

July 27, 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. ER12-50-____
Offer of Settlement**

Dear Secretary Bose:

The California Independent System Operator submits for filing the attached Offer of Settlement regarding the ISO Flexible Ramping Constraint Amendment under Rule 602 of the Federal Energy Regulatory Commission's Rules of Practice and Procedure, 18 C.F.R § 385.602 (2012). In accordance with Rule 602 this Offer of Settlement also contains a separate explanatory statement and proposed tariff modifications.

Respectfully submitted,

By: /s/ Anna McKenna

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

**California Independent System
Operator Corporation**

Docket No. ER12-50-000

OFFER OF SETTLEMENT

The California Independent System Operator Corporation (the “ISO”) submits this Offer of Settlement, including the Explanatory Statement in Attachment A and the Revised Tariff Provisions in Attachment B, in order to resolve all issues in this proceeding. Each party to this proceeding (“Party,” or collectively, “Parties”) has authorized the ISO to state that such party either supports or does not oppose the Offer of Settlement.¹

1. DEFINITIONS

1.1 All defined terms in this Offer of Settlement have the meanings set forth in the ISO’s open access transmission tariff, as amended or supplemented from time to time, provided that such amendments or supplements of the defined terms shall not alter any rights or obligations set forth in the Offer of Settlement.

¹ The following parties have advised the ISO that they either support or do not oppose this Offer of Settlement: California Department of Water Resources State Water Project; Calpine Corporation; Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California; City of Santa Clara, California and the M-S-R Public Power Agency; Dynegy Marketing and Trade, LLC, et al.; GenOn Energy Management, LLC, GenOn Delta, LLC and GenOn West, LP; J.P. Morgan Ventures Energy Corporation and BE CA LLC; Modesto Irrigation District; Northern California Power Agency; NRG Companies; Pacific Gas and Electric Company; Powerex Corp.; San Diego Gas & Electric Company; Southern California Edison Company; NextEra Energy Resources, LLC and Western Power Trading Forum.

2. RESOLUTION OF ALL ISSUES RAISED IN THIS PROCEEDING

2.1 All issues raised in this proceeding² will be fully resolved by the Commission's acceptance, without modification or suspension, of the proposed ISO tariff provisions that are included in Attachment B, Revised Tariff Provisions, to this Offer of Settlement.

2.2 The ISO respectfully requests that the Commission issue an order in this proceeding accepting the Offer of Settlement without modification or condition ("Settlement Order") and accept the ISO tariff modifications which the ISO has included in Attachment B to this Offer of Settlement consistent with Section 385.602 (c)(2) of the Commission's Rules of Practice and Procedure.³ The ISO commits under this Offer of Settlement to submit a compliance filing that contains the Revised Tariff Provisions within fifteen (15) calendar days after the date on which the Commission issues its Settlement Order.

3. SUMMARY OF CHANGES BY TARIFF SECTION

3.1 Section 11.25 is modified to incorporate the new payment structure, on which basis the ISO will rescind payments for non-performance, and the allocation of costs associated with the Flexible Ramping Constraint.

3.2 Section 11.25.1 is added to reflect the compensation to resources that have been identified as having contributed to the relief of the Flexible Ramping Constraint. Whereas under the methodology currently on file with the Commission, resources were compensated based on the Flexible Ramping

² *Cal. Indep. Sys. Operator Corp.*, 137 FERC ¶ 61,191 (2011) ("December 12 Order").

³ 18 C.F.R § 385.602 (c)(2) (2012).

Constraint shadow price, resources eligible to contribute to relieving the Flexible Ramping Constraint would be compensated based on a price that would be derived as follows. Scheduling coordinators would be paid if their resources are identified as having resolved the Flexible Ramping Constraint, *i.e.*, if awarded Flexible Ramping Capacity, in the applicable real-time unit commitment (RTUC) interval, whether or not the Flexible Ramping Constraint is binding in that interval. Proposed Section 11.25.1 also provides that the payment will be limited by the quantity of Flexible Ramping Constraint requirements set by the ISO operators. The scheduling coordinator will be paid the product of the upward MW of capacity identified to satisfy the constraint and the Flexible Ramping Constraint derived price for each applicable fifteen-minute RTUC interval. For each applicable fifteen-minute RTUC interval, the Flexible Ramping Constraint derived price will be equal to the lesser of:

