



California Independent
System Operator Corporation

April 30, 2013

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 ISO Rate Schedule No. 73
Docket No. ER13-____-000**

Dear Secretary Bose:

The California Independent System Operator Corporation (“ISO”)¹ submits for filing and acceptance an agreement dated April 30, 2013, between the ISO and PacifiCorp (“Implementation Agreement”).² The Implementation Agreement sets forth the terms under which the ISO will modify and extend its existing real-time energy market systems to provide energy imbalance market service to PacifiCorp, including transmission customers taking transmission service under PacifiCorp’s open access transmission tariff (“OATT”). Under the Implementation Agreement, PacifiCorp will compensate the ISO for its share of the costs of these system changes, software licenses, and other configuration activities. The ISO has also initiated a concurrent stakeholder process to design the energy imbalance market and establish its governing market rules.

The ISO requests that the Commission accept the Implementation Agreement effective July 1, 2013, so the extension of the real-time energy market to include PacifiCorp’s participation in the energy imbalance market may proceed without delay. The ISO notes, as discussed further below, that additional filings will be submitted for the Commission’s review of the rules of the expanded energy imbalance market and the

¹ Capitalized terms not otherwise defined herein have the meanings set forth in Appendix A to the ISO tariff and in the Implementation Agreement.

² The ISO submits the Implementation Agreement pursuant to Section 205 of the Federal Power Act, 16 U.S.C. § 824d, and Part 35 of the Commission’s regulations, 18 C.F.R. Part 35, and in compliance with Order No. 714, *Electronic Tariff Filings*, FERC Stats. & Regs. ¶ 31,276 (2009).

terms of participation in the market before the market commences operation, which is targeted for October 1, 2014.

I. Background

A. Discussions Concerning an Energy Imbalance Market Serving Multiple Balancing Authority Areas and Advantages of the Expanded Energy Imbalance Market

Industry leaders in the West have explored and promoted the energy imbalance market concept for the last several years. The Western Electricity Coordinating Council (“WECC”) launched a major initiative and study effort in 2010. Late in 2011, the Western Governors Association appointed a group of western public utilities commissioners to advance the concept and understanding of an energy imbalance market. Such an energy imbalance market has the potential to produce significant economic and reliability benefits for customers throughout the region.³ In addition, an energy imbalance market would provide the energy imbalance services that utilities in the region currently offer under schedules 4 and 9 of their respective OATT, as Order Nos. 888 and 890 require, to address real-time variations in load and generation.⁴

Replacing the utilities’ separate provision of energy imbalance service with an automated market operating in multiple balancing authority areas would allow participants to obtain imbalance energy from a far greater pool of resources than would otherwise be available. The expansion of the resources able to provide imbalance energy would benefit customers of all participating balancing authority areas.

³ See *PacifiCorp – ISO Energy Imbalance Market Benefits Report* (March 13, 2013), by Energy and Environmental Economics, Inc., <http://www.caiso.com/Documents/PacifiCorp-ISOEnergyImbalanceMarketBenefits.pdf> (“PacifiCorp-ISO Benefits Report”); and *Examination of Potential Benefits of an Energy Imbalance Market in the Western Interconnection* (March 2013), by the National Renewable Energy Laboratory, <http://www.nrel.gov/docs/fy13osti/57115.pdf>; see also *Qualitative Assessment of Potential Reliability Benefits from a Western Energy Imbalance Market* (February 26, 2013), FERC Staff, <http://www.westgov.org/PUceim/meetings/2013/briefing/03-08-13FERC-EIMrbqa.pdf>. In addition, the Northwest Power Pool has conducted an energy imbalance market benefit study with respect to its region, which was presented on April 8, 2013 at the western public utilities commissioners’ group meeting in Boise, Idaho.

⁴ See *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities and Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036, at 31,705 (1996), *order on reh’g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 (1997), *order on reh’g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh’g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff’d in part and rev’d in part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff’d sub nom. New York v. FERC*, 535 U.S. 1 (2002). *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. ¶ 31,241, *order on reh’g*, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh’g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh’g*, Order No. 890-C, 126 FERC ¶ 61,228 (2009), *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

The ISO already conducts a real-time energy imbalance market in connection with its provision of transmission service under the ISO tariff. The ISO's real-time energy market creates locational marginal prices and automatically dispatches the least cost resources every 5 minutes to economically serve load, while avoiding transmission congestion through the use of a detailed network model. Resources with the ability to respond to 5-minute dispatch instructions may bid available energy into this market. The ISO has examined how its experience could facilitate the development of an energy imbalance market that would operate in multiple balancing authority areas and benefit existing customers of the ISO and other interested participants.

As a result of its review, the ISO determined that the real-time portion of the existing ISO market, including 5-minute dispatch, could be expanded to function as an energy imbalance market operating in multiple balancing authority areas and that doing so would benefit both existing ISO customers and customers of other interested participants.⁵ The ISO determined that basing an energy imbalance market on the real-time portion of the existing ISO market offers several advantages, including:

- The benefit of building on an existing, stable platform that balancing authority areas could incrementally avail themselves of;
- The economies of scale that result from balancing resources and loads of other balancing authority areas together with the resources and loads participating in the ISO, benefitting all participants through improved reliability, better forecasting and integration of renewables, and improved scheduling practices;
- The ability to use “security-constrained economic dispatch” to manage congestion more efficiently and ensure that the energy imbalance market's dispatch would not cause constraints to be violated; and
- Improved management of intermittent resources through automatic adjustments made by the ISO's market system.⁶

As discussed further below, expansion of the ISO's existing real-time energy market presents a low risk and low cost market platform.

⁵ See ISO Conceptual EIM Proposal (March 29, 2012), http://www.caiso.com/Documents/ISOConceptualProposal_PUC-EIM_20120405.pdf; ISO Clarification of Conceptual EIM Proposal (January 19, 2013), http://www.caiso.com/Documents/ISOConceptualProposalClarification_PUC-EIM_20130129.pdf; see also *PacifiCorp – ISO Benefits Report* (estimating annual economic PacifiCorp-ISO benefits from the EIM to be in the range of \$21.4 million to \$128.7 million, depending upon the transfer capacity actually available between the two systems in real time).

⁶ *Id.*

B. ISO-PacifiCorp Memorandum of Understanding

On February 12, 2013, PacifiCorp and the ISO executed a memorandum of understanding (“MOU”).⁷ The MOU established a basis for the ISO and PacifiCorp to move forward with two activities. The first activity was the negotiation and filing for Commission approval of the Implementation Agreement. The second activity contemplated by the MOU is the ISO’s development of the expanded energy imbalance market design and applicable market rules for submission to the Commission at a later date, after taking into account input from stakeholders.⁸

The MOU itself contains twelve principles and a high-level project milestone schedule, including milestones associated with a stakeholder process. The ISO and PacifiCorp developed the principles to meet the parties’ needs and the anticipated needs of customers and other stakeholders with respect to the energy imbalance market.

The Implementation Agreement incorporates the specific principles in the MOU and also establishes a more detailed project scope and schedule than was provided in the MOU. The current stakeholder process timeline anticipates presentation of the final energy imbalance market design proposal to the ISO governing board in November 2013 and, with board authorization, development of the necessary tariff changes for submission to the Commission for acceptance in early 2014.⁹

II. The Implementation Agreement

The Implementation Agreement details the contractual terms, including the scope of work and the agreed to fee, under which the ISO will take the steps necessary to adapt the ISO’s energy imbalance market for use by PacifiCorp and its transmission customers, including key milestones and associated milestone payment provisions. The six fundamental purposes served by the Implementation Agreement are described below.

A. The Implementation Agreement Establishes Project Scope and Schedule

The Implementation Agreement establishes the project scope and schedule, which is set forth in Exhibit A. The Implementation Agreement requires both the ISO

⁷ See PacifiCorp-ISO Memorandum of Understanding (February 12, 2013), http://www.caiso.com/Documents/ISO-PacifiCorpMOU_Effective20130212.pdf.

⁸ See ISO Energy Imbalance Market Design Straw Proposal and Issue Paper (April 4, 2013), http://www.caiso.com/Documents/DesignStrawProposal-IssuePaper-EnergyImbalanceMarket_040413.pdf.

