CA 95630  
Email Address: sanderso@wapa.gov  
Phone: (916) 353-4421  
Fax No: (916) 985-1931

Name of Alternative

Representative: Jeanne Haas  
Title: Contracts and Energy Services Manager  
Company: Western Area Power Administration  
Sierra Nevada Region  
Address: 114 Parkshore Drive  
City/State/Zip Code Folsom, CA 95630  
Email Address: haas@wapa.gov  
Phone: (916) 353-4438  
Fax No: (916) 985-1931

## **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 No: (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 No: (916) 608-5063

**SCHEDULE 5**  
**ATTESTATION**  
**[Sections 3.2.1, 4.3, 5.2]**

The undersigned, the Scheduling Coordinator for a MEEA Entity Federal Customer, has requested that a MEEA Resource ID be issued to it in accordance with the Market Efficiency Enhancement Agreement between the MEEA Entity and the CAISO (the "MEEA").

The undersigned therefore agrees to be bound by the following sections of the MEEA as it governs authorized Federal Customers.

- 4.3 Application of Market Efficiency Enhancement Agreement-Specific Pricing in any Settlement Interval or Settlement Period;
- 5.1 MEEA-Specific Settlement Pricing;
- 5.1.1 Identified Transactions;
- 5.2 MEEA Entity Federal Customers; and
- 11.10 Audit Rights.

In addition, scheduling, settlement and all other aspects of the MEEA Resource ID use shall be governed by the Scheduling Coordinator Agreement associated with the MEEA Resource ID, as supplemented by this agreement.

This Schedule 5 shall terminate upon termination of the MEEA, and may be terminated by the MEEA Entity Federal Customer upon sixty (60) days advance written notice to the MEEA Entity, the CAISO and associated Scheduling Coordinator.

[FEDERAL CUSTOMER's SCHEDULING COORDINATOR]

By: \_\_\_\_\_  
Name:  
Title:  
Date:

Furthermore, in fulfillment of section 27.5.3.2.2 of the CAISO Tariff, the undersigned officer of the MEEA Entity Federal Customer attests that:

- a. effective \_\_\_\_\_, 2015, XXXX and during the effective period of this Schedule 5, YYYYY, as the MEEA Entity Federal Customer's Scheduling Coordinator, use of the MEEA Resource ID(s):

\_\_\_\_\_ shall mean that XXXX, as the MEEA Entity Federal Customer, dispatched from its share of energy made available to XXXX from the MEEA Portfolio by the MEEA Entity to support the MEEA interchange transaction;

- b. I have knowledge of XXXX's operations; and
- c. I am duly authorized by XXXX and have the authority to bind XXXX to the statements, terms and conditions herein.

I declare under penalty of perjury pursuant to 28 USC 1746 and the laws of the State of California that, to the best of my knowledge, the foregoing is true and correct.

Executed on \_\_\_\_\_, 2015 ("Execution Date")

[FEDERAL CUSTOMER]

By: \_\_\_\_\_

Name:

Title:

Date:

**SCHEDULE 5**  
**ATTACHMENT A**

**Customers That Western Area Power Administration, Sierra Nevada Region is the Scheduling Coordinator for:**

City of Avenal  
Calaveras Public Power Agency  
Deuel Vocational Institute  
Northern California Youth Correctional Center  
California Medical Facility, Vacaville  
East Bay Municipal Utility District  
Hoopa Valley Tribe  
Lassen Municipal Utility District  
Naval Support Activity Monterey  
Pittsburg Power Company  
The Presidio Trust  
Reclamation District 2035  
Sierra Conservation Center  
City and County of San Francisco  
Shelter Cove Resort Improvement District No. 1  
South San Joaquin Irrigation District  
Tuolumne Public Power Agency  
University of California, Davis  
Beale Air Force Base  
Travis Air Force Base  
Defense Logistics Agency  
Department of Energy  
    Lawrence Berkeley National Laboratory  
    Stanford Linear Accelerator Center  
    Site 300  
Naval Air Station, Lemoore  
Naval Radio Station, Dixon  
Bureau of Reclamation Project Use Loads  
Western Area Power Administration  
Trinity Public Utilities District  
Coyote Valley Band of Pomo Indians  
Table Mountain Rancheria  
Placer County Water Agency  
Nasa Ames Research Center