- 1) \$800/MWh; or
- 2) the greater of:
 - (a) 0;
 - (b) the Real-time Ancillary Services Marginal Price for Spinning Reserves for the applicable fifteen-minute RTUC interval; or
 - (c) the Flexible Ramping Constraint Shadow Price minus seventy-five percent of the maximum of (i) zero (0); or (ii) the Real-Time System Marginal Energy Cost, calculated as the simple average of the three five-minute Dispatch Interval System Marginal Energy Costs in the applicable fifteen-minute RTUC interval.

3.3 Section 11.25.2 is added to include the terms for rescission of payments to resources made pursuant to Section 11.25.1. The ISO will rescind payments to scheduling coordinators for the non-performance of resources for the MWs deemed to be undelivered Flexible Ramping Constraint capacity. Undelivered Flexible Ramping Constraint capacity will be determined as the hourly sum of the Settlement Interval amounts of the minimum of: 1) the Flexible Ramping Constraint capacity identified as having contributed to the relief of the Flexible Ramping Constraint; and 2) the maximum of: (a) 0 (zero); and (b) the difference between (i) the absolute value of the sum of negative Tier 1 UIE and negative Tier 2 UIE,⁴ and (ii) the upward MWs identified as Undelivered Ancillary Services Capacity as already defined in Section 11.10.9.3 of the ISO tariff.

3.4 Section 11.25.3 is added to reflect the method in which the ISO will allocate the total costs incurred for payment to resources for Flexible Ramping Constraint capacity procured. The total Flexible Ramping Constraint costs are determined by netting out the amounts rescinded per Section 11.25.2 from the total payments made to resources for the Flexible Ramping Constraint awards. These total netted costs will be divided in two portions and each portion will be allocated as follows.

3.5 The new section 11.25.3.1 provides that seventy-five percent of the total netted costs will be allocated to scheduling coordinators based on their Measured Demand for each applicable Trading Hour. Each scheduling coordinator will be assessed a portion of these costs based on the scheduling

⁴ Tier 1 and Tier 2 UIE would be determined as already defined in Section 11.5.2 of the ISO Tariff.

coordinator's Measured Demand for the applicable trading hour divided by total market Measured Demand for the applicable trading hour.

3.6 The new section 11.25.3.2 provides that twenty-five percent of the total netted costs will be allocated to scheduling coordinators based on each scheduling coordinator's gross negative supply deviations . This is accomplished using a two-step process. First, on a daily basis each scheduling coordinator will receive a portion of the twenty-five percent of the total netted costs for that trading day based on the scheduling coordinator's daily gross negative supply deviations for that trading day divided by total market daily gross negative supply deviations for that trading day. Second, at the end of each month the daily charges will be reversed and the total of the amounts initially allocated on a daily basis during the month will be re-allocated to scheduling coordinators based on the scheduling coordinator's monthly gross negative supply deviations for that trading month divided by total market monthly gross negative supply deviations for that trading month. Gross negative supply deviations are determined by resource for each Scheduling Coordinator based on the sum of (1) the resource's total negative Settlement Interval Tier 1 UIE, and (2) negative Tier 2 UIE deviations, which are determined as defined in Section 11.5.2, and any negative import Operational Adjustments. Gross supply deviations determined for this purpose are not netted across Settlement Intervals, they are calculated at the resource level, and are not netted within a Scheduling Coordinator's portfolio.

3.7 Section 27.10 is modified to clarify that Participating Load can participate in satisfying the Flexible Ramping Constraint.