⁹ PacifiCorp – ISO Implementation Agreement, Recital C, Section 14, and Exhibit A

and PacifiCorp to complete a variety of project tasks necessary for the development and implementation by October 1, 2014, of an energy imbalance market in which PacifiCorp and its OATT customers can participate. The parties chose this date to allow for completion of all necessary activities because it is outside of the summer peak operational period. These tasks may be modified by mutual agreement of the parties.¹⁰

The milestones included in the Implementation Agreement are intended to align the project timeline and the stakeholder process. These activities must be aligned so that the imbalance energy market can both be implemented in a timely manner and take into account stakeholder input in developing the market design and rules.¹¹

B. PacifiCorp's Share of the ISO's Development Costs Will Be Recovered Through a Fixed Implementation Fee

The Implementation Agreement specifies that PacifiCorp will pay a fixed implementation fee of \$2.1 million, subject to completion of milestones specified in the Implementation Agreement.¹² This is the fee that the ISO will charge PacifiCorp through five (5) specific milestone payments for recovery of the portion of the costs attributable to the ISO's configuration of its real-time energy market to function as an energy imbalance market available to PacifiCorp and its transmission customers. On March 20, 2013, the ISO Board authorized the ISO management to enter into the Implementation Agreement and increase its 2013 capital budget by \$2.1 million to account for the anticipated associated revenues.¹³

The implementation fee is based on the ISO's estimate of the costs it will incur to configure its real-time energy market to function as an energy imbalance market available to all balancing authority areas in the WECC. The components of that estimate are described in the Declaration of Michael K. Epstein, the ISO's Director of Financial Planning, which is included with this filing as Attachment B, and are summarized below.

¹⁰ Implementation Agreement, Section 3.

¹¹ Activities more broadly considered as being necessary to implement the energy imbalance market, including the necessary tariff revisions and service agreements, will be the subject of the stakeholder process regarding the energy imbalance market design and rules, as discussed further below in Section II.E of this transmittal letter.

¹² Implementation Agreement, Section 4 and Exhibit A.

¹³ ISO Board Resolution, March 20-21, 2013, http://www.caiso.com/Documents/DecisionPacifiCorpEIM_ImplementationAgreement-Motion-Mar2013.pdf.

Implementation Costs (in thousands of dollars)	
Licenses	10,800
EMS system improvements	1,000
Data storage	2,000
Necessary hardware upgrades	500
Production software modifications	1,000
Network configuration and mapping	500
Integration	500
Testing	1,500
System performance tuning	250
Training and operations readiness	150
Project management	100
Total	\$18,300

Using this estimate, the ISO derived a rate that allocates the \$18.3 million to potential entrants into the energy imbalance market according to their proportionate share of the total WECC load (excluding the ISO's load), using data reported to WECC. The ISO then applied this fee to PacifiCorp's share of the WECC load (exclusive of the ISO).

The \$2.1 million implementation fee is just and reasonable because it allocates a portion of the overall cost to PacifiCorp in an amount proportionate to PacifiCorp's share of the benefits that will ensue from the energy imbalance market, as measured by usage. In addition, as explained in Mr. Epstein's declaration, the ISO confirmed the reasonableness of the resulting allocation by comparing it to an estimate of the costs the ISO projects it will incur to configure its real-time energy market to function as an energy imbalance market that serves both the ISO and PacifiCorp, prior to expansion to include other entities and determining that the fee accurately represents those costs.

The Implementation Agreement also provides for adjustment of the fixed implementation fee by mutual agreement of the parties in the event the ISO's actual or expected costs exceed the estimate that forms the basis of the implementation fee. This provision allows for appropriate consideration of the allocation of costs associated with incorporation of PacifiCorp into the energy imbalance market. At the same time, the requirement for PacifiCorp to agree to any increase in the implementation fee due to increased development costs ensures that PacifiCorp's share of those costs remains reasonable. The Implementation Agreement therefore represents a reasonable balance of the parties' interest in preserving a level of cost certainty for their customers while appropriately allocating the costs of developing the energy imbalance market.

C. The Implementation Agreement Affirms Key Principles

In addition to other provisions of the Implementation Agreement, Section 14 incorporates several of the principles identified in the MOU. These principles are

necessarily dependent on the outcome of the market design and development process, including input from stakeholders, but are reiterated in the Implementation Agreement to guide the parties' efforts as the stakeholder process unfolds. Each of these principles is set forth below.

1. *Structure of the market rules.* The EIM market rules shall be contained in a discrete part of the ISO tariff to the extent this structure provides additional clarity to all EIM participants; provided, however, provisions generally applicable to the relationship between the ISO and market participants may be provided for by reference and applicable to EIM participants. This format and structure will enable a better understanding of the EIM market rules and ensure that oversight of these market rules can evolve. Having the EIM market rules discretely organized facilitates portability and opportunity for a different oversight structure, as appropriate. In the meantime, this format and structure provides clarity for all interested participants.
2. *Market rule oversight.* Initial EIM governance and market rule oversight shall be consistent with existing ISO governance, allow for voluntary participation and expansion of participants and market activities, and evolve based on stakeholder feedback. Consideration of EIM governance and market rule oversight will be considered during the stakeholder process. However, it is important to move forward in a timely manner to capture the benefits of the EIM and gain experience as these important issues continue to be considered.
3. *Transmission services.* The Parties shall consider whether and how to account for transmission service in the EIM stakeholder process. Each transmission owner participating in the EIM will retain its rights to establish imbalance energy service rates under its OATT. In addition, it will be important to consider whether a transmission service rate for transfers between balancing authority areas participating in the EIM is appropriate.
4. *Compliance with greenhouse gas emission standards.* The EIM shall include an appropriate means to identify transactions that do not involve California resources or loads, or that otherwise occur outside the State of California, such that only the imbalance energy portion that is imported into California would be subject to any laws, regulations or costs associated with a California specific greenhouse gas compliance obligation. In doing so, it will be important to work with California regulators and all EIM participants to ensure greenhouse gas costs are accounted for properly.
5. *Compatibility with existing and emerging market features.* The EIM shall be implemented in a manner that is compatible with the Northwest Power Pool reserve sharing program and other existing and emerging market initiatives, including FERC Order No. 764 (and its progeny). The EIM design is founded upon a 15 minute real time market being implemented prior to the EIM, and it

remains essential the EIM not erode existing reserve sharing benefits.

6. *Opportunity for Others to Participate.* Other entities may participate in the EIM within a timeframe to be determined by the ISO if they agree to fund their share of implementation costs pursuant to a FERC-accepted implementation agreement in a manner similar to PacifiCorp. It is expected that a regular commitment cycle would be established in the EIM market rules, providing an opportunity to take EIM service after the commitment is made.

In addition to the principles outlined above, Section 12 provides the opportunity for the ISO and PacifiCorp to work with customers in the PacifiCorp balancing authority area, or other third parties, to ensure accommodation of their interests when the energy imbalance market is implemented. Lastly, Section 13 provides that both parties will comply with their respective compliance obligations, including WECC and NERC Reliability Standards. The Implementation Agreement is not intended to modify the parties' current functional responsibilities associated with such compliance.

D. The Implementation Agreement Provides a Framework to Resolve Differences

The Implementation Agreement represents a binding commitment of the parties. As such, it must provide a workable framework for the parties to resolve any differences and correct course along the way. On the other hand, the Implementation Agreement recognizes that proceeding with development of the energy imbalance market is a voluntary act on the part of the ISO and choosing to participate in the energy imbalance market is a voluntary act on the part of PacifiCorp.

Accordingly, the Implementation Agreement allows either party to terminate the agreement for any reason, provided it has first entered into good faith discussions for thirty (30) days in an effort to resolve any differences.¹⁴ This and other related provisions mean that the parties must work closely together to achieve the goal of implementing an energy imbalance market in a form approved by the Commission.

E. The Implementation Agreement Sets Forth the Agreed Development Process, Including the Process for Obtaining Stakeholder Input

Success of the energy imbalance market is dependent on parallel completion of both (1) the tasks and milestones identified in the Implementation Agreement *and* (2) the development of proposed market rules, the receipt and consideration of stakeholder input, and the acceptance of the market rules and associated tariff amendments and agreements by the Commission. Upon Commission acceptance of the energy imbalance market rules and the associated service agreements, the Implementation Agreement will terminate.