**Attachment C – Marked Market Efficiency Enhancement Agreement  
between the Western Area Power Administration – Sierra Nevada Region and the  
California Independent System Operator Corporation**



**CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION**

**AND**

**WESTERN AREA POWER ADMINISTRATION,  
SIERRA NEVADA REGION**

**MARKET EFFICIENCY ENHANCEMENT  
AGREEMENT**



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## MARKET EFFICIENCY ENHANCEMENT AGREEMENT

**THIS AGREEMENT** is dated this 27th day of August, 2015 and is entered into, by and between:

(1) **United States of America, acting by and through the Western Area Power Administration, Sierra Nevada Region** having its business address at 114 Parkshore Drive, Folsom, California 95630 (the "MEEA Entity");

and

(2) **California Independent System Operator Corporation**, 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, initially 250 Outcropping Way, Folsom, California 95630 (the "CAISO").

The MEEA Entity and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

- A.** The CAISO seeks to model and price interchange transactions between the CAISO and the MEEA Entity, which resides within an Integrated Balancing Authority Area ("IBAA"), in a manner that reflects the resources that support those interchange transactions. The CAISO needs certain information in order to perform this modeling and pricing for the MEEA Entity.
- B.** The MEEA Entity seeks alternative pricing for interchange transactions. Accordingly, the MEEA Entity agrees to provide the CAISO with certain information.
- C.** The MEEA Entity has Federal preference and project use customers (Federal Customers) in the CAISO Balancing Authority Area that receive Federal hydropower located in the IBAA that desire to schedule their share of the Federal hydropower output from MEEA Portfolio resources using a MEEA Resource ID.
- D.** The Parties are entering into this Agreement in order to establish the terms and conditions upon which the CAISO and the MEEA Entity will discharge their respective duties and responsibilities under the CAISO Tariff, namely the modeling and pricing for imports and exports between the IBAA and the CAISO Balancing Authority Area.

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

## ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All capitalized terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff unless otherwise defined in this Agreement.

**1.2** Special Definitions for this Agreement. In this Agreement, the following words and expressions shall have the meaning set forth below:

**“Control”** means ownership or any contractual arrangements that provide authority to schedule and or receive the financial benefits of a resource.

**“Identified Transaction”** means those transactions described in Section 5.1 of this Agreement.

**“MEEA Portfolio”** means the supply resources set forth in Schedule 1 of this Agreement.

**“MEEA Resource ID”** means those Resource IDs described in Section 4.3 of this Agreement.

**“MEEA Transaction”** means an interchange transaction between the CAISO and MEEA Entity or Federal Customer supported from the MEEA Entity’s MEEA Portfolio, as further described in Section 5.1.

**“Ongoing MEEA Data”** means that data provided by the MEEA Entity on an ongoing basis as set forth in Schedule 3 of this Agreement.

**1.3 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article or Schedule shall mean a Section, Article

or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

- (f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;
- (g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;
- (h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;
- (i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;
- (j) any reference to a day, week, month or year is to a calendar day, week, month or year; and
- (k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## **ARTICLE II**

### **ACKNOWLEDGEMENTS OF MEEA ENTITY AND CAISO**

- 2.1 Reliability Standard Compliance.** The Parties acknowledge that they are each responsible for compliance with the Reliability Standards consistent with their registered functions.

## **ARTICLE III**

### **TERM AND TERMINATION**

- 3.1 Effective Date and Term.** This Agreement shall be effective as of the date set forth above, unless accepted for filing and made effective by the Federal Energy Regulatory Commission (“FERC”) on some other date, and shall remain in full force and effect for two (2) years from the effective date or until terminated pursuant to Section 3.2 of this Agreement (“Effective Date”). Except as limited below, one year prior to the expiration of the two-year term, each Party shall determine in its sole discretion whether to extend the Agreement for another two (2) year term. If the Parties agree, they may extend the term of this Agreement for two (2) years by entering into a written instrument extending the term, up to a maximum of two such extensions for a six (6) year term after the Effective Date.

Further extensions of this Agreement shall constitute an amendment in accordance with Section 11.8 of this Agreement.