3.8 Section 27.10 is also modified to include the ability for Dynamic System Resources to participate in relieving the Flexible Ramping Constraint if the scheduling coordinator scheduling that resource can demonstrate that it has firm transmission service to the ISO balancing authority area intertie that allows the resource to deliver additional energy in real-time. The scheduling coordinator must comply with the existing requirements for Dynamic System Resources in section 1.5 of the Dynamic Scheduling Protocol contained in Appendix M of the ISO Tariff. In particular, any Dynamic System Resource that wishes to be eligible to provide Flexible Ramping Capacity must indicate on the transmission profile of its E-Tag that it has reserved the necessary external transmission. Procurement of Flexible Ramping Constraint capacity from Dynamic System Resources is limited by the available capacity on the applicable intertie transmission constraint with which the Dynamic System Resource is associated.

4. EFFECTIVE DATES

4.1 The Revised Tariff Provisions will be effective as of the first calendar day of the month commencing after the Settlement Order Date. For example, if the Commission issues an order on August 28, 2012, the effective date will be September 1, 2012. This is necessary to accommodate the monthly settlement calculations discussed above in Section 3.

4.2 Prior to the effective date of the tariff provisions as specified in Section 4.1 above, the tariff provisions suspended by the Commission's December 12 Order shall be in effect, as filed, and, upon issuance of the Settlement Order, shall not be subject to refund.

5. MISCELLANEOUS

5.1 In addition to the items leading to tariff modifications discussed above, the offer of settlement includes three additional requirements that the ISO will complete no later than fifteen calendar days after the Settlement Order Date. The ISO is endeavoring to have these items completed by the date of the order. However, given that the Settlement Order Date is not known, it is requesting 15 additional days in the event that it requires additional time to finalize these items after that date.

5.2 The ISO will enhance the explanations provided on OASIS for information related to the Flexible Ramping Constraint information available, including market data indicating the applicable intervals and how much Flexible Ramping Constraint requirements were acquired for those intervals, in volume and dollar cost.

5.3 The ISO will issue an operating procedure that explains the ISO's practices in determining the amount of Flexible Ramping Constraint capacity procured.

5.4 ISO will provide the ability for scheduling coordinators to see daily or monthly Flexible Ramping Constraint cost allocation by resource for their resources in their regularly released settlement statements.

6. PRECEDENCE AND MODIFICATIONS TO THE TERMS OF THIS OFFER OF SETTLEMENT

6.1 The discussions between ISO and the Parties that resulted in the Offer of Settlement were conducted with the explicit understanding, pursuant to Rules 602 and 606 of the Commission's Rules of Practice and Procedure, that all offers of settlement and discussions relating thereto are and shall be privileged, shall be without prejudice to the position of any party or any participant presenting such offer or participating in any such discussions, and are not to be used in any manner in this proceeding or otherwise, except as specifically noted in the Offer of Settlement or in an action to enforce the Offer of Settlement after its acceptance or approval by the Commission.

6.2 Nothing in this Offer of Settlement is intended to bar the ISO or the parties listed in footnote 1 *supra* from withdrawing their support of the Offer of Settlement in the event that the Commission imposes a material change or condition to the Offer of Settlement unacceptable to such parties.

6.3 The Offer of Settlement is intended to relate only to the specific matters referred to in the Offer of Settlement. Except as specifically provided for this Offer of Settlement or in the attached documents, nothing in the Offer of Settlement shall determine or constitute a ratemaking principle binding on the Parties in the future, and no Party shall be deemed to have approved, accepted, agreed, or consented for purposes other than this proceeding to any specific ratemaking methodology or principle, accounting treatment, or level of expense or revenue.

6.4 Nothing in this Offer of Settlement is intended to prejudge or limit the ISO's authority to make a filing with the Commission pursuant to Section 205 of the Federal Power Act ("FPA"), or other parties' exercise of their rights under FPA Section 205 or 206, regarding any separate flexible ramping product or other measures that may be necessary, and to propose provisions for such new products or measures, which may be the same as or different from the Revised Tariff Provisions.

6.5 After Commission acceptance of this Offer of Settlement, any filing made pursuant to Section 205 or 206 of the Federal Power Act that is not barred or otherwise restricted by the terms of this Offer of Settlement shall constitute a new filing subject to the ordinary just and reasonable standard of review, not the public interest standard of review. The standard of review for any changes proposed by a non-party or the Commission acting *sua sponte* shall be the ordinary just and reasonable standard of review, not the public interest standard of review.⁵

7. CONCLUSION

The Offer of Settlement will fully resolve all of the issues raised in Docket No. ER12-50-000. Commission approval of the Offer of Settlement will save the Parties and the Commission the expense and risks associated with continued litigation.