¹⁴ Implementation Agreement, Section 2.

F. Other Provisions

The Implementation Agreement includes a variety of standard provisions that round out the parties' commitment. These are confidentiality (Section 5), limitations of liability (Section 6), representations and warranties (Section 7), general provisions such as notices, amendments, etc. (Section 8), governing law and venue (Section 9), communication (Section 10), and dispute resolution (Section 11).

III. Next Steps

Following Commission acceptance of this filing, the ISO will continue its stakeholder process and initiate activities necessary to implement PacifiCorp into the energy imbalance market. In parallel with the ISO's process, implementation of the energy imbalance market may require modifications to PacifiCorp's OATT. The ISO recognizes that PacifiCorp will be working with its transmission customers and other interested parties to facilitate implementation of the energy imbalance market.

IV. Effective Date

The ISO requests that the Implementation Agreement be made effective on July 1, 2013.

V. Request for Waivers

The ISO believes this filing constitutes a new service (development of an expanded energy imbalance market) to a new customer (PacifiCorp), and is thus an initial rate schedule, subject to section 35.12 of the Commission's rules, 18 C.F.R. § 35.12 (2012). This filing substantially complies with the requirements of section 35.12 of the Commission's rules, 18 C.F.R. § 35.12 (2013), applicable to filings of this type. The ISO respectfully requests waiver of any such requirement to the extent this filing does not satisfy that requirement.

In the event the Commission concludes that this filing is a change in a rate tariff or service agreement, the ISO submits that the filing also substantially complies with the requirements of section 35.13 of the Commission's rules, 18 C.F.R. § 35.13 (2013), applicable to filings of this type. The ISO respectfully requests waiver of any such requirement to the extent this filing does not satisfy that requirement. In particular, the ISO requests waiver of the requirement to submit Period 1 and Period 2 schedules, because the implementation fee is a one-time fee that is not based on historical data in Period 1 schedules or on the projections in Period 2 schedules.

In either event, there is good cause to waive filing requirements that are not material to the Commission's consideration of the Implementation Agreement.

VI. Service

The ISO has served copies of this filing upon all scheduling coordinators, the California Public Utilities Commission, and the California Energy Commission. In addition, the ISO has posted the filing on the ISO website.

Enclosed for filing is each of the following:

- (1) This letter of transmittal; and
- (2) Implementation Agreement (Attachment A); and
- (3) Declaration of Michael K. Epstein, Director of Financial Planning (Attachment B).

VII. Correspondence

The ISO requests that all correspondence, pleadings, and other communications concerning this filing be served upon the following:

John C. Anders*
Senior Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7287
E-mail: janders@caiso.com

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

VIII. Conclusion

The ISO respectfully requests that the Commission accept this filing and permit the Implementation Agreement, ISO Rate Schedule No. 73, to be effective July 1, 2013. If there are any questions concerning this filing, please contact the undersigned.

Respectfully submitted,

By: /s/ John C. Anders

Nancy Saracino

General Counsel

Roger E. Collanton

Deputy General Counsel

Beth Ann Burns

Senior Counsel

John C. Anders

Senior Counsel

California Independent System

Operator Corporation

250 Outcropping Way

Folsom, CA 95630

Tel: (916) 608-7287

Fax: (916) 608-7222

janders@caiso.com

Attorneys for the California Independent
System Operator Corporation

Attachment A

Rate Schedule 73

Energy Imbalance Market Implementation Agreement

between the ISO and PacifiCorp

California Independent System Operator

April 30, 2013

ENERGY IMBALANCE MARKET IMPLEMENTATION AGREEMENT

This Implementation Agreement (“Agreement”) is entered into as of April 30, 2013, by and between PacifiCorp, an Oregon corporation (“PacifiCorp”), and the California Independent System Operator Corporation, a California nonprofit public benefit corporation (“ISO”). PacifiCorp and the ISO are sometimes referred to in this Agreement individually as a “Party” and, collectively, as the “Parties”.

RECITALS

A. WHEREAS, PacifiCorp has determined there is an opportunity to secure benefits for PacifiCorp’s customers through improved dispatch and operation of PacifiCorp’s generation fleet and through the efficient use and continued reliable operation of existing and future transmission facilities and desires to participate in an energy imbalance market (“EIM”) that benefits its customers and could potentially be expanded to benefit other customers in the region;

B. WHEREAS, the ISO has determined there are benefits to ISO market participants through greater access to energy imbalance resources in real-time and through the efficient use and reliable operation of the transmission facilities and markets operated by the ISO, and desires to develop and operate the EIM by employing the systems and processes of the ISO’s existing imbalance energy market;

C. WHEREAS, the ISO will develop EIM market rules through a stakeholder process in which PacifiCorp will be a stakeholder with rights and responsibilities with respect to the EIM implementation as provided for in this Agreement.

D. WHEREAS, the Parties acknowledge that the rules and procedures governing the EIM must be set forth in the provisions of an ISO tariff filed with the Federal Energy Regulatory Commission (“FERC”), as well as corresponding revisions to PacifiCorp’s Open Access Transmission Tariff and the execution of associated service agreements, to implement the EIM;

E. WHEREAS, the Parties are entering into this Agreement to set forth the terms upon which the ISO will timely configure its systems to incorporate PacifiCorp into the EIM and develop the market rules for the EIM (“Project”) as contemplated by the Memorandum of Understanding dated February 12, 2013 (“MOU”), such that PacifiCorp and the ISO are prepared for an October 1, 2014 implementation of the Project (“Implementation Date”);

NOW THEREFORE, in consideration of the mutual covenants contained herein, and of other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

AGREEMENT

1. Effective Date and Term.

(a) This Agreement shall become effective upon the date the Agreement is accepted, approved or otherwise permitted to take effect by FERC, without condition or modification unsatisfactory to either Party ("Effective Date").

(b) In the event FERC requires any modification to the Agreement or imposes any other condition upon its acceptance or approval of the Agreement, each Party shall have ten (10) days to notify the other Party that any such modification or condition is unacceptable to that Party. If no Party provides such notice, then the Agreement, as modified or conditioned by FERC, shall take effect as of the date determined under section 1(a). If either Party provides such notice to the other Party, the Parties shall take any one or more of the following actions: (i) meet and confer and agree to accept any modifications or conditions imposed by such FERC order; (ii) jointly seek further administrative or legal remedies with respect to such FERC order, including a request for rehearing or clarification; or (iii) enter into negotiations with respect to accommodation of such FERC order, provided however, if the Parties have not agreed to such an accommodation within thirty (30) days after the date on which such FERC order becomes a final and non-appealable order, such order shall be deemed an adverse order and the Parties shall have no further rights and obligations under this Agreement.

(c) The term of this Agreement ("Term") shall commence on the Effective Date and shall terminate upon the earliest to occur of (1) the date FERC permits all necessary revisions to the ISO and PacifiCorp tariffs to take effect and the service agreements under such tariffs necessary for the commencement of the EIM have taken effect; (2) termination in accordance with Section 2 of this Agreement; or (3) such other date as mutually agreed to by the Parties ("Termination Date").

(d) This Agreement shall automatically terminate on the Termination Date and shall have no further force or effect, provided that the rights and obligations set forth in Sections 5 and 6 shall survive the termination of this Agreement and remain in full force and effect.

2. Termination.

(a) The Parties may mutually agree to terminate this Agreement in writing at any time. In addition, either Party may terminate this Agreement in its sole discretion after conclusion of the negotiation period in Section 2(b), as provided in Section 2(d) or 2(e) as applicable.

(b) If either the ISO or PacifiCorp seeks to terminate this agreement, it must first notify the other Party in writing of its intent to do so ("Notice of Intent to Terminate") and engage in thirty (30) days of good faith negotiations in an effort to resolve its concerns. If the Parties successfully resolve the concerns of the Party

issuing the Notice of Intent to Terminate, the Party that issued such notice shall notify the other Party in writing of the withdrawal of such Notice ("Notice of Resolution").

