



March 7, 2012

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

Re: California Independent System Operator Corporation Docket No. ER11-4353-____ Regulation Energy Management and Non-Generator Resources

Dear Secretary Bose:

The California Independent System Operator Corporation (ISO) submits this filing to modify the effective date of its tariff provisions for regulation energy management and non-generator resource functionality from April 10, 2012 until on or after November 27, 2012, subject to two weeks prior notice to the Commission as to the actual effective date.¹ The ISO also requests that the Commission waive the requirement of 18 C.F.R. § 35.3 that a rate schedule be filed not more than 120 days from the effective date. The additional time is necessary for the ISO to develop and test software and market systems.

I. Background

On August 22, 2011, the ISO filed a tariff amendment to establish tariff rules for regulation energy management for non-generator resources. The purpose of this tariff amendment was to expand participation by non-generator resources in the ISO's ancillary services market. Non-generator resources are resources that can operate as generation or load, or both. These resources have the capability to be dispatched to any operating level within their operating range but can be subject to constraints with respect to the amount of energy they can

¹ On February 3, 2012, the ISO filed a motion in this docket to modify the effective date of its tariff provisions for regulation energy management and non-generator resource functionality. No party opposed the ISO's request for relief. Commission staff has informed the ISO that it is necessary to resubmit this request for relief in the form of a compliance filing in order to effect changes to the ISO's tariff records in the Commission's E-tariff system.

The Honorable Kimberly D. Bose March 7, 2012 Page 2

generate or curtail. Examples of non-generator resources include, but are not limited to, battery storage, flywheels and dispatchable demand response.

The Commission accepted the ISO's proposed tariff revisions on November 30, 2011.² The tariff revisions will allow non-generator resources to bid their capacity more effectively into the ISO's regulation markets. The tariff revisions will also ensure that the ISO's market appropriately recognizes the operating constraints of non-generator resources that elect not to use regulation energy management. The ISO requested an order accepting these tariff revisions by November 30, 2011 to provide the ISO sufficient time to work with non-generator resource owners and scheduling coordinators for testing and other readiness activities in anticipation of an April 10, 2012 production date.

As explained in greater detail below, the ISO has experienced delays in developing the necessary market software to launch regulation energy management as well as the generic functionality to support non-generator resources. Moreover, scheduling coordinators have not requested to use this market functionality in connection with physical resources in the April 2012 timeframe. In order to ensure the ISO can successfully develop, test and move regulation energy management and the generic functionality for non-generator resources into production, the ISO respectfully asks for the Commission to grant this request. The ISO informed market participants of the need to modify the effective date for its regulation energy management and non-generator tariff provisions at its January 30, 2012 market performance and planning forum.

II. Request to Modify the Effective Date

The ISO requires additional time to implement regulation energy management and non-generator resource functionality. The ISO proposes to change the effective date for this functionality from April 10, 2012 until on or after November 27, 2012, which is the date targeted for the ISO's fall market release. The ISO intends to refile these tariff sheets with the actual effective date two weeks prior to the actual date the ISO places regulation energy management and non-generator resource functionality into production. The Commission has recently permitted this approach to establish an effective date when entities are implementing automated software systems.³

² California Independent System Operator Corp. 137 FERC ¶ 61,165 (November 2011). The Commission accepted the ISO's proposed changes to Appendix K of its tariff (Appendix K) to become effective December 1, 2011, and accepted all other proposed tariff revisions to become effective April 10, 2012. This filing addresses the tariff revisions to become effective on April 10, 2012.

³ See ISO New England Inc. 137 FERC ¶ 61,120 (November 2011) at P 30.

The Honorable Kimberly D. Bose March 7, 2012 Page 3

Good cause exists to change the effective date for these tariff provisions. The ISO's main vendor has experienced delays in delivering the complete model required to implement regulation energy management and non-generator resource functionality. The ISO does not expect its vendor to deliver the complete model before the end of May 2012. Once the ISO receives the complete model from its vendor, the ISO will need to integrate this model into its internal applications and market systems, including settlements. The ISO plans to undertake testing to ensure the addition of this new non-generator resource model does not affect existing functionality. This testing is critical to ensure operation of the ISO's software and market systems to allow the successful launch of regulation energy management and non-generator resource functionality. This testing will not be complete until the summer, during which time the ISO generally avoids implementing market software changes. For these reasons, the ISO is requesting to implement regulation energy management as part of its fall 2012 market release.