For all of these reasons, the ISO respectfully requests that the Commission approve the Offer of Settlement without modification.

⁵ See *Devon Power LLC*, 134 FERC ¶ 61,208 at P 10 (2011).

Respectfully submitted,

By: /s/ Anna McKenna

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July 27, 2012

**OFFER OF SETTLEMENT
ATTACHMENT A**

EXPLANATORY STATEMENT

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

California Independent System
Operator Corporation

Docket No. ER12-50-000

EXPLANATORY STATEMENT

Pursuant to 18 C.F.R. § 385.602(c)(1)(ii), the California Independent System Operator Corporation (“ISO”) provides this Explanatory Statement in support of the Offer of Settlement submitted herewith.¹

I. BACKGROUND

On October 7, 2011, the ISO submitted proposed amendments to its tariff in the above captioned proceeding to implement a flexible ramping constraint in its real-time market processes (“Flexible Ramping Constraint”) and provide related compensation. The Flexible Ramping Constraint was designed to procure upward ramp capability from committed, flexible generation resources and proxy demand response resources that are not designated to provide regulation or contingent operating reserves, and whose upward ramping capability is not committed for load forecast needs. The Flexible Ramping Constraint is applied to the market optimization for the real-time pre-dispatch runs, which include the hour-ahead scheduling process, the short-term unit commitment process, 15-minute real-time unit commitment, and also in the real-time economic dispatch run as part of the 5-minute real-time dispatch process.

¹ This Explanatory Statement is not intended to alter any of the terms of the Offer of Settlement. In the event of any conflict between this Explanatory Statement and the terms of the Offer of Settlement, the Offer of Settlement will govern. Unless otherwise stated, capitalized terms will have the meanings provided, or incorporated by reference, in the Offer of Settlement.

On December 12, 2011, the Commission accepted the Flexible Ramping Constraint and suspended it for a nominal period, to become effective December 13, 2011, as requested by the ISO, subject to refund.² The Commission also established hearing and settlement judge procedures to consider contested factual issues involving ISO's proposed Flexible Ramping Constraint.

On January 5, 2012, the Chief Judge issued an order designating the Settlement Judge and scheduling a settlement conference. On January 6, 2012, the Settlement Judge issued an order outlining the conference procedures and setting a new date. On February 2, 2012, the Settlement Judge issued his first status report, reporting that a first settlement conference was held on January 31, 2012, and recommending that the parties continue negotiations. Negotiations continued until May 22, 2012, when the parties reached a tentative understanding. On June 1, 2012, the Settlement Judge issued an order reporting this event and recommending that settlement negotiations continue.

The parties exchanged drafts of the Offer of Settlement, Revised Tariff Language and this Explanatory Statement over the month of June, leading to this filing of the Offer of Settlement and supporting documents.

II. OVERVIEW OF OFFER OF SETTLEMENT AND OF REVISED TARIFF PROVISIONS

A. Offer of Settlement Revised Tariff Provisions

Pursuant to section 2.1 of the Offer of Settlement, all issues in this proceeding will be fully resolved by the Commission's issuance of an order that accepts, without modification or condition, the Revised Tariff Provisions that are in

² *Cal. Indep. Sys. Operator Corp.*, 137 FERC ¶ 61,191 (2011) ("December 12 Order").

Attachment B to the Offer of Settlement (“Settlement Order”). Within 15 calendar days after the date on which the Commission issues the Settlement Order (“Settlement Order Date”), the CAISO will make a compliance filing to incorporate the Revised Tariff Provisions in its Tariff, effective upon the first day of the month following the Settlement Order Date. Because the Offer of Settlement rates require monthly calculations, the ISO requests that the Revised Tariff Provisions will be effective the first day of the month following the Settlement Order Date. This will avoid the need for separate settlement calculations in a given month for the payment and allocation of costs related to the Flexible Ramping Constraint. Prior to the effective date of the Revised Tariff Provisions, the tariff provisions suspended by the Commission’s December 12 Order would be in effect, as filed, and will not be subject to refund.