## **3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 3.2.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the MEEA Entity commits any material default under this Agreement which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the MEEA Entity, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC. This Agreement shall terminate upon acceptance by FERC of such a notice of termination. In addition, the CAISO also will notify all Federal Customers that have executed a Schedule 5 to this Agreement of the CAISO's intent to terminate this Agreement and take the necessary actions to ensure that any future schedules from such Federal Customers using MEEA Resource IDs under this Agreement will not be accepted after the effective date of the termination.

**3.2.2 Termination by MEEA Entity.** In the event that the MEEA Entity no longer wishes to be eligible for MEEA pricing, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC. This Agreement shall terminate upon acceptance by FERC of such a notice of termination. Although the CAISO must file the termination of this Agreement with FERC, since the MEEA Entity does not require authorization from FERC to terminate, the CAISO shall stop providing and the MEEA Entity shall stop taking any service under this Agreement on the effective date of the termination provided by the MEEA Entity regardless of any action or inaction by FERC in response to the CAISO's filing to terminate. The CAISO will notify all Federal Customers that have executed a Schedule 5 to this Agreement of the MEEA Entity's intent to terminate this Agreement and take the necessary actions to ensure that any future schedules from such Federal Customers using MEEA Resource IDs under this Agreement will not be accepted after the effective date of the termination provided by the MEEA Entity.

## **ARTICLE IV**

### **GENERAL TERMS AND CONDITIONS**

**4.1 Market Efficiency Enhancement Agreement Portfolio and Modeling.** Through the provision of information by the MEEA Entity to the CAISO in accordance with CAISO Tariff Section 27.5.3.2, the CAISO and the MEEA Entity have established a MEEA Portfolio which comprises the supply resources

specified in Schedule 1 of this Agreement and which shall be modeled in accordance with Schedule 2 of this Agreement.

**4.1.1 Use of Information Required to Implement this Market Efficiency**

**Enhancement Agreement.** The CAISO shall use the information specified in Schedule 1, in addition to modeling information set forth in Schedule 2 of this Agreement, solely to model and price imports and exports between the MEEA Entity and the CAISO in accordance with CAISO Tariff Section 27.5.3.2.

**4.1.2 Updates of Information Provided to Implement a Market Efficiency**

**Enhancement Agreement.** Each Party may request in writing an update to the data specified in Schedule 1 and Schedule 2 of this Agreement. The Parties agree to meet and confer as soon as practicable but not more than within thirty (30) days of any such request for an update to discuss and resolve any such request.

**4.1.3 Post-Operations Provision of Data by the MEEA Entity**

After the Effective Date, the MEEA Entity has agreed to provide ongoing data to the CAISO ("Ongoing MEEA Data") in order to establish the MEEA price and assist the CAISO in evaluating MEEA Transactions, including "Identified Transactions," as set forth in Section 5.1 of this Agreement. The Parties agree to meet and confer at least on an annual basis to assess any changes to the Ongoing MEEA Data. The protocol for providing Ongoing MEEA Data and any change management thereto shall be fully set forth in Schedule 3 of this Agreement.

**4.2 Market Efficiency Enhancement Agreement-Specific Price.** The CAISO shall calculate a MEEA-specific LMP that reflects the nodes where the supply resources are located as specified in Schedule 1 in accordance with CAISO Tariff Section 27.5.3.2 and which applies the modeling information in accordance with Schedule 2 of this Agreement. The CAISO will replace the Marginal Cost of Losses with the Marginal Cost of Losses at the Tracy substation or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system pursuant to CAISO Tariff Appendix C, H.1.

**4.3 Application of Market Efficiency Enhancement Agreement-Specific Pricing in any Settlement Interval or Settlement Period.**

The CAISO will establish Resource IDs that are to be used by a Scheduling Coordinator only to submit Bids, including Self-Schedules in the CAISO's Day-Ahead Market, for the purpose of obtaining MEEA-specific pricing ("MEEA Resource ID"). MEEA Entity's Federal Customers whose Scheduling Coordinator has executed Schedule 5 may obtain a MEEA Resource ID. Use of a MEEA Resource ID shall not preclude the Federal Customer's Scheduling Coordinator from using other Resource IDs to submit Bids, including Self-Schedules, that are not covered by this Agreement. Prior to obtaining and settling MEEA Resource