(c) At the time the Notice of Intent to Terminate is provided, or any time thereafter unless a Notice of Resolution is issued, PacifiCorp may provide written notice directing the ISO to suspend performance on any or all work on the Project for a specified period of time ("Notice to Suspend Work"). Upon receipt of a Notice to Suspend Work, the ISO shall: (1) discontinue work on the Project; (2) place no further orders with subcontractors related to the Project; (3) take commercially reasonable actions to suspend all orders and subcontracts; (4) protect and maintain the work on the Project; and (5) otherwise mitigate PacifiCorp's costs and liabilities for the areas of work suspended. The ISO will not invoice PacifiCorp pursuant to Section 4(c) of this Agreement for any milestone payment following the issuance of a Notice to Suspend Work. To the extent a Notice of Resolution is issued pursuant to Section 2(b), the Notice to Suspend Work in effect at the time shall be deemed withdrawn and the ISO shall be entitled to invoice PacifiCorp for any milestone completed as specified in Section 4(c) of this Agreement and PacifiCorp shall pay such invoice pursuant to Section 4.

(d) Any time after 30 days from the date of the Notice of Intent to Terminate under Section 2(b), issued by either Party, and prior to the date of a Notice of Resolution, the ISO may terminate this Agreement by providing written notice to PacifiCorp that it is terminating this Agreement ("Termination Notice") effective immediately. The ISO may terminate this Agreement at its sole discretion for any reason, including but not limited to: (i) a lack of reasonable progress in the development of the Project in accordance with Exhibit A to this Agreement, subject to modification only as described in Section 3(c); (ii) a disagreement between the Parties regarding Project design, scope, or implementation, which disagreement the Parties are unable to resolve to their mutual satisfaction; or (iii) if the ISO determines in its sole discretion that the Project is not likely to provide the benefits the ISO is seeking to obtain.

(e) Any time after 30 days from the date of the Notice of Intent to Terminate under Section 2(b), issued by either Party, and prior to the date of a Notice of Resolution, PacifiCorp may terminate this Agreement by providing written notice to the ISO that it is terminating this Agreement ("Termination Notice") effective immediately. PacifiCorp may terminate this Agreement at its sole discretion for any reason, including but not limited to: (i) a lack of reasonable progress in the development of the Project in accordance with Exhibit A to this Agreement, subject only to modification only as described in Section 3(c); (iii) a disagreement between the Parties regarding Project design, scope, or implementation, which disagreement the Parties are unable to resolve to their mutual satisfaction; or (iii) if PacifiCorp determines in its sole discretion that the Project is not likely to provide the benefits PacifiCorp is seeking to obtain.

(f) In the event this Agreement is terminated by either or both of the Parties, this Agreement will become wholly void and of no further force and effect, without further action by either Party, and the liabilities and obligations of the Parties hereunder will terminate, and each Party shall be fully released and discharged from any liability or obligation under or resulting from this Agreement as of the date of the Termination Notice provided in Section 2(d) or 2(e), as applicable, notwithstanding the requirement for the ISO to submit the filing specified in Section 2(g). Notwithstanding the foregoing, the rights and obligations set forth in Sections 5 and 6 shall survive the termination of this Agreement and remain in full force and effect as specified in Sections 5 and 6, and any milestone payment obligation pursuant to Section 4(c) that arose prior to the Termination Notice in accordance with Section 2(d) or 2(e) shall survive until satisfied or resolved in accordance with Section 11.

(g) The Parties acknowledge that the ISO is required to file a timely notice of termination with FERC. The Parties acknowledge and agree that the filing of the notice of termination by the ISO with FERC will be considered timely if the filing of the notice of termination is made after the preconditions for termination have been met, and the ISO files the notice of termination within ten (10) days after the Termination Notice has been provided by either the ISO in accordance with Section 2(d) or PacifiCorp in accordance with Section 2(e). This Agreement shall terminate upon acceptance by FERC of such a notice of termination.

3. Implementation Scope and Schedule.

(a) The Parties shall complete the Project as described in Exhibit A , subject to modification only as described in Section 3(c) below.

(b) The Parties shall undertake the activities described in Exhibit A with the objective of completing the Project and implementing the EIM no later than the Implementation Date, subject to modification only as described in section 3(c) below.

(c) Either Party may propose a change in Exhibit A or the Implementation Date to the other Party to pursue the Project objectives in accordance with Section 14. If a Party proposes a change in Exhibit A or the Implementation Date, the Parties shall negotiate in good faith to attempt to reach agreement on the proposal and any necessary changes in Exhibit A and any other affected provision of this Agreement, provided that any change in Exhibit A or the Implementation Date must be mutually agreed to by the Parties. The agreement of the Parties to a change in Exhibit A or the Implementation Date shall be memorialized in a revision to Exhibit A, which will be binding on the Parties and shall be posted on the internet web sites of the ISO and PacifiCorp, without the need for execution of an amendment to this Agreement. Changes that require revision of any provision of this Agreement other than Exhibit A shall be reflected in an executed amendment to this Agreement and filed with FERC for acceptance.

(d) At least once per calendar month during the Term, the Parties' Designated Executives, or their designees, will meet telephonically or in person (at a mutually agreed to location) to discuss the continued appropriateness of Exhibit A to ensure that the Project can meet the Implementation Date. For purposes of this section, "Designated Executive" shall mean the individual identified in Section 8(g), or their designee or successor.

4. Implementation Charges, Invoicing and Milestone Payments.

(a) PacifiCorp shall pay the ISO a fixed fee of \$2.1 million for costs incurred by the ISO to implement the Project ("Implementation Fee"), subject to completion of the milestones specified in Section 4(c) and subject to adjustment only as described in Section 4(b).

(b) The Implementation Fee shall be subject to adjustment only by mutual agreement of the Parties in either of the following circumstances: (1) if the Parties agree to a change in Exhibit A or the Implementation Date in accordance with Section 3(c) and the Parties agree that an adjustment to the Implementation Fee is warranted in light of such change; or (2) the ISO provides notice to PacifiCorp that the sum of its actual costs through the date of such notice and its projected costs to accomplish the balance of the Project exceed the Implementation Fee.

(c) Upon completion of the milestones identified in Exhibit A, the ISO shall invoice PacifiCorp for the Implementation Fee as follows:

- i. \$500,000 twenty (20) days after the Effective Date as further described in Section 1 of this Agreement and Exhibit A as Milestone 1;
- ii. \$400,000 upon deployment into the ISO test environment of the full network model database that includes the topology of the PacifiCorp system as further described in Exhibit A as Milestone 2;
- iii. \$400,000 upon delivery to PacifiCorp of the EIM technical specifications and configuration guides as further described in Exhibit A as Milestone 3;
- iv. \$400,000 upon commencement of EIM market simulation as further described in Exhibit A as Milestone 4; and
- v. \$400,000 ten (10) days after the Implementation Date as further described in Exhibit A as Milestone 5.

(d) Following the completion of each milestone identified in Section 4(c)(i) through (v), the ISO will deliver to PacifiCorp an invoice which will show the amount due, together with reasonable documentation supporting the completion of the milestone being invoiced. PacifiCorp shall pay the invoice no later than

forty-five (45) days after the date of receipt. Any milestone payment past due will accrue interest, per annum, calculated in accordance with the methodology specified for interest in the FERC regulations at 18 C.F.R. § 35.19a(a)(2)(iii) (the "FERC Methodology").

(e) If a milestone has not been completed as described in 4(c)(i), (ii), (iii), (iv), or (v) and Exhibit A, as Exhibit A may have been modified in accordance with Section 3(c), the Parties shall negotiate in good faith an agreed upon change to Exhibit A consistent with Section 3(c) such that the timing of milestone payments in Section 4(c) can be adjusted to correspond to the updated Exhibit A.

(f) If PacifiCorp disputes any portion of any amount specified in an invoice delivered by the ISO, PacifiCorp shall pay its total amount of the invoice when due, and identify the disputed amount and state that the disputed amount is being paid under protest. Any disputed amount shall be resolved pursuant to the provisions of Section 11. If it is determined pursuant to Section 11 that an overpayment or underpayment has been made by PacifiCorp or any amount on an invoice is incorrect, then (i) in the case of any overpayment, the ISO shall promptly return the amount of the overpayment (or credit the amount of the overpayment on the next invoice) to PacifiCorp; and (ii) in the case of an underpayment, PacifiCorp shall promptly pay the amount of the underpayment to the ISO. Any overpayment or underpayment shall include interest for the period from the date of overpayment, underpayment, or incorrect allocation, until such amount has been paid or credited against a future invoice calculated in the manner prescribed for calculating interest in Section 4(d).