In the December 12 Order, the Commission set the matter for hearing, stating that the ISO’s “proposed implementation of the Flexible Ramping Constraint may not be just and reasonable,” raising “issues of material fact (including but not limited to the compensation and cost allocation methodologies) that cannot be discerned based on the information provided.” The Commission stated that with “respect to compensation, the difference between the Flexible Ramping Constraint service and non-contingent spinning reserves is not clear,” and that the “difference in the price paid for the two services” likewise is not clear. The Commission found that the ISO had “not demonstrated how the two services differ, and why non-contingent spinning reserves are paid the ancillary services marginal price while the Flexible Ramping Constraint is compensated based on the marginal resource’s

opportunity cost” and had “not explained how its proposed level of compensation accurately reflects opportunity costs for resources to resolve the Flexible Ramping Constraint.” With respect to the cost allocation, the Commission found that while the ISO attributed “the need for flexible ramping capacity to a number of factors” it had “not adequately demonstrated to the Commission that its proposed allocation reflects the Commission’s cost causation principles, and accordingly that allocation may not be just and reasonable.” The Offer of Settlement filed today resolves all these issues.

With respect to the compensation, the Offer of Settlement provides a derived price that differs from the pricing proposed in the ISO’s original filing, consisting of a formula pricing structure that incorporates the Flexible Ramping Constraint shadow price, the ancillary services price, and the real-time system marginal energy costs. This pricing structure resolves the issues related to the relationship between the two products and pricing discussed in the Commission’s order and quoted above. The Revised Tariff Provisions relating to compensation are contained in the proposed section 11.25.1. The Offer of Settlement includes provisions for the rescission of payments based on this pricing for the non-performance of awarded amounts. These provisions are contained in proposed section 11.25.2.

With respect to the cost allocation issues raised in the Commission’s December 12 Order quoted above, the Offer of Settlement offers a cost allocation mechanism that also differs from the cost allocation offered in the ISO’s original filing and allocates the cost of the Flexible Ramping Constraint to measured demand and gross negative deviations of supply. This proposed allocation

mechanism addresses all the cost allocation issues raised by the Commission in its December 12 Order quoted above. Under the Offer of Settlement, the total Flexible Ramping Constraint costs are calculated net of the amounts that are rescinded for non-performance. The proposed allocation mechanism provides that seventy-five percent of the total costs will be allocated to measured demand. The method of allocating these costs to measured demand is the same as the ISO's original filed proposal. However, in contrast to the originally filed proposal, under the Offer of Settlement twenty-five percent of the costs will be allocated to all gross supply negative deviations. The allocation to gross supply negative deviations will be made first on a daily basis. These allocated amounts are reversed out at the end of the month, and the total monthly Flexible Ramping Constraint costs are allocated to the monthly gross supply negative deviations. Gross negative supply deviations are determined by resource for each scheduling coordinator based on the resource's total uninstructed imbalance energy. The calculations of uninstructed imbalance energy are as already provided for in the ISO tariff.

The Offer of Settlement also addresses eligibility issues raised by the parties. The Offer of Settlement proposes revisions to Section 27.10 clarifying that participating load can participate in relieving the Flexible Ramping Constraint. In addition, the Offer of Settlement Proposes revisions to Section 27.10 that extend the participation to relieve the constraint to Dynamic System Resources.

Finally, the Offer of Settlement includes the ISO's commitment to provide additional visibility to the performance and costs of the Flexible Ramping Constraints. These items are not included in the Revised Tariff Provisions but will

be completed no later than fifteen calendar days after the Settlement Order Date. These include: 1) the enhancement of explanations provided on OASIS for information related to the Flexible Ramping Constraint information available, including market data indicating the applicable intervals and how much Flexible Ramping Constraint requirements were acquired for those intervals, in volume and dollar cost; 2) the provisions of an operating procedure that explains the ISO's practices in determining the amount of Flexible Ramping Constraint capacity procured; and 3) the ability for scheduling coordinators to see daily or monthly Flexible Ramping Constraint cost allocation by resource for their resources in their regularly released settlements statements.