ID(s), if the Federal Customer either schedules its own resources as the Scheduling Coordinator or has a third party schedule its resources on its behalf as the Scheduling Coordinator, such Federal Customer's Scheduling Coordinator shall agree that use of its MEEA Resource ID(s) means that the MEEA Transaction is supported by the Federal Customer's share of a resource identified in the MEEA Portfolio. This agreement is included in Schedule 5 in the form of an attestation to be executed under oath by an officer of the Federal Customer with knowledge of their respective operations and by the respective Scheduling Coordinators. With respect to Federal Customers, full load service customers and project use customers as defined in Attachment A to Schedule 5, the MEEA Entity as the Scheduling Coordinator shall execute the attestation.

- 4.4 Measures to Preserve Confidentiality of Data.** Data provided by the MEEA Entity to the CAISO pursuant to Sections 4.1 and 4.3 shall be treated as confidential data in accordance with CAISO Tariff Section 27.5.3.5 and used solely by the CAISO for the purposes set forth in this Agreement.

## **ARTICLE V**

### **MEEA Pricing**

- 5.1 MEEA-Specific Settlement Pricing.** Except as provided in Sections 5.1.1 and 5.1.2 below, transactions conducted by the MEEA Entity or authorized Federal Customers using its MEEA Resource ID(s) shall be considered a "MEEA Transaction" and settled by the CAISO at the MEEA-specific price. For purposes of this Agreement and validation, a transaction shall be deemed to be a MEEA Transaction if the amount of Energy scheduled under a MEEA Resource ID is equal to or less than the amount of energy made available to that authorized Federal Customer from the MEEA Portfolio by the MEEA Entity. This amount will vary hourly, daily, weekly and monthly depending on the amount of resources available under the MEEA Portfolio. The MEEA Portfolio primarily consists of hydro-generation, which can fluctuate significantly and will impact the amount of Energy an authorized Federal Customer will be allocated.
- 5.1.1 Identified Transactions.** Notwithstanding Section 5.1 above, and without waiving the CAISO's formal right to audit MEEA Transactions described in Section 11.10 below, certain pre-identified hourly MEEA Transactions using the MEEA Resource ID(s) ("Identified Transactions") may, at the CAISO's discretion, trigger the need for additional verification by the CAISO through a less formalized meet and confer process, as further described in Section 5.2 below. Identified Transactions to be evaluated based on final real time Energy include:
- (a) MEEA Transactions not supported by an E-tag from the MEEA Portfolio; or
  - (b) Misuse of a MEEA Resource ID (e.g., incorrect time-of-use period associated with a MEEA Resource ID).

**5.1.2 Informal Review of Identified Transactions.** The CAISO may request to meet and confer with the MEEA Entity for any Identified Transaction prior to the issuance of a T+12B recalculation settlement statement for the relevant settlement period. If such a request is made by the CAISO, the MEEA Entity shall cooperate and provide additional information to the CAISO as soon as practicable to support why any of the Identified Transactions are valid MEEA Transactions. If the Parties mutually agree, as evidenced by an email or other form of mutual written confirmation with sufficient description to identify the subject transaction, that the MEEA Transaction(s) subject to this Section are invalid, the CAISO shall not apply the MEEA-specific price to the portion of the agreed-upon transaction(s) that is not eligible for the MEEA-specific price for the incremental T+ 55B settlement statement (i.e., the CAISO shall settle the transaction at the IBAA price). If the Parties are unable to agree that the MEEA Transaction(s) subject to this Section are invalid, the CAISO may conduct an audit, as provided in Section 11.10, or institute Dispute Resolution, as provided in Section 7.1 with respect to the Identified Transactions, however, until resolved, the MEEA-specific price shall apply. If there are MEEA Transactions, or portions of MEEA Transactions, that are reversed to IBAA transactions the Parties will meet and confer as soon as practicable. If there are two (2) or more reversal events per quarter, up to a maximum of four (4) per year after the Effective Date, the Parties shall additionally meet to consider changes to the MEEA Transaction definition. If the Parties are unable to agree within sixty (60) calendar days, then the CAISO shall have the right to terminate this Agreement in accordance with Section 3.2.1, or suspend one or more MEEA Resources IDs.