(g) All costs necessary to implement the Project not provided for in this Agreement shall be borne separately by each Party and recovered through rates as may be authorized by their respective regulatory authorities.

(h) All milestone payments required to be made under the terms of this Agreement shall be made to the account or accounts designated by the Party which the milestone payment is owed, by wire transfer (in immediately available funds in the lawful currency of the United States).

5. Confidentiality.

(a) All written or oral information received from another Party in connection with this Agreement (but not this Agreement after it is filed with FERC) necessary to complete the Project and marked or otherwise identified at the time of communication by such Party as containing information that Party considers commercially sensitive or confidential shall constitute "Confidential Information" subject to the terms and conditions herein.

(b) If PacifiCorp releases PacifiCorp's Confidential Information in connection with the public EIM stakeholder process or a regulatory filing, or if the ISO releases the ISO's Confidential Information in connection with the public EIM

stakeholder process or a regulatory filing, then the information released shall no longer constitute Confidential Information. In addition, Confidential Information does not include information that (i) is or becomes generally available to the public other than as a result of disclosure by either Party, its officers, directors, employees, agents, or representatives; (ii) is or becomes available to such Party on a non-confidential basis from other sources or their agents or representatives when such sources are not known by such Party to be prohibited from making the disclosure; (iii) is already known to such Party or has been independently acquired or developed by such Party without violating any of such Party's obligations under this Section 5; (iv) is the subject of a mutual written agreement between the Parties, including an agreement evidenced through an exchange of electronic or other communications, for discussion at any stakeholder meetings or during the stakeholder process or with any regulatory authority; or (v) is the subject of a mutual written agreement between the Parties, including an agreement evidenced through an exchange of electronic or other communications, to allow for such disclosure and designation as non-confidential or public information on a case-by-case basis in accordance with Section 10 of this Agreement.

(c) The Confidential Information will be kept confidential by each Party and each Party agrees to protect the Confidential Information using the same degree of care, but no less than a reasonable degree of care, as a Party uses to protect its own confidential information of a like nature. Notwithstanding the preceding sentence, a Party may disclose the Confidential Information or portions thereof to those of such Party's officers, employees, partners, representatives, advisors, or agents who need to know such information for the purpose of analyzing or performing an obligation related to the Project. Notwithstanding the foregoing, a Party is not authorized to disclose such Confidential Information to any officers, employees, partners, representatives, advisors, or agents without (i) informing such officer, employee, partner, representative, advisor, or agent of the confidential nature of the Confidential Information and (ii) receiving the agreement of such officer, employee, partner, representative, advisor, or agent as to the confidentiality obligation herein. Each Party agrees to be responsible for any breach of this Section 5 by such Party or a Party's officers, employees, partners, representatives, advisors or agents.

(d) In the event that a Party becomes compelled by a court of competent jurisdiction or regulatory authority (by law, rule, regulation, order, deposition, interrogatory, request for documents, data request issued by a regulatory authority, subpoena, civil investigative demand or similar request or process) to disclose any of the Confidential Information, such Party shall provide the other Party with prompt prior written notice of such requirement so that the other Party may seek a protective order or other appropriate remedy and/or waive compliance with the terms of this Section 5. In the event that such protective order or other remedy is not obtained, or that such Party waives compliance with the provisions hereof, the Party compelled to disclose shall (i) furnish only that portion of the Confidential Information which, in accordance with the advice of its own counsel (which may include internal counsel), is legally required to be furnished, and (ii)

exercise reasonable efforts to obtain assurances that confidential treatment will be accorded the Confidential Information so furnished.

(e) Notwithstanding the foregoing, the Parties acknowledge that they are required by law or regulation to report certain information that could embody Confidential Information from time to time, and may do so from time to time without providing prior notice to the other Party. Such reports may include models, filings, and reports of costs, general rate case filings, cost adjustment mechanisms, FERC-required reporting, investigations, annual state reports that include resources and loads, integrated resource planning reports, reports to entities such as FERC, the North American Electric Reliability Council ("NERC"), Western Electricity Coordinating Council ("WECC"), or similar or successor organizations, or similar or successor forms, filings, or reports, the specific names of which may vary by jurisdiction, along with supporting documentation. Additionally, in regulatory proceedings or investigations in all state and federal jurisdictions in which they may do business, the Parties will from time to time be required to produce Confidential Information, and may do so without prior notice using its business judgment in compliance with all of the foregoing and including the appropriate level of confidentiality for such disclosures in the normal course of business.

(f) Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

(g) Upon written request by a Party, the other Party shall promptly return to the requesting Party or destroy all Confidential Information it received, including all copies of its analyses, compilations, studies or other documents prepared by or for it, that contain the Confidential Information in a manner that would allow its extraction or that would allow the identification of the requesting Party as the source of the Confidential Information or inputs to the analysis. Notwithstanding the foregoing, neither Party shall be required to destroy or alter any computer archival and backup tapes or archival and backup files (collectively, "Computer Tapes"), provided that such Computer Tapes shall be kept confidential in accordance with the terms of this Agreement.

(h) Nothing in this Agreement shall be deemed to restrict either Party from engaging with third parties with respect to any matter and for any reason, specifically including the EIM, provided Confidential Information is treated in accordance with this Section 5.

(i) This Section 5, Confidentiality, applies for two years (24 months) after the Termination Date.

6. Limitation of Liability; Indemnity.

(a) Each Party acknowledges and agrees that the other Party shall not be liable to it for any claim, loss, cost, liability, damage or expense, including any direct damage or any special, indirect, exemplary, punitive, incidental or consequential loss or damage (including any loss of revenue, income, profits or investment opportunities or claims of third party customers), arising out of or directly or indirectly related to the other Party's decision to enter into this Agreement, the other Party's performance under this Agreement, or any other decision with respect to the Project or the EIM.

(b) Each Party shall indemnify, defend and hold harmless the other Party and its officers, directors, employees, agents, contractors and sub-contractors, from and against all third party claims, judgments, losses, liabilities, costs, expenses (including reasonable attorneys' fees) and damages for personal injury, death or property damage, caused by the negligence or willful misconduct related to this Agreement or breach of this Agreement of the indemnifying Party, its officers, directors, agents, employees, contractors or sub-contractors, provided that this indemnification shall be only to the extent such personal injury, death or property damage is not attributable to the negligence or willful misconduct related to this Agreement or breach of this Agreement of the Party seeking indemnification, its officers, directors, agents, employees, contractors or sub-contractors. The indemnified Party shall give the other Party prompt notice of any such claim. The indemnifying Party, in consultation with the indemnified Party, shall have the right to choose competent counsel, control the conduct of any litigation or other proceeding, and settle any claim. The indemnified Party shall provide all documents and assistance reasonably requested by the indemnifying Party.

(c) The rights and obligations under this Section 6 shall survive the expiration and termination of this Agreement.

7. Representation and Warranties

(a) Representations and Warranties of PacifiCorp. PacifiCorp represents and warrants to the ISO as of the Effective Date as follows:

(1) It is duly formed, validly existing and in good standing under the laws of the jurisdiction of its formation.

(2) It has all requisite corporate power necessary to own its assets and carry on its business as now being conducted or as proposed to be conducted under this Agreement.

(3) It has all necessary corporate power and authority to execute and deliver this Agreement and to perform its obligations under this Agreement, and the execution and delivery of this Agreement and the performance by it of this

Agreement have been duly authorized by all necessary corporate action on its part.

(4) The execution and delivery of this Agreement and the performance by it of this Agreement do not: (i) violate its organizational documents; (ii) violate any governmental requirements applicable to it; or (iii) result in a breach of or constitute a default of any material agreement to which it is a party.

(5) This Agreement has been duly and validly executed and delivered by it and constitutes its legal, valid and binding obligation enforceable against it in accordance with its terms, except as the same may be limited by bankruptcy, insolvency or other similar laws affecting creditors' rights generally and by principles of equity regardless of whether such principles are considered in a proceeding at law or in equity.

