

October 11, 2024

The Honorable Debbie-Anne A. Reese
Acting Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20246

**Re: California Independent System Operator Corporation
Docket No. ER25-____-000**

**Tariff Amendment to Implement Billing, Payment, and Credit
Enhancements**

Dear Secretary Reese:

The California Independent System Operator Corporation (CAISO) submits this tariff amendment to enhance its tariff rules regarding billing, payment, and credit in order to reduce the risk of a financial default on market invoices, improve the CAISO's ability to pay market participants after a default, and otherwise clarify and reorganize those rules.¹ The tariff amendment results from the CAISO's multi-year evaluation of potential enhancements to improve its billing, payment, and credit provisions. Participants in the stakeholder process supported the tariff revisions proposed in this filing.

The CAISO requests that the Commission issue an order accepting these revisions by January 29, 2025, and make the tariff revisions effective upon five days' prior notice to the Commission. Although the CAISO believes each element of this tariff amendment filing is just and reasonable, the tariff revisions described in each subsection of this transmittal letter are severable from the tariff revisions described in every other subsection—for example, the tariff revisions described in subsection II.B.3.a (about preventing default loss allocations to new market participants) are severable from the tariff revisions described in the following subsection II.B.3.b (about calculating loss allocation percentages using more recent data), and from those described in every other subsection.

¹ The CAISO submits this filing pursuant to Section 205 of the Federal Power Act (FPA), 16 U.S.C. § 824d, and Part 35 of the Commission's regulations, 18 C.F.R. Part 35. Capitalized terms not otherwise defined herein have the meanings set forth in appendix A to the CAISO tariff, and references herein to specific tariff sections are references to sections of the CAISO tariff unless otherwise specified.

Accordingly, the Commission could issue an order accepting the balance of the tariff revisions contained in this filing even if it were to reject the proposed amendments described in any one subsection.

I. Background

A. Broad Overview of the CAISO Financial Settlement Process²

Section 11.29 of the CAISO tariff contains the provisions regarding billing and payment. The billing process is grounded in the settlement statements of market participants. In accordance with its payments calendar, the CAISO publishes settlement statements for every trading day that reflect the settlement charges and credits from market activity, and later publishes recalculations of these same statements at scheduled intervals as new data becomes available.³ Billing takes place every week when the CAISO issues market invoices and payment advices with the net results of a week's worth of settlement statements. Ordinarily, invoices and payment advices are issued Wednesday with payment due the following Tuesday.

The CAISO issues settlement statements, invoices, and payment advices only to business associates (*i.e.*, entities with whom the CAISO interacts financially) based on their financial activity in the CAISO market. A business associate that has a net amount due from the CAISO on a payment date is a CAISO creditor, and a business associate with a net amount payable to the CAISO on a payment date is a CAISO debtor.⁴

The CAISO maintains bank accounts necessary for the operation of its settlement and billing procedures. These bank accounts include: the CAISO Clearing Account, which the CAISO uses to transfer payments in accordance with its tariff; the CAISO Reserve Account, which the CAISO uses to provide

² This section of the CAISO's transmittal letter provides a broad overview only. The CAISO discusses in greater detail the sections of the CAISO tariff relevant to the revisions proposed in this tariff amendment in section II of this transmittal letter.

³ The CAISO administers various markets under its tariff (*e.g.*, the day-ahead market and the real-time market), which this transmittal letter refers to collectively as the CAISO market. The tariff uses "T+[time period]" nomenclature as shorthand to describe the timing of the settlements process for the CAISO market. *E.g.*, T+70B data means data for the seventieth business day from the relevant trading day, and T+11M settlement statements mean settlement statements issued eleven months from the relevant trading day. See existing tariff section 11.29.7.1. For the sake of clarity, this transmittal letter distinguishes between existing tariff sections (*i.e.*, sections in the current CAISO tariff), new tariff sections (*i.e.*, tariff sections the CAISO proposes to add in this filing), revised tariff sections (*i.e.*, existing tariff sections the CAISO proposes to revise in this filing), and deleted tariff sections (*i.e.*, existing tariff sections the CAISO proposes to delete in this filing).