Accordingly, the ISO now plans to conduct a phased market simulation to allow market participants to gain experience with the regulation energy management and non-generator resource functionality. The ISO will outline the scope of each market simulation phase for stakeholders as part of its project implementation plan. Phase 1 of the market simulation will address operation of the non-generator resource model for resources to provide regulation energy management. This phase of the market simulation will not include any physical resources but instead allow market participants to analyze the economics of a potential non-generator resource providing regulation with the use of regulation energy management. Phase 1 of the ISO's market simulation will not include outage management functionality or compliance monitoring of non-generator resources. Phase 2 of the market simulation will address the remainder of the non-generator resource model supporting the ability for non-generator resources to participate with or without the use of regulation energy management. Phase 2 will be open to participation by physical resources and will include outage management functionality and compliance monitoring for non-generator resources.

The ISO believes a successful market launch of regulation energy management and non-generator resource functionality outweighs any prejudice to parties that may result from granting the ISO an extension of time. Importantly, at this time, there are no physical resources requesting that the ISO move regulation energy management into production by April 10, 2012. The ISO anticipates that some resources may come online during the summer and fall of 2012. But the ISO believes a phased market simulation can accommodate these resources' needs to conduct necessary testing. The Honorable Kimberly D. Bose March 7, 2012 Page 4

III. Attachments

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

Attachment A Revised ISO tariff sheets that incorporate a legend identifying a new effective date

IV. Conclusion

The ISO requires additional time to complete necessary software testing for regulation energy management. Accordingly, the ISO proposes to modify the effective date from April 10, 2012 until on or after November 27, 2012 for its tariff provisions applicable to regulation energy management and non-generator resource functionality. The ISO commits to provide two weeks prior notice to the Commission as to the actual effective date.

Please contact the undersigned if you have any questions regarding this matter.

Respectfully submitted,

<u>By: /s/ Andrew Ulmer</u>

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CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all of the parties listed on the official service list for the above referenced proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2011).

Dated at Folsom, California this 7th day of March, 2012.

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Attachment A

California Independent System Operator Corporation Fifth Replacement FERC Electric Tariff Regulation Energy Management - Request to Modify Effective Date

4.6 Relationship Between CAISO And Generators THIS SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

The CAISO shall not accept Bids for any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to accept Bids from Scheduling Coordinators relating to Generation from any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area unless the relevant Generator undertakes in writing, by entering into a Participating Generator Agreement, QF PGA, or Metered Subsystem Agreement with the CAISO, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7. The CAISO shall not accept Bids from Scheduling Coordinators relating to Generator undertakes in writing, by entering into a Participating Generator undertakes in writing, by entering into a ccept Bids from Scheduling Coordinators relating to Generation from a Non-Generator Resource unless the resource owner or operator undertakes in writing, by entering into a Participating Generator Agreement and Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7.

4.7 Relationship Between CAISO And Participating Loads THIS SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012

The CAISO shall only accept Bids for Supply of Energy or Ancillary Services or Submissions to Self-Provide Ancillary Services from Loads if such Loads are those of a Participating Load that has entered into a Participating Load Agreement with the CAISO and which meet standards adopted by the CAISO and published on the CAISO Website. The CAISO shall not accept submitted Bids for Supply of Energy or Ancillary Services from a Participating Load other than through a Scheduling Coordinator. The CAISO shall not accept Bids from Scheduling Coordinators relating to Load from any Non-Generator Resource unless the resource owner or operator undertakes in writing, by entering into a Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time.

8.4.1.1 Regulation

THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

A resource offering Regulation must have the following operating characteristics and technical capabilities:

- (a) it must be capable of being controlled and monitored by the CAISO EMS by means of the installation and use of a standard CAISO direct communication and direct control system, a description of which and criteria for any temporary exemption from which, the CAISO shall publish on the CAISO Website;
- (b) it must be capable of achieving at least the Ramp Rates (increase and decrease in MW/minute) stated in its Bid for the full amount of Regulation capacity offered;
- (c) the Regulation capacity offered must not exceed the maximum Ramp Rate
 (MW/minute) of that resource times a value within a range from a minimum of ten
 (10) minutes to a maximum of thirty (30) minutes, which value shall be specified
 by the CAISO and published on the CAISO Website;
- (d) the resource to CAISO Control Center telemetry must, in a manner meeting
 CAISO standards, include indications of whether the resource is on or off CAISO
 EMS control at the resource terminal equipment;
- (e) the resource must be capable of the full range of movement within the amount of Regulation capability offered without manual resource operator intervention of any kind;
- (f) each Ancillary Service Provider must ensure that its CAISO EMS control and related SCADA equipment for its resource are operational throughout the time period during which Regulation is required to be provided; and
- (g) Regulation capacity offered must be dispatchable on a continuous basis for at least sixty (60) minutes in the Day-Ahead Market and at least thirty (30) minutes in the Real-Time Market after issuance of the Dispatch Instruction. The CAISO will measure continuous Energy from the time a resource reaches its award capacity. Scheduling Coordinators for Non-Generator Resources located within

the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation may request the use of Regulation Energy Management as described in Section 8.4.1.2.