B. Conditions of the Offer of Settlement

The Revised Tariff Provisions were negotiated by the Parties as a package and are submitted with the Offer of Settlement as a "black-box" settlement. The Commission is asked to accept the Revised Tariff Provisions as a package and a "black-box" settlement resolving all issues that have been raised in this proceeding. Therefore, the Offer of Settlement reflects that nothing in the Offer of Settlement is intended to bar the ISO or the parties that have provided their support or agreed not to contest the Offer of Settlement as listed in footnote 1 of the Offer of Settlement from withdrawing their support of the Offer of Settlement in the event that the Commission imposes a material change or condition to the Offer of Settlement unacceptable to such parties.

The Offer of Settlement represents that the discussions between ISO and the Parties that resulted in the Offer of Settlement were conducted with the explicit

understanding, pursuant to Rules 602 and 606 of the Commission's Rules of Practice and Procedure, that all offers of settlement and discussions relating thereto are and shall be privileged, shall be without prejudice to the position of any party or any participant presenting such offer or participating in any such discussions, and are not to be used in any manner in this proceeding or otherwise, except as specifically noted in the Offer of Settlement or in an action to enforce the Offer of Settlement after its acceptance or approval by the Commission.

The Offer of Settlement states that it is intended to relate only to the specific matters referred to in the Offer of Settlement. Except as specifically provided for in this Offer of Settlement or in the attached documents, nothing in the Offer of Settlement should be viewed a ratemaking principle binding on the Parties in the future, and no Party shall be deemed to have approved, accepted, agreed, or consented for purposes other than this proceeding to any specific ratemaking methodology or principle, accounting treatment, or level of expense or revenue.

Finally, the Offer of Settlement recognizes that it is not intended to prejudice or limit the ISO's authority to make a filing with the Commission pursuant to Section 205 of the Federal Power Act ("FPA"), or other parties' exercise of their rights under FPA Section 205 or 206, regarding any separate flexible ramping product or other measures that may be necessary, and to propose provisions for such new products or measures, which may be the same as or different from the Revised Tariff Provisions.

III. ADDITIONAL INFORMATION

3.1 What are the issues underlying the settlement and what are the major implications?

The factual and procedural background of this proceeding, the issues underlying this proceeding, and the major implications of this proceeding have been summarized in Sections 1 and 2 above. The Offer of Settlement states that it is a negotiated settlement, that its terms have no precedential value, and that it sets no precedent regarding future rates. The Offer of Settlement resolves all issues in Docket No. ER12-50.

3.2 Do any of the issues raise policy implications?

The Offer of Settlement furthers the broad public interest favoring settlements.³ Beyond that, the Offer of Settlement does not raise policy implications.

3.3 Will other pending cases be affected?

No.

3.4 Does the settlement involve issues of first impression, or are there any previous reversals on the issues involved?

The Offer of Settlement involves no issues of first impression, and there are no previous reversals on the issues involved in this proceeding.

3.5 What is the standard of review of modifications to the Offer of Settlement?

The Offer of Settlement states that after Commission acceptance of this Offer of Settlement, any filing made pursuant to Section 205 or 206 of the Federal Power Act that is not barred or otherwise restricted by the terms of this Offer of Settlement

³ See *Southern Union Gas Co. v. FERC*, 840 F.2d 964, 971 (D.C. Cir. 1988).

Agreement shall constitute a new filing subject to the ordinary just and reasonable standard of review, not the public interest standard of review. The standard of review for any changes proposed by a non-party or the Commission acting *sua sponte* shall be the ordinary just and reasonable standard of review, not the public interest standard of review.

IV. DUE DATE FOR COMMENTS

In accordance with Rule 602, 18 C.F.R. § 385.602(c)(1)(ii), initial comments on the Offer of Settlement are due 20 days after filing, and reply comments are due 10 days thereafter.