**5.2 MEEA Entity Authorized Federal Customers.** The MEEA Entity's Federal Customer that is either a CAISO certified Scheduling Coordinator or has another entity besides the MEEA Entity as their certified Scheduling Coordinator, shall be authorized to schedule MEEA Transactions using a MEEA Resource ID upon written notice by the MEEA Entity and execution by the Federal Customer and Scheduling Coordinator of the form of agreement attached as Schedule 5.



## ARTICLE VI

### COSTS

- 6.1 Operating and Maintenance Costs.** The MEEA Entity shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement. Except that the MEEA Entity shall not be responsible for any costs associated with MEEA Transactions scheduled by the MEEA Entity's Federal Customers that have executed a Schedule 5 to this Agreement as provided in Section 5.2 above. The CAISO shall invoice and settle directly with those Federal Customers.

## ARTICLE VII

### DISPUTE RESOLUTION

- 7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

### REPRESENTATIONS

- 8.1 Representation.** Each Party represents that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

## ARTICLE IX

### LIABILITY

- 9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

### UNCONTROLLABLE FORCES

- 10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references

in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

### MISCELLANEOUS

- 11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.
- 11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the MEEA Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 4. A Party must update the information in Schedule 4 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.
- 11.3 Waivers.** Any waivers 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 other 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.
- 11.4 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 United States of America. 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 federal court of the United States of America with appropriate jurisdiction or, (iii) where subject to its jurisdiction, before the Federal Energy Regulatory Commission.
- 11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

- 11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.
- 11.7 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.
- 11.8 Amendments.** Except as provided in Section 4.1.3, this Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO 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.
- 11.9 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.
- 11.10 Audit Rights.** The CAISO reserves the right to audit data supplied pursuant to Section 4.1 for the limited purposes of verifying that the MEEA Entity or authorized Federal Customers accurately represented available resources and met the requirements specified for MEEA-specific LMP pricing in accordance with CAISO Tariff Section 27.5.3.7. The CAISO shall make every effort to provide a reasonable time period for which it chooses to audit the MEEA Entity or authorized Federal Customers and further agrees that its audits under this Section shall be limited to those MEEA Transactions that occurred no greater than one (1) year prior to the date of the written audit request provided to the MEEA Entity or authorized Federal Customers. Notwithstanding the foregoing, nothing in this Agreement, including specifically the foregoing limitation, shall limit the CAISO's rights under the CAISO Tariff with respect to the Rules of Conduct.
- 11.11 No-Precedent.** The terms and conditions reached by the Parties herein are not intended to limit or otherwise restrict future MEEA negotiations with other entities within the existing IBAA that are not Parties to this Agreement.

## ARTICLE XI

### MISCELLANEOUS

- 12.1 Covenant Against Contingent Fees.** The CAISO warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the CAISO for the purpose of securing business. For breach or violation of this warranty, the MEEA Entity shall have the right to annul this Agreement without liability or in its discretion to deduct from the price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.
- 12.2 Contingent Upon Appropriations.** Where activities provided for in this Agreement extend beyond the current fiscal year, continued expenditures by the United States are contingent upon Congress making the necessary appropriations required for the continued performance of the MEEA Entity's obligations under this Agreement. In case such appropriation is not made, the CAISO hereby releases the MEEA Entity from its obligations and from all liability due to the failure of Congress to make such appropriation.
- 12.3 Contract Work Hours and Safety Standards.** This Agreement, to the extent that it is of a character specified in Section 103 of the Contract Work Hours and Safety Standards Act, 40 U.S.C.A. § 3701, is subject to the provisions of the Act, 40 U.S.C.A. §§ 3701-3708, and to regulations promulgated by the Secretary of Labor pursuant to the Act.
- 12.4 Equal Opportunity Employment Practices.** Section 202 of Executive Order No. 11246, 30 Fed. Reg. 12319 (1965), as amended by Executive Order No. 12086, 43 Fed. Reg. 46501 (1978), as amended or supplemented, which provides, among other things, that the CAISO will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin, is incorporated herein by reference the same as if the specific language had been written into this Agreement, except that Indian Tribes and tribal organizations may apply Indian preference to the extent permitted by Federal Law.
- 12.5 Use of Convict Labor.** The CAISO agrees not to employ any person undergoing sentence of imprisonment in performing this Agreement except as provided by 18 U.S.C. § 3622 (c) (2) and Executive Order 11755, December 29, 1973.