⁴ Existing tariff section 11.29.10, *et seq.*

funds to clear the CAISO Clearing Account if there are insufficient funds in the CAISO Clearing Account to pay CAISO creditors; and the CAISO Penalty Reserve Account, which contains funds collected for late payments of amounts and for late postings of financial security, and which the CAISO uses to provide funds to clear the CAISO Clearing Account if there are insufficient funds in the CAISO Clearing Account to pay CAISO creditors.⁵

If a CAISO debtor becomes aware that a payment for which it is responsible will not be deposited into the CAISO Clearing Account on time, it must immediately inform the CAISO of that fact and will owe interest on the overdue amount.⁶ If the CAISO cannot clear the CAISO Clearing Account on a payment date because of nonpayment by a CAISO debtor, which cannot be covered using funds available in the CAISO Reserve Account or the CAISO Penalty Reserve Account, or by enforcing any financial security provided by a defaulting CAISO debtor, the CAISO will follow procedures set forth in the tariff for making a *pro rata* reduction in payments to CAISO creditors, *i.e.*, a shortfall allocation. Specifically, the CAISO will allocate any unpaid amount from a defaulting CAISO debtor to the market using the methodology set forth in the tariff.⁷

Tariff section 12 addresses creditworthiness requirements that prospective and existing market participants must satisfy in order to participate in the CAISO market. These include minimum participation requirements that obligate the market participant to (1) have a specified amount of tangible net worth or total assets, or (2) post sufficient financial security to allow market participation.⁸

B. Reasons for CAISO Review of Its Billing, Payment, and Credit Provisions

The payments the CAISO makes each week to CAISO creditors depend on CAISO debtors paying the amounts they owe on their market invoices. If a CAISO debtor defaults on its payment to the CAISO, the result could be a loss the CAISO must allocate to other market participants. A loss could be only temporary—a delay of full payment while the CAISO works through the legal process for using collateral or otherwise collecting a debt, with the market then ultimately paid in full using the amounts collected. Or, more concerning, a loss could be permanent, if the CAISO is ultimately unable to collect the full amount due from the defaulting entity.

⁵ Existing tariff section 11.29.9.6, *et seq.*

⁶ Existing tariff section 11.29.13.1.

⁷ Existing tariff section 11.29.17, *et seq.*

⁸ Existing tariff section 12.1, *et seq.*

It has been more than 23 years since the CAISO needed to allocate any default loss to market participants, either temporarily or permanently—*i.e.*, since the energy crisis of 2000-01. However, recent events prompted the CAISO to evaluate its tariff provisions on billing, payment, and credit, and develop possible enhancements to them. The CAISO commenced evaluating its tariff in the fall of 2021 in connection with an effort to learn lessons from events in energy markets in Texas and the United Kingdom.⁹ The CAISO considered the potential impact if California were to endure a period of sustained high energy prices, or if market participants were under other financial distress and unable to satisfy their financial obligations to the CAISO. The CAISO also considered lessons learned from the 2021 bankruptcy of an entity that served load in the CAISO balancing authority area. In addition, while the CAISO was evaluating these issues, in the summer of 2022, a small entity defaulted on its payment obligations in the CAISO market, which prompted the CAISO to consider other possible improvements to its billing, payment, and credit tariff provisions.¹⁰

The CAISO's current billing and payment rules and its credit policy are fundamentally sound. But improvement remains possible. The CAISO's multiyear evaluation identified the targeted enhancements proposed in this filing, which are intended to improve the resilience of the CAISO market during periods of financial stress.

C. Stakeholder Process for This Tariff Amendment

Following the evaluation described above, the CAISO posted an Issue Paper and Draft Final Proposal on Billing, Payment, and Credit Enhancements (Draft Final Proposal) on its website for stakeholder review on September 26, 2023.¹¹ The CAISO held a meeting with stakeholders regarding this matter on October 3, 2023, during which the CAISO gave a presentation and considered stakeholder input. The CAISO also provided an opportunity for stakeholders to submit written comments to the CAISO afterwards. Stakeholders expressed

⁹ See, e.g., "Winter Storm in Texas will Continue to be Felt in Utilities' Credit Profiles," S&P Global (Mar. 15, 2021) ("ERCOT estimates \$3.1 billion of participant payment defaults"), available at <https://www.spglobal.com/ratings/en/research/articles/210315-winter-storm-in-texas-will-continue-to-be-felt-in-utilities-credit-profiles-11873218>; "As it happens: the 2022 UK energy price crisis," Power Technology (Jan. 19, 2022) ("Since September 2021, UK utilities have fought to stay in business, facing historically high wholesale gas and power prices. By the end of December, these had caused at least 25 utility bankruptcies, with more expected in 2022"), available at <https://www.power-technology.com/features/uk-power-utility-crisis-gas-price-energy-bills/?cf-view>.