(6) All material governmental authorizations have been obtained by it prior to the date hereof in connection with the due execution and delivery of, and performance by it of its obligations under, this Agreement, have been duly obtained or made and are in full force and effect.

(b) Representations and Warranties of the ISO. ISO represents and warrants to PacifiCorp as of the Effective Date as follows:

(1) It is duly formed, validly existing and in good standing under the laws of the jurisdiction of its formation.

(2) It has all requisite corporate power necessary to own its assets and carry on its business as now being conducted or as proposed to be conducted under this Agreement.

(3) It has all necessary corporate power and authority to execute and deliver this Agreement and to perform its obligations under this Agreement, and the execution and delivery of this Agreement and the performance by it of this Agreement have been duly authorized by all necessary corporate action on its part.

(4) The execution and delivery of this Agreement and the performance by it of this Agreement do not: (i) violate its organizational documents; (ii) violate any governmental requirements applicable to it; or (iii) result in a breach of or constitute a default of any material agreement to which it is a party.

(5) This Agreement has been duly and validly executed and delivered by it and constitutes its legal, valid and binding obligation enforceable against it in accordance with its terms, except as the same may be limited by bankruptcy, insolvency, regulatory authority, or other similar laws affecting

creditors' rights generally and by principles of equity regardless of whether such principles are considered in a proceeding at law or in equity.

(6) All material governmental authorizations have been obtained by it prior to the date hereof in connection with the due execution and delivery of, and performance by it of its obligations under, this Agreement, have been duly obtained or made and are in full force and effect.

8. General Provisions.

(a) This Agreement, including Exhibit A to this Agreement, represents the entire agreement between the Parties and supersedes any prior written or oral agreements or understandings between the Parties relating to the subject matter of this Agreement, including specifically the MOU, provided that nothing in this Agreement shall limit, repeal, or in any manner modify the existing legal rights, privileges, and duties of each of the Parties as provided by any other agreement, statute or any other law or applicable court or regulatory decision.

(b) This Agreement may not be amended except in writing signed by both of the Parties; provided, however, the Parties may mutually agree to changes in Exhibit A in accordance with Section 3(c). This Agreement may be modified to include one or more additional parties upon mutual agreement, not to be unreasonably withheld or delayed, of the then-current Parties, if the new party agrees to fund their share of implementation costs in a manner similar to PacifiCorp.

(c) Any waiver by a Party to this Agreement of any provision or condition of this Agreement must be in writing signed by each Party to be bound by such waiver, shall be effective only to the extent specifically set forth in such writing and shall not limit or affect any rights with respect to any other or future circumstance.

(d) This Agreement is for the sole and exclusive benefit of the Parties and shall not create a contractual relationship with, or cause of action in favor of, any third party.

(e) Neither Party shall have the right to assign its interest in this Agreement, including its rights, duties, and obligations hereunder, without the prior written consent of the other Party, which consent may be withheld by the other Party in its sole and absolute discretion. Any assignment made in violation of the terms of this Section 8(e) shall be null and void and shall have no force and effect.

(f) In the event that any provision of this Agreement is determined to be invalid or unenforceable for any reason, in whole or part, the remaining provisions of this Agreement shall be unaffected thereby and shall remain in full force and effect to the fullest extent permitted by law, and such invalid or unenforceable provision shall be replaced by the Parties with a provision that is valid and

enforceable and that comes closest to expressing the Parties' intention with respect to such invalid or unenforceable provision.

(g) Whenever this Agreement requires or provides that (i) a notice be given by a Party to the other Party or (ii) a Party's action requires the approval or consent of the other Party, such notice, consent or approval shall be given in writing and shall be given by personal delivery, by recognized overnight courier service, email or by certified mail (return receipt requested), postage prepaid, to the recipient thereof at the address given for such Party as set forth below, or to such other address as may be designated by notice given by any Party to the other Party in accordance with the provisions of this Section 8(g):

If to PacifiCorp:

PacifiCorp
825 NE Multnomah Street, Suite 2000
Portland, OR 97232
Attention: Senior Vice President, Strategic Business Performance
E-mail: Andrea.Kelly@PacifiCorp.com

If to the ISO:

California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Attention: Vice President, Technology
E-mail: PRistanovic@caiso.com

Each notice, consent or approval shall be conclusively deemed to have been given (i) on the day of the actual delivery thereof, if given by personal delivery, email or overnight delivery, or (ii) date of delivery shown on the receipt, if given by certified mail (return receipt requested).

(h) This Agreement may be executed in one or more counterparts (including by facsimile or a scanned image), each of which when so executed shall be deemed to be an original, and all of which shall together constitute one and the same instrument.

(i) Nothing contained in this Agreement shall be construed as creating a corporation, company, partnership, association, joint venture or other entity, 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.

(j) The decision to execute an EIM service agreement and participate in the EIM remains within the sole discretion of PacifiCorp and the decision whether

to proceed with development of the EIM remains within the sole discretion of the ISO.

(k) Nothing in this Agreement shall preclude a Party from exercising any rights or taking any action (or having its affiliates take any action) with respect to any other project, including an energy imbalance market or similar project that may compete with the Project or the EIM.

(l) Unless otherwise expressly provided, for purposes of this Agreement, the following rules of interpretation shall apply: (i) any reference in this Agreement to gender includes all genders, and the meaning of defined terms applies to both the singular and the plural of those terms; (ii) the insertion of headings are for convenience of reference only and do not affect, and will not be utilized in construing or interpreting, this Agreement; (iii) all references in this Agreement to any "Section" are to the corresponding Section of this Agreement unless otherwise specified; (iv) words such as "herein," "hereinafter," "hereof," and "hereunder" refer to this Agreement (including Exhibit A to this Agreement) as a whole and not merely to a subdivision in which such words appear, unless the context otherwise requires; (v) the word "including" or any variation thereof means "including, without limitation" and does not limit any general statement that it follows to the specific or similar items or matters immediately following it; and (vi) the Parties have participated jointly in the negotiation and drafting of this Agreement and, in the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as jointly drafted by the Parties and no presumption or burden of proof favoring or disfavoring any Party will exist or arise by virtue of the authorship of any provision of this Agreement.

9. Governing Law; Venue. This Agreement shall be governed by, and construed and interpreted in accordance with, the laws of the State of California without regard to its principles of conflicts of laws. Venue for any action hereunder shall be FERC, where subject to its jurisdiction, or in any Sacramento County state or Eastern District federal court located within the State of California. Each Party waives to the fullest extent permitted by law, any right it may have to contest venue and a right to trial by jury in respect of any suit, action, claim or proceeding relating to this Agreement.

10. Communication. The Parties shall develop a communication protocol for the dissemination of material information associated with the Project, which shall be approved by PacifiCorp and the ISO. Pursuant to the communication protocol, the individual identified in Section 8(g), or their designee or successor, shall provide reasonable advance notice to the other Party of planned press releases, public statements, and meetings with the public or governmental authorities in which material information concerning the Project will be shared. The Parties shall mutually consult with each other as provided in the communication protocol prior to making such public statements or disclosures; provided that nothing herein shall prevent, limit, or delay either Party from making any disclosure required by applicable law or regulation. In the event either Party engages in material

unplanned communications about the Project that otherwise should have been subject to this Section and the communication protocol, such Party shall provide notice to the other Party as promptly as possible of the nature and content of such communication.

11. Dispute Resolution. Unless otherwise provided herein, each of the provisions of this Agreement shall be enforceable independently of any other provision of this Agreement and independent of any other claim or cause of action. In the event of any dispute arising under this Agreement, the Parties shall first attempt to resolve the matter through direct good faith negotiation between the Parties, including a full opportunity for escalation within the Parties' respective organizations. If the Parties are unable to resolve the issue within thirty (30) days after presentation of the dispute, then for matters subject to FERC jurisdiction either Party shall have the right to file a complaint under Section 206 of the Federal Power Act. For all other matters, then:

(a) To the fullest extent permitted by law, each of the Parties hereto waives any right it may have to a trial by jury in respect of litigation directly or indirectly arising out of, under or in connection with this Agreement. Each Party further waives any right to consolidate, or to request the consolidation of, any action in which a jury trial has been waived with any other action in which a jury trial cannot be or has not been waived.