[Signature page to follow]

**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 hereinabove written.

**California Independent System Operator Corporation**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Western Area Power Administration, Sierra Nevada Region**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**SCHEDULE 1**  
**MEEA ENTITY SPECIFIC INFORMATION**  
**[Sections 4.1 and 4.2]**

1. The MEEA Portfolio comprises the following supply resources within the IBAA over which the MEEA Entity has control or serves.
  1. Injections and withdrawals modeled at Folsom Substation
    - i. Folsom Powerhouse
    - ii. Nimbus Powerhouse
  2. Injections and withdrawals modeled at Keswick Substation
    - i. J.F. Carr Powerhouse
    - ii. Keswick Powerhouse
    - iii. Trinity Powerhouse
    - iv. Spring Creek Powerhouse
  3. Injections and withdrawals modeled at ~~New Melones~~ Tracy 230 kV Substation
    - i. New Melones Powerhouse
  4. Injections and withdrawals modeled at Shasta Substation
    - i. Shasta Powerhouse
2. Non-default LMPs will be calculated for these resource locations as described in Schedule 2.
3. The appropriate Resource IDs assigned to specific Scheduling Coordinators that apply for the MEEA transactions using non-default LMP.

**SCHEDULE 2**  
**MODELING INFORMATION**  
**[Section 4.1.1]**

The supply resources controlled by the MEEA Entity will be represented in the CAISO's Full Network Model (FNM) as aggregated resources at high-voltage (230 kV) substations located within the MEEA Entity's network that are electrically close to the underlying physical resources, as follows:

- Folsom Substation,
- Keswick Substation,
- ~~New Melones~~ Tracy 230 kV Substation, and
- Shasta Substation.

Distribution factors used in the FNM for representing the MEEA Entity's import bids to the CAISO, and for calculating the weighted average price among these resource locations in the CAISO's settlements, will be established by the CAISO through consultation with the MEEA Entity. The distribution factors will vary by season and time-of-use period based on representative actual output, and be updated at least twice per year to reflect recent years' actual production and expected hydroelectric conditions during the period in which the factors will be applicable. Distribution factors may include values representing CVP generation and other imports modeled as originating from the Northwest for the purpose of the MEEA.

Initially, the seasons used in the distribution factors will be October through March, and April through September. Time-of-use periods will follow standard definitions established for the WECC region. These seasons and periods may be adjusted as needed during consultations between the CAISO and the MEEA Entity.

The same distribution factors will represent the MEEA Entity's export bids in the CAISO's FNM and for settlements.

**SCHEDULE 3**  
**ONGOING MEEA DATA PROVISION PROTOCOL**  
**[Section 4.1.3]**

**1. General Description of Data**

MEEA Entity will provide historical generation hourly system data and E-tags associated with CVP generation and other imports modeled as originating from the Northwest for the purpose of the MEEA for which sales occurred to the CAISO while using its MEEA Resource ID.

**2. Format and Delivery of Data**

The data provided shall be formatted to comply with agreed upon format, such as comma separated value file format. The data shall be provided no less than annually.

**3. No Warranties**

Any data provided to the CAISO pursuant to this Schedule carries no warranty or representation of any kind, either express or implied.

**4. Confidentiality**

All data provided under this Schedule shall be treated as confidential data, consistent with Section 4.4 of this Agreement.

**5. Modification(s)**

The MEEA Entity reserves the right to modify this Schedule 3, after the Parties meet and confer, to the extent it deems it inconsistent with its ongoing business practices or it becomes unduly burdensome. The MEEA Entity will meet and confer with the CAISO at least seven (7) business days prior to making any modifications to Schedule 3 or terminating this Agreement.