8.4.1.2 Regulation Energy Management

THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

The CAISO will make Regulation Energy Management available to Scheduling Coordinators for Non-Generator Resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation. A Scheduling Coordinator for a resource using Regulation Energy Management may submit a Regulation Bid for capacity (MW) of up to four (4) times the maximum Energy (MWh) the resource can generate or curtail for fifteen (15) minutes after issuance of a Dispatch Instruction. In the Real-Time Market, a Scheduling Coordinator for a resource using Regulation Energy Management will procure Imbalance Energy as needed to satisfy the sixty (60) minute continuous Energy requirement for Regulation Awards in the Day-Ahead Market.

Scheduling Coordinators may request to use Regulation Energy Management for these Non-Generator Resources by submitting a request to certify such a resource to provide Regulation using Regulation Energy Management. The owner or operator of a Resource using Regulation Energy Management must execute both a Participating Generator Agreement and/or Participating Load Agreement and may provide only Regulation in the CAISO Market. A resource using Regulation Energy Management may not provide Energy other than Energy associated with Regulation. Scheduling Coordinators for Resources using Regulation Energy Management may define a Ramp Rate for operating as Generation and a Ramp Rate for operating as Load, respectively. These resources shall comply with the requirements to provide Regulation as specified in this Section 8, Appendix K, and the CAISO's Operating Procedures, including the requirement to undergo a market simulation using Regulation Energy Management as part of the certification procedure.

Scheduling Coordinators for resources using Regulation Energy Management shall register these resources in the Master File. Scheduling Coordinators may only submit Bids for Regulation Up and Regulation Down for these resources. Scheduling Coordinators may not submit Energy Bids, Energy Self-Schedules, Residual Unit Commitment Bids, or Ancillary Service Bids other than Regulation for these

resources. Scheduling Coordinators may not submit any type of commitment costs as part of their Regulation Up and Regulation Down Bids for resources using Regulation Energy Management, including Start-Up Cost, Minimum Load Costs, Pumping Cost or Pump Shut-Down Costs, or Transition Cost. All other bidding rules for Regulation set forth in Section 30 shall apply to resources using Regulation Energy Management.

The CAISO will settle Dispatches from resources using Regulation Energy Management as Instructed Imbalance Energy. The portion of Demand of Non-Generator Resources using Regulation Energy Management that is dispatched as Regulation in any Settlement Interval shall not be considered Measured Demand for purposes of allocating payments and charges pursuant to Section 11 during that Settlement Interval.

The CAISO shall control the resource's operating set point through its Energy Management System with the objective of maintaining the resource's operating set point at its preferred operating point. In the Day-Ahead Market and Real-Time Unit Commitment, the procurement of Regulation from resources using Regulation Energy Management will not be constrained by the resource's MWh limit to generate, curtail the consumption of, or consume Energy continuously. In the Real-Time Dispatch, the CAISO will base the Dispatches on the resource's capability to provide Regulation. When the resource has a physical MWh limit, the CAISO will observe the resource's MWh constraint during Real-Time Dispatch and will assess whether the CAISO can support the resource's self-provided Regulation capacity or Regulation award with Real-Time Unit Commitment processes that the MWh constraint of resources using Regulation Energy Management limits the capability of the CAISO, through Real-time Dispatch, to support these resources' self-provided Regulation Energy Management limits the capability of the CAISO, through Real-time Dispatch, to support these resources' self-provided Regulation Energy Management on a pro rata basis across the System Region from providing Regulation, which shall result in the rescission of the disqualified portion of the resource's self-provided regulation capacity payments.

8.4.1.3 Voltage Support

THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

A Generating Unit providing Voltage Support must be under the control of generator automatic voltage regulators throughout the time period during which Voltage Support is required to be provided. A Generating Unit may be required to operate underexcited (absorb reactive power) at periods of light system Demand to avoid potential high voltage conditions, or overexcited (produce reactive power) at periods of heavy system Demand to avoid potential low voltage conditions.