(b) If a waiver of jury trial is deemed by any court of competent jurisdiction to not be enforceable for any reason, then to the fullest extent permitted by law, each of the Parties hereto agrees to binding arbitration. Such arbitration shall be in accordance with the rules and procedures of the American Arbitration Association (AAA). Notwithstanding any AAA rules and procedures or any other provisions or any state or federal laws, the Parties agree that the arbitrators shall not consider or award punitive damages as a remedy. Upon request by either Party, AAA shall provide the Parties a list of arbitrators each of who have experience and expertise with respect to construction. Upon each of the Parties receipt of such list, each Party shall have ten (10) days to select an arbitrator. The two selected arbitrators shall then select a third arbitrator within thirty (30) days from the date the initial two arbitrators were selected and the matter subject to arbitration shall be arbitrated within sixty (60) days after the selection of the third arbitrator.

12. Third Party Agreements. The Parties may engage in discussions with third parties, either jointly or unilaterally, to facilitate the Project or EIM implementation process. Each Party may enter into binding agreements or tariffs or modify existing agreements or tariffs with these third parties to implement the approved terms and conditions of the Project or EIM as necessary and appropriate.

13. Compliance. Each Party shall comply with all federal, state, local or municipal governmental authority; any governmental, quasi-governmental, regulatory or administrative agency, commission, body or other authority

exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory or taxing authority or power, including FERC, NERC, WECC; or any court or governmental tribunal, in each case, having jurisdiction over either Party in connection with the execution, delivery and performance of its obligations under this Agreement. This Agreement is not intended to modify, change or otherwise amend the Parties' current functional responsibilities associated with compliance with WECC and NERC Reliability Standards; provided however, the Parties may enter into separate mutually agreed to arrangements to clarify roles and responsibilities associated with compliance with WECC and NERC Reliability Standards.

14. EIM Principles. The Parties recognize and acknowledge that input received from stakeholders during the course of implementing the Project, conditions imposed or questions raised in the EIM regulatory approval process, and analyses the Parties may perform or information the Parties receive or develop in the course of implementing the Project through the EIM stakeholder process or otherwise may require adjustments in the Project. Consistent with the foregoing, the Project shall nevertheless be implemented consistent with the following principles:

(a) The EIM market rules shall be contained in a discrete part of the ISO tariff to the extent this structure provides additional clarity to all EIM participants; provided, however, provisions generally applicable to the relationship between the ISO and market participants may be provided for by reference and applicable to EIM participants.

(b) Initial EIM governance and market rule oversight shall be consistent with existing ISO governance, allow for voluntary participation and expansion of participants and market activities, and evolve based on stakeholder feedback.

(c) The Parties shall consider whether and how to account for transmission service in the EIM stakeholder process.

(d) The EIM shall include an appropriate means to identify transactions that do not involve California resources or loads, or that otherwise occur outside the State of California, such that only the imbalance energy portion that is imported into California would be subject to any laws, regulations or costs associated with a California specific greenhouse gas compliance obligation.

(f) The EIM shall be implemented in a manner that is compatible with the Northwest Power Pool reserve sharing program and other existing and emerging market initiatives, including FERC Order No. 764 (and its progeny).

(g) Other entities may participate in the EIM within a timeframe to be determined by the ISO if they agree to fund their share of implementation costs pursuant to a FERC-accepted implementation agreement in a manner similar to PacifiCorp.

IN WITNESS WHEREOF, each of the Parties has caused its duly authorized officer to execute this Implementation Agreement as of the date first above written.

PACIFICORP

By: Andrea Kelly
Name: Andrea L. Kelly
Title: Senior Vice President, Strategic Business Performance

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

By: Karen Edson
Name: Karen Edson
Title: Vice President, Policy and Client Services

EXHIBIT A: PROJECT SCOPE AND SCHEDULE

The Project consists of the activities and delivery dates identified in this Exhibit A, implemented in accordance with the Agreement, including specifically the principles set forth in Section 14.

The Parties understand that input received from stakeholders during the course of implementing the Project, conditions imposed or questions raised in the regulatory approval process, and the activities of the Parties in implementing the Project may cause the Parties to determine that changes in the Project are necessary or desirable. Accordingly, this Exhibit A may be modified in accordance with Section 3(c) of the Agreement.

Each Party is responsible for performing a variety of tasks necessary to achieve the milestones on schedule and shall plan accordingly. The Parties shall communicate and coordinate as provided in the Agreement to support the planning and execution to complete the Project.

Project Scope and Milestones	Project Delivery Dates
<p>Detailed Project Management Plan – The Parties will develop and initiate a final project management plan that describes specific project tasks each Party must perform, delivery dates, project team members, meeting requirements, and a process for approving changes to support completion of the Project.</p>	<p>May 31, 2013</p>
<ul style="list-style-type: none"> • Milestone 1 – The Agreement must be made effective in accordance with Section 1 of the Agreement to complete this milestone. 	<p>July 1, 2013</p>
<p>Full Network Model Expansion – Full Network Model expansion for PacifiCorp and EMS/SCADA, including, proof of concept of export/import of EMS data; complete PACE and PACW model into the ISO test model; complete validation for all SCADA points from PacifiCorp; complete testing of the new market model; and validation of the Outage, State Estimator, Real Time Contingency Analysis, and Automatic Generation Control applications.</p>	<p>November 22, 2013</p>
<ul style="list-style-type: none"> • Milestone 2 - This milestone is completed upon the modeling PacifiCorp into the ISO Full Network Model through the EMS which will be deployed using the ISO's network and resource modeling process. 	<p>December 6, 2013</p>
<p>System Implementation Program Improvements – System requirements and software design, the execution of necessary software vendor contracts, technical interface specifications and configuration guides, and other related activities.</p>	<p>April 1, 2014</p>

<ul style="list-style-type: none"> • Milestone 3 - For PacifiCorp and the ISO to exchange production data (market inputs and outputs) and complete this milestone, the ISO will provide to PacifiCorp all final technical specifications for application program interface (API) specifications, metering specifications and settlement specifications. Final technical specifications related to some systems may be required earlier as provided in the project management plan. 	<p>April 8, 2014</p>
<p>Construction, Testing and Training in Preparation for Market Simulation - This task includes IT infrastructure upgrades, security testing, training simulators, and functional testing.</p>	<p>July 1, 2014</p>
<ul style="list-style-type: none"> • Milestone 4 - The EIM market simulation will allow PacifiCorp and the ISO to conduct specific market scenarios in a test environment prior to the production deployment to ensure that all system interfaces are functioning as expected and to produce simulated market results. To complete this milestone, the commencement of EIM simulation will signal that the PacifiCorp and the ISO have independently completed EIM system design, development and testing to participate in joint testing. 	<p>July 8, 2014</p>
<p>System Deployment and Go Live – Implementing the Project and going live will include resource registration, operating procedures and updates, execution of service agreements, completion of the policy and tariff stakeholder processes, applicable board approvals, the filing and acceptance of tariff changes with FERC, and the development of new and updated Business Practice Manuals.</p>	<p>September 30, 2014</p>
<ul style="list-style-type: none"> • Milestone 5 – This milestone is complete upon the first production energy imbalance market trade date. 	<p>October 1, 2014</p>

Attachment B

Declaration of Michael K. Epstein

Energy Imbalance Market Implementation Agreement

between the ISO and PacifiCorp

California Independent System Operator

April 30, 2013

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

**California Independent System) Docket No. ER13 ____-000
Operator Corporation)**

**DECLARATION OF MICHAEL K. EPSTEIN
ON BEHALF OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

I, Michael K. Epstein, state as follows:

1. I am employed as Director of Financial Planning for the California Independent System Operator Corporation (the "ISO"). My business address is 250 Outcropping Way, Folsom, California 95630. I am responsible for the ISO's budget preparation and management; long term planning; accounting for the FERC refund case; market cash settlements; and audit coordination for all the ISO's settlement and operations activities. As part of my duties at the ISO, I oversee the development of the ISO's grid management charge.
2. I received both an MBA and a BA with a major in accounting from the University of Southern California in Los Angeles, California. Prior to my current position, I was the Controller of the ISO from 1997 - 2009. From 1994 – 1997, I was Vice President (Finance) of Siskon Gold Corporation, a publicly-traded mining company located in Grass Valley, California. From 1989 -1994, I was Controller of the Grupe Company, a privately held diversified real estate company located in Stockton, California. From

1985-1989, I was Controller of Brush Creek Mining and Development Company located in Auburn, California. Prior to that, I was a Certified Public Accountant in the practice of public accounting with both local and international accounting firms.