¹⁰ These are among the most recent such occurrences. Since 2001, more than 20 market participants have filed for bankruptcy or defaulted on their financial obligations in the CAISO market. As noted above, the CAISO has not needed to allocate any default loss to market participants during that time.

¹¹ The Draft Final Proposal is contained in attachment C to this filing.

general approval for the proposals reflected in the tariff revisions contained in the instant filing, and the two sets of written comments stakeholders submitted did not raise any concerns about them.¹²

The CAISO held another stakeholder meeting on September 19, 2024 to discuss the draft tariff revisions to implement the Draft Final Proposal, and provided an opportunity for written stakeholder comment on the draft tariff revisions. One stakeholder, which had reviewed the changes carefully, submitted comments pointing out some typographical corrections and the need for one additional correction in an existing tariff provision. No other stakeholders commented.

The CAISO Governing Board and the Western Energy Imbalance Market (WEIM) Governing Body jointly authorized the CAISO to submit this tariff amendment at their meeting held on November 8, 2023.¹³

II. Proposed Tariff Revisions

A. Revisions to Enhance the CAISO's Ability to Prevent Market Defaults

1. Implement a Uniform Minimum Capitalization Requirement for Market Participants that Post Financial Security

The tariff requires that, in order to participate in the CAISO market, each prospective or existing market participant with a direct financial relationship with the CAISO must satisfy specified minimum participation requirements.¹⁴ Those requirements include that the market participant or its guarantor must either (1)

¹² The Draft Final Proposal and other materials related to this stakeholder initiative are available on the CAISO website at <https://stakeholdercenter.caiso.com/StakeholderInitiatives/Billing-payment-credit-enhancements>. The Draft Final Proposal also included discussion on how the CAISO could improve its visibility into the financial condition of load-serving entities. Draft Final Proposal at 2, 20-21. The two sets of written comments only addressed that topic, which has not yet been completely evaluated and will be considered in a future phase 2 of the stakeholder process that resulted in the instant tariff amendment. Phase 2 of the stakeholder process may also include discussion of other changes to the tariff provisions related to billing, credit, and payment.

¹³ See <https://www.caiso.com/about/governance-committees>. Prior to the November 8, 2023 meeting, the CAISO's Vice President, General Counsel, and Chief Compliance Officer provided a memorandum to the CAISO Governing Board and the WEIM Governing Body (Memorandum) regarding the changes now proposed in this tariff amendment. The Memorandum is contained in attachment D to this filing. The WEIM Governing Body was subsequently renamed the Western Energy Markets Governing Body.

¹⁴ Existing tariff section 12.1(b).

have at least \$1 million in tangible net worth¹⁵ or \$10 million in total assets or (2) post financial security in a form recognized under the tariff.¹⁶

A market participant that posts financial security and has fewer than six months of CAISO market activity must maintain at least \$500,000 in capitalization (in addition to any collateral posting required based on CAISO market activity). From the six-month point onwards, the market participant must continue to maintain at least \$500,000 in capitalization if its highest estimated aggregate liability for the preceding six months was more than \$100,000. However, if the market participant's highest estimated aggregate liability for the preceding six months was \$100,000 or less, it need only maintain at least \$100,000 in capitalization.¹⁷

The CAISO identified a concern with the tariff provision that allows a market participant to maintain only \$100,000 in capitalization when a small market participant that was a virtual bidder (2022 Defaulting Entity) defaulted on its payment obligation on September 27, 2022. The 2022 Defaulting Entity chose to leave the CAISO market and ceased operations without filing for bankruptcy. The 2022 Defaulting Entity left the CAISO holding its collateral, which exceeded its estimated aggregated liability during the time it participated in the CAISO market, and it also left the CAISO with its \$100,000 in capitalization. However, these amounts combined did not cover the full balance due on every invoice, which resulted in payment defaults totaling \$7,233.

The CAISO was able to avoid spreading a loss to other market participants by covering the shortfalls with funds from the CAISO Penalty Reserve Account. Over time, the CAISO eventually recouped the amounts due from funds that later came due to the 2022 Defaulting Entity, which CAISO used to replenish the Penalty Reserve Account.