**SCHEDULE 4**  
**NOTICES**  
**[Section 11.2]**

**MEEA Entity**

Name of Primary

Representative: Sonja Anderson  
Title: Power Marketing Manager  
Company: Western Area Power Administration  
Sierra Nevada Region  
Address: 114 Parkshore Drive  
City/State/Zip Code Folsom, CA 95630  
Email Address: sanderso@wapa.gov  
Phone: (916) 353-4421  
Fax No: (916) 985-1931

Name of Alternative

Representative: Jeanne Haas  
Title: Contracts and Energy Services Manager  
Company: Western Area Power Administration  
Sierra Nevada Region  
Address: 114 Parkshore Drive  
City/State/Zip Code Folsom, CA 95630  
Email Address: haas@wapa.gov  
Phone: (916) 353-4438  
Fax No: (916) 985-1931

## **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 No: (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 No: (916) 608-5063

**SCHEDULE 5**  
**ATTESTATION**  
**[Sections 3.2.1, 4.3, 5.2]**

The undersigned, the Scheduling Coordinator for a MEEA Entity Federal Customer, has requested that a MEEA Resource ID be issued to it in accordance with the Market Efficiency Enhancement Agreement between the MEEA Entity and the CAISO (the "MEEA").

The undersigned therefore agrees to be bound by the following sections of the MEEA as it governs authorized Federal Customers.

- 4.3 Application of Market Efficiency Enhancement Agreement-Specific Pricing in any Settlement Interval or Settlement Period;
- 5.1 MEEA-Specific Settlement Pricing;
- 5.1.1 Identified Transactions;
- 5.2 MEEA Entity Federal Customers; and
- 11.10 Audit Rights.

In addition, scheduling, settlement and all other aspects of the MEEA Resource ID use shall be governed by the Scheduling Coordinator Agreement associated with the MEEA Resource ID, as supplemented by this agreement.

This Schedule 5 shall terminate upon termination of the MEEA, and may be terminated by the MEEA Entity Federal Customer upon sixty (60) days advance written notice to the MEEA Entity, the CAISO and associated Scheduling Coordinator.

[FEDERAL CUSTOMER's SCHEDULING COORDINATOR]

By: \_\_\_\_\_  
Name:  
Title:  
Date:

Furthermore, in fulfillment of section 27.5.3.2.2 of the CAISO Tariff, the undersigned officer of the MEEA Entity Federal Customer attests that:

- a. effective \_\_\_\_\_, 2015, XXXX and during the effective period of this Schedule 5, YYYYYY, as the MEEA Entity Federal Customer's Scheduling Coordinator, use of the MEEA Resource ID(s):

\_\_\_\_\_ shall mean that XXXX, as the MEEA Entity Federal Customer, dispatched from its share of energy made available to XXXX from the MEEA Portfolio by the MEEA Entity to support the MEEA interchange transaction;

- b. I have knowledge of XXXX's operations; and
- c. I am duly authorized by XXXX and have the authority to bind XXXX to the statements, terms and conditions herein.

I declare under penalty of perjury pursuant to 28 USC 1746 and the laws of the State of California that, to the best of my knowledge, the foregoing is true and correct.

Executed on \_\_\_\_\_, 2015 ("Execution Date")

[FEDERAL CUSTOMER]

By: \_\_\_\_\_

Name:

Title:

Date:

**SCHEDULE 5**  
**ATTACHMENT A**

**Customers That Western Area Power Administration, Sierra Nevada Region is the Scheduling Coordinator for:**

City of Avenal  
Calaveras Public Power Agency  
Deuel Vocational Institute  
Northern California Youth Correctional Center  
California Medical Facility, Vacaville  
East Bay Municipal Utility District  
Hoopa Valley Tribe  
Lassen Municipal Utility District  
Naval Support Activity Monterey  
Pittsburg Power Company  
The Presidio Trust  
Reclamation District 2035  
Sierra Conservation Center  
City and County of San Francisco  
Shelter Cove Resort Improvement District No. 1  
South San Joaquin Irrigation District  
Tuolumne Public Power Agency  
University of California, Davis  
Beale Air Force Base  
Travis Air Force Base  
Defense Logistics Agency  
Department of Energy  
    Lawrence Berkeley National Laboratory  
    Stanford Linear Accelerator Center  
    Site 300  
Naval Air Station, Lemoore  
Naval Radio Station, Dixon  
Bureau of Reclamation Project Use Loads  
Western Area Power Administration  
Trinity Public Utilities District  
Coyote Valley Band of Pomo Indians  
Table Mountain Rancheria  
Placer County Water Agency  
Nasa Ames Research Center