**OFFER OF SETTLEMENT
ATTACHMENT B**

TARIFF MODIFICATIONS

11.25 Flexible Ramping Constraint Compensation

11.25.1 Compensation

All resources identified as resolving the Flexible Ramping Constraint in the ~~binding~~ applicable RTUC interval are awarded Flexible Ramping Constraint capacity and will be compensated for such capacity for each RTUC interval, whether or not the Flexible Ramping Constraint is binding, limited by the quantity of Flexible Ramping Constraint requirements set by the CAISO operators as follows: The Scheduling Coordinator is paid the product of the (1) upward MW of capacity identified to satisfy the constraint, multiplied by 0.25 hours, and (2) Flexible Ramping Constraint Derived Price calculated for each applicable fifteen-minute RTUC interval as described further in this Section 11.25.1. Payment to resources will be rescinded as set forth in Section 11.25.2. For each applicable fifteen-minute RTUC interval, the Flexible Ramping Constraint Derived Price is equal to the lesser of: 1) \$800/MWh; or 2) the greater of: (a) zero (0), or (b) the Real-Time ASMP for Spinning Reserves for the applicable fifteen-minute RTUC interval; or (c) the Flexible Ramping Constraint Shadow Price minus seventy-five (75) percent of the maximum of (i) zero (0), or (ii) the Real-Time System Marginal Energy Cost, calculated as the simple average of the three five-minute Dispatch Interval System Marginal energy costs in the applicable fifteen-minute RTUC interval. ~~based on the Flexible Ramping Constraint Shadow Price.~~ The Shadow Price of the binding Flexible Ramping Constraint represents the reduction of the total Energy and Ancillary Services procurement cost associated with a marginal change of that constraint, which is equal- ~~The Shadow Price is~~ to zero (0) if the Flexible Ramping Constraint is not binding. ~~The compensation will equal the product of the upward ramping MW quantity of Flexible Ramping Constraint capacity the specific resource is awarded and the Shadow Price of the binding Flexible Ramping Constraint for the applicable interval.~~ All costs associated with payments made pursuant to this Section 11.25 are allocated to all Scheduling Coordinators pursuant to the requirements set forth in Section 11.25.3 ~~their Measured Demand.~~

11.25.2 Rescission of Payment for Non-Performance

Payment to Scheduling Coordinators are rescinded for the quantity of MWs of undelivered Flexible Ramping Constraint capacity determined as the hourly sum of the Settlement Interval

amounts calculated as the minimum of: 1) the Flexible Ramping Constraint capacity identified as having contributed to the relief of the Flexible Ramping Constraint, or 2) the maximum of (a) zero (0), or (b) the difference between (i) the absolute value of sum of the negative Tier 1 UIE and negative Tier 2 UIE, which are both as defined in Section 11.5.2, and (ii) the upward MWs identified as Undelivered Ancillary Services Capacity as required in Section 11.10.9.3. The rescinded amounts will be based on the product of the: 1) MWs quantities to be rescinded determined as described in this Section 11.25.2; and 2) hourly Flexible Ramping Constraint price determined as the weighted average of the four fifteen-minute Flexible Ramping Constraint Derived Prices derived as described in Section 11.25.1.

11.25.3 Allocation of Costs

The CAISO determines the total Flexible Ramping Constraint costs incurred as described in Section 11.25.1, net of the rescission of payments as described and 11.25.2. The CAISO divides the total Flexible Ramping Constraint costs incurred in two portions and allocates each portion as follows:

11.25.3.1 Allocation to Measured Demand

Seventy five (75) percent of the total Flexible Ramping Constraint costs netted as described above in the Section 11.25.3, are allocated to Scheduling Coordinators based on their Measured Demand for each applicable Trading Hour. Each Scheduling Coordinator is assessed a portion of seventy-five (75) percent share of the total costs equal to the Scheduling Coordinator's Measured Demand for the applicable Trading Hour divided by total market Measured Demand for the applicable Trading Hour.

11.25.3.2 Allocation to Supply Deviations

Twenty-five (25) percent of the total Flexible Ramping Constraint costs netted as described above in this section 11.25.3, are allocated to Scheduling Coordinators based on their gross negative supply deviations as follows, using a two-step process.