After reviewing lessons learned from its experience with the 2022 Defaulting Entity, the CAISO concluded that it should not allow any market participant to reduce its posting to \$100,000 in capitalization. Rather, it should instead require all market participants to post financial security to maintain at

¹⁵ Tangible net worth equals total assets minus assets (net of any matching liabilities, assuming the result is a positive value) the CAISO reasonably believes to be restricted or potentially unavailable to settle a claim in the event of a default minus intangible assets minus derivative assets (net of any matching liabilities, assuming the result is a positive value) minus total liabilities. Existing tariff section 12.1.1.1.2 (at step 4(a)).

¹⁶ Existing tariff section 12.1(b)(iii)(1).

¹⁷ Existing tariff section 12.1(b)(iii)(2). Estimated aggregate liability means the sum of a market participant's known and reasonably estimated potential liabilities for a specified time period arising from charges described in the CAISO tariff. Tariff appendix A, existing definition of Estimated Aggregate Liability.

least the \$500,000 in capitalization that the tariff requires initially. The CAISO is concerned the existing capitalization requirement might be exploited by, for example, a market participant that invests six months in transacting at low levels in order to reduce its capitalization requirement, and then subsequently enters into larger transactions that leave the CAISO market holding most of the downside risk. Moreover, the CAISO's \$100,000 capitalization requirement is lower than the capitalization requirements of other Independent System Operators and Regional Transmission Organizations, which generally require at least \$500,000 in capitalization for entities that hold congestion revenue rights or participate in virtual bidding.¹⁸

The CAISO also determined that requiring all market participants that post financial security to provide at least \$500,000 in capitalization will be easier to administer than the current capitalization requirements, because it will eliminate the need for the CAISO credit team to track the total liability of participants that avail themselves of the exception that allows them to post only \$100,000 in order to confirm their eligibility. The change will not impose an unreasonable burden on the 17 market participants that currently post \$100,000, because they have already demonstrated the ability to post \$500,000 during the initial phase of their participation. These participants, moreover, represent a small part of the more than 300 current CAISO market participants that have a direct financial relationship with the CAISO, the overwhelming majority of which have at least \$1 million in tangible net worth or \$10 million in total assets. Even among the 17 market participants that currently post financial security as a substitute for meeting this requirement, and have been provide only \$100,000 in capitalization, the CAISO's review of these participants indicates that at least five of these are members of larger corporate families that are obviously capable of posting at least \$500,000 in capitalization.

For these reasons, the CAISO proposes to require all market participants that post financial security, regardless of their highest estimated aggregate liability for the preceding six months, to maintain at least \$500,000 in capitalization.¹⁹

¹⁸ See Midcontinent Independent System Operator, Inc. tariff, attachment L, section III(C)(1)(iii); New York Independent System Operator, Inc. market administration and control area services tariff, attachment K, section 26.1.1(e)(2); PJM Interconnection, L.L.C. open access transmission tariff, attachment Q, section D(1)(b)(ii).

¹⁹ Revised tariff section 12.1(b)(iii).

2. Designate a Single Agreement to Govern Settlement, Billing, and Payment

As described below, the CAISO proposes to implement tariff rules that apply when a market participant has multiple agreements that could govern its financial relationship with the CAISO and designate one of those agreements as controlling all settlement, billing, and payment. These proposed tariff revisions will reduce the risk of payment defaults after a bankruptcy filing by expanding the CAISO's ability to employ the bankruptcy law doctrine of "recoupment," which does not require advance authorization from the bankruptcy court, to collect unpaid amounts.²⁰ The tariff revisions should also reduce the risk of unnecessary litigation in bankruptcy court over which contract governs an amount due.

Of the multiple types of agreements that a market participant may have with the CAISO, only some enable the market participant to engage directly with the CAISO in the settlement, billing, and payment process. In particular, scheduling coordinators, energy imbalance market (EIM) entity scheduling coordinators, congestion revenue right (CRR) entities, and participating transmission owners transact directly with the CAISO.²¹ Other types of market participants, such as participating generators, must either engage a scheduling coordinator to handle this process for them, or else enter into an additional agreement with the CAISO in order to handle settlement, billing, and payment themselves.²²

Many market participants are parties to more than one agreement that enables settlement, billing, and payment directly with the CAISO. If such a market participant were to file for bankruptcy, issues could arise regarding which of its multiple agreements governs a particular set of market transactions. One reason for this is that CAISO settlement statements, invoices, and payment advices are not tied expressly to individual agreements with CAISO, such as the scheduling coordinator agreement or the CRR entity agreement.²³ Moreover, the

²⁰ In contrast, under bankruptcy law, "setoff" does