3. The purpose of my declaration is to provide cost support for the fixed implementation fee that the ISO proposes to charge PacifiCorp for the development and implementation of the energy imbalance market under the Implementation Agreement that the ISO is filing today.

The Implementation Fee

4. The implementation fee is based on the ISO's estimate of the start-up cost of implementing an energy imbalance market that could ultimately accommodate the entire Western Electric Coordinating Council ("WECC"), should the WECC utilities all choose to participate.
5. As explained below, the ISO estimates that the total start-up cost for the energy imbalance market would be \$18.3 million. (Throughout this declaration, I am rounding millions to a single decimal point.) The ISO would not incur this entire cost up front, however. Rather, the ISO would incur the costs incrementally as the imbalance energy activity from additional balancing authority areas is incorporated into the market.
6. This total cost comprises eleven components: licenses, \$10.8 million; energy management system upgrades, \$1.0 million; data storage, \$2.0 million; hardware upgrades, \$500,000; production software modification, \$1.0 million; and network configuration and mapping, \$500,000;

integration, \$500,000; testing, \$1.5 million; system performance tuning, \$250,000; training and operations readiness, \$150,000; and project management, \$100,000.

Licenses

7. To estimate the license costs, the ISO used the costs for its existing licenses for software systems development for scheduling infrastructure, integrated forward market, real time market and market quality system, and settlements software. The total base fees for the contracts covering these services is \$4.5 million. The fees in certain cases include a provision for a fee increase for each specified increment of additional ISO peak demand. The detail for these contracts are confidential, so I will need to describe the process without identifying the specific data.
8. Because the information on peak loads was not readily available, the ISO decided to estimate costs by applying the 10% incremental cost to annual net energy for loads. The definition of “net energy for load” is posted on the WECC website. It comprises imports plus generation less exports with specific exclusions. Net energy for load is reported to WECC annually by each balancing authority area and used by WECC to allocate its reliability costs to each balancing authority area. The net energy for load (which I will hereafter refer to as load) for each balancing authority area is included with WECC’s billing to the balancing authority area for reliability costs. It is the most consistent and available data on all balancing authority areas in WECC. The ISO used the 2009 load, which was included in the 2010

- billing, for this allocation. The 2009 annual load for the ISO was 231.9 million MWh. Using this data, the ISO estimated that what increment in ISO load would occasion a specific amount of additional license costs.
9. The WECC load, exclusive of the ISO, is 616.0 million MWh. The ISO calculated that this is a particular multiple of the load increments used in the license contracts. The ISO calculated the product of this multiple and the increased costs associated with the contractual increment. Using this methodology, the ISO estimates the license costs for implementing a WECC-wide energy imbalance market would be 24 times \$450,000, or \$10.8 million.

Data Storage

10. The ISO will need to procure additional data storage to account for the expanded data requirements associated with integrating all WECC balancing authority areas into ISO systems. The storage will provide the required highly available and redundant storage as well as cover long term archiving.
11. The storage for current ISO production requires 200 terabytes at a cost of approximately \$7.5 million. The ISO estimates that it will require a 10% increase for additional storage and faster retrieval, which would equate to \$750,000 at the same rate. Additional cabinets and ports will cost \$500,000 and licensing for databases, monitoring, storage, backups, etc. will be \$750,000, for a total cost of \$2.0 million.

Hardware Upgrades

12. Hardware upgrades will be necessary to meet the market timeline requirements, including 5 minute dispatch. These upgrades include servers and supporting network systems to provide the needed availability, reliability, and performance.
13. The ISO currently uses about 100 servers. The ISO estimates that it will need an additional 10%, or ten servers, with an estimated cost of \$30,000 each, for a total of \$300,000. The ISO also estimates \$200,000 of networking and data acquisition costs for a total hardware upgrade cost of \$500,000.

Network Configuration and Mapping, Integration, System Performance Tuning.

14. The ISO will need to include the other energy imbalance market balancing authority areas into the ISO's network model and market model. It must also (1) integrate system interfaces to enable data exchange between systems to meet business and system requirements and (2) measure and analyze performance in a non-production environment and mitigate any identified performance issues to ensure that production performance is as expected.
15. The ISO project management team determined the costs of these activities in consultation with the relevant directors and managers of the affected departments by estimating the level of effort required based on an extrapolation from the level of effort necessary for similar past activities. The staff consulted has extensive experience in estimating costs in this

area. In particular, the ISO in 2009 completed a \$200 million implementation of a new market design and annually thereafter has carried out software implementation, modification and redesign projects averaging about \$20 million each.

Energy Management System Upgrades, Production Software Modification, and Testing

16. To build the energy imbalance market for the entire WECC region, the ISO will need to improve the existing energy management system, which currently supports the ISO control area with a peak demand of 50,000 MW. These system improvements would enable the ISO to integrate the imbalance energy for the additional balancing authority areas within the four second data resource time.
17. The ISO will also require production software modifications to support new inputs and outputs associated with the energy imbalance market, including base schedules.
18. Following the system integration described above, the ISO will need to conduct testing to ensure that it meets all energy imbalance market business and system requirements.
19. The ISO project management team determined the costs of these activities in consultation with the relevant directors and managers of the affected departments by estimating the resources (contractors and consultants) needed based on an extrapolation from the resources that the ISO has required for recent software changes and modifications. As

described above, the staff consulted has extensive experience in estimating costs in this area.

Training and Operations Readiness, and Project Management

20. Similarly, ISO project management personnel determined the costs of these activities in consultation with the relevant directors and managers of the affected disciplines by estimating the level of effort required based on an extrapolation from the level of effort necessary for similar past activities. As described in paragraph 14 above, the staff consulted has extensive experience in estimating costs in this area.

Derivation of Implementation Fee

21. Having determined that the total cost of implementing the WECC-wide energy imbalance market would be \$18.3 million, the ISO proceeded to develop a rate that could be used for individual participants. To do so, the ISO divided the \$18.3 million total cost by the 616.0 million MWh of non-ISO net energy for load in the WECC, for a rate of \$0.03/MWh.
22. Finally, to determine the PacifiCorp fee as established in the Implementation Agreement, the ISO applied the rate to PacifiCorp's most recently reported net energy for load for 2011 of 68.7 million MWh, for a rounded total of \$2.1 million.

Comparison of PacifiCorp Fee to Generic Rate

23. Although the ISO intends to base the implementation fee on a generic rate that would reasonably allocate the costs of an WECC-wide energy imbalance market to all potential participants, the ISO thought it

worthwhile to compare PacifiCorp's fee based on the \$.03/MWh rate with an estimate of the specific costs of expansion of the existing energy imbalance market to include PacifiCorp. Using the same process described above, the ISO estimated the costs that appear in the following table:

Software license costs	\$900
Production software modifications	600
Network configuration and mapping	75
Integration	75
Testing	300
Training and operations readiness	100
Project Management	50
Total	\$2,100

24. As is readily apparent, although the total costs are the same, the proportion of the total PacifiCorp-specific costs that each component represents differs from proportion of the WECC-wide costs that the component represents. For example, the ISO will incur no additional storage costs or EMS upgrade, but to integrate PacifiCorp, the ISO will need to incur the majority of total production software costs up front. Although the PacifiCorp-specific costs are the same as the PacifiCorp fee based on the generic rate, the ISO cannot determine at this time if this will be the case with regard to all future participants. Nonetheless, the ISO has concluded that the generic fee represents the most equitable methodology of allocating the costs of a WECC-wide energy imbalance market.

I hereby certify under penalty of perjury that the foregoing statements are true and correct to the best of my knowledge, information, and belief:

Executed on: April 30, 2013

/s/ Michael K. Epstein
Michael K. Epstein