First on a daily basis, the CAISO determines a daily rate equal to twenty-five (25) percent of the total daily Flexible Ramping Constraint costs divided by total daily gross supply negative deviations for the applicable Trading Day. Each Scheduling Coordinator is assessed its share of

[these daily costs based on its daily gross negative deviations calculated by resource as described below. Second, at the end of each Trading Month, the ISO reverses the daily amounts assessed to Scheduling Coordinators and calculates a monthly rate equal to twenty-five \(25\) percent of the total monthly Flexible Ramping Constraint costs divided by the total monthly gross supply negative deviations. Each Scheduling Coordinator is assessed its share of these monthly costs per its monthly gross negative deviations calculated by resource as described below. The gross supply negative deviations are determined by resource based on the sum of: \(1\) the resource's total negative Settlement Interval Tier 1 UIE and Tier 2 UIE deviations, which are determined as defined in Section 11.5.2, and \(2\) any negative import Operational Adjustments. Gross supply negative deviations determined for this purpose are not netted across Settlement Intervals. The CAISO will provide the ability for Scheduling Coordinators to see daily or monthly Flexible Ramping Constraint cost allocation by resource for their resources in their regularly released settlement statements.](#)

27.10 Flexible Ramping Constraint

The CAISO may enforce a Flexible Ramping Constraint in the HASP, RTUC, STUC, and RTED. Any flexible Dispatch capacity constrained to be available as a result of the Flexible Ramping Constraint in RTUC will come from capacity that is not designated to provide Regulation or Operating Reserves, and will not offset the required procurement of those Regulation or Operating Reserves in RTUC. To the extent a resource incurs an opportunity cost for not providing Energy or Ancillary Services in the RTUC interval as a result of a binding Flexible Ramping Constraint, all resources resolving that Flexible Ramping Constraint will be compensated pursuant to Section 11.25. In RTD the resources identified as resolving the Flexible Ramping Constraint in the corresponding RTUC run will be the only resources used to resolve the Flexible Ramping Constraint enforced in RTD. The Flexible Ramping Constraint can be satisfied only by committed online dispatchable Generating Units, [Participating Load](#), and Proxy Demand Response resources with ramping capability for which a Scheduling Coordinator has submitted Economic Bids for Energy for the applicable Trading Hour, [and Dynamic System resources as specified below](#). This constraint cannot be satisfied by System Resources [that are](#)

[not Dynamic System Resources. Dynamic System Resources can become eligible to participate in relieving the Flexible Ramping Constraint if the Scheduling Coordinator scheduling that Resource can demonstrate that it has firm transmission service to the CAISO Balancing Authority Area intertie that allows the resource to deliver additional Energy in Real-Time, consistent with the requirements of Section 1.5 of the Dynamic Scheduling Protocol in Appendix M. This Dynamic System Resource must demonstrate that the Dynamic System Resource has acquired sufficient firm transmission to support the total quantity of Energy and Ancillary Services offered in the Real-Time Market by submitting an E-Tag with a transmission profile that reflects the necessary transmission reservation\(s\) outside the CAISO Balancing Authority Area.](#)

[Procurement of Flexible Ramping Constraint capacity from Dynamic System Resources is limited by the available capacity in Real-Time for the applicable interval on the applicable intertie transmission constraint with which the Dynamic System Resource is associated.](#) The quantity of the flexible ramping capacity for each applicable CAISO Market run will be determined by CAISO operators using tools that estimate the: 1) expected level of imbalance variability; 2) uncertainty due to forecast error; and 3) differences between the hourly, fifteen (15) minute average and historical five (5) minute Demand levels.

- Flexible Ramping Constraint

A constraint that may be enforced in the optimization of a given CAISO Market run to ensure that the unit commitment or Dispatch of resources for intervals beyond the applicable commitment or Dispatch period provide for the availability of required capacity for Dispatch in subsequent Real-Time Dispatch intervals as further described in Section 27.10.

[Flexible Ramping Constraint Derived Price](#)

[The price at which resources identified as relieving the Flexible Ramping Constraint in Section 27.10 are compensated as described in Section 11.25.](#)

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service lists in the above-referenced proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 27^h day of July 2012.

Anna Pascuzzo

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