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8.10.8.4 Rescission of Ancillary Service Capacity Payments for Non-Generator Resources THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

For Non-Generator Resources, payment for Ancillary Service capacity will be rescinded, in accordance with the provisions of Section 11.10.9, to the extent the resource is unable as a result of its MWh constraint to generate Energy or consume Energy continuously to support its self-provision or award of Ancillary Services.

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8.10.8.6 Rescission of Payments for Regulation Up and Regulation Down Capacity THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

Payment for Regulation Up and Regulation Down capacity will be rescinded, in accordance with the provisions of Section 11.10.9, if the resource providing Regulation Up and Regulation Down capacity: (i) is off Regulation or off Automatic Generation Control, (ii) is not running, (iii) is not providing sufficient Regulating Range, (iv) is generating outside the Regulating Range, (v) has a Regulating Range that overlaps with its Forbidden Operating Regions, or (vi) has telemetry equipment that is not available. In addition to these criteria, payment for Regulation Up and Regulation Down capacity to Non-Generator Resources will be rescinded, in accordance with the provisions of Section 11.10.9, to the extent the resource is unable as a result of its MWh constraint to generate Energy (or curtail Energy consumption) continuously to support its self-provision or award of Regulation Up or unable as a result of its MWh constraint to consume Energy (or increase Energy consumption) continuously to support its self-provision or award of Regulation Up or unable as a result of its MWh constraint to consume Energy (or increase Energy consumption) continuously to support its self-provision or award of Regulation Devention Support its self-provision or award of Regulation Energy Management.

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11.8Bid Cost RecoveryTHIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

For purposes of determining the Unrecovered Bid Cost Uplift Payments for each Bid Cost Recovery Eligible Resource as determined in Section 11.8.5 and the allocation of Unrecovered Bid Cost Uplift Payments for each Settlement Interval, the CAISO shall sequentially calculate the Bid Costs, which can be positive (IFM, RUC or RTM Bid Cost Shortfall) or negative (IFM, RUC or RTM Bid Cost Surplus) in the IFM, RUC and the Real-Time Market, as the algebraic difference between the respective IFM, RUC or RTM Bid Cost and the IFM, RUC or RTM Market Revenues, which is netted across the CAISO Markets. In any Settlement Interval a resource is eligible for Bid Cost Recovery payments only if it is On, or in the case of a Participating Load or a Proxy Demand Resource, only if the resource has actually stopped or started consuming pursuant to the Dispatch Instruction. BCR Eligible Resources for different MSS Operators are supply resources listed in the applicable MSS Agreement. All Bid Costs shall be based on mitigated Bids as specified in Section 39.7. Virtual Awards are not eligible for Bid Cost Recovery. Virtual Awards are eligible for make-whole payments due to price corrections pursuant to Section 11.21.2. In order to be eligible for Bid Cost Recovery, Non-Dynamic Resource-Specific System Resources must provide to the CAISO SCADA data by telemetry to the CAISO's EMS in accordance with Section 4.12.3 demonstrating that they have performed in accordance with their CAISO commitments. Scheduling Coordinators for Non-Generator Resources are not eligible to recover Start-Up Costs, Minimum Load Costs, Pumping Costs, Pump Shut-Down Costs, or Transition Costs but are eligible to recover Energy Bid Costs, RUC Availability Payments and Ancillary Service Bid Costs.

27.9 Non-Generator Resources MWh Constraints

THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

The CAISO will observe Non-Generator Resources' MWh constraints in the IFM as part of the cooptimization unless the resources are using Regulation Energy Management. The CAISO will observe Non-Generator Resources' MWh constraints in RUC as part of the co-optimization unless the resources are using Regulation Energy Management. The CAISO will observe Non-Generator Resources' MWh constraints in Real-Time Unit Commitment as part of the co-optimization unless the resources are using

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Regulation Energy Management. The CAISO will observe Non-Generator Resources' MWh constraints in Real-Time Dispatch, including constraints of resources using Regulatory Energy Management.

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Appendix A Master Definitions Supplement

- Measured Demand THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

The metered CAISO Demand plus Real-Time Interchange Export Schedules, excluding that portion of Demand of Non-Generator Resources dispatched as Regulation through Regulation Energy Management.

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- Non-Generator Resources THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

Resources that operate as either Generation or Load and that can be dispatched to any operating level

within their entire capacity range but are also constrained by a MWh limit to (1) generate Energy, (2)

curtail the consumption of Energy in the case of demand response, or (3) consume Energy.

* * *

- Regulation Energy Management

THIS TARIFF SECTION WILL BECOME EFFECTIVE ON NOVEMBER 27, 2012.

A market feature for resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation, as described in Section 8.4.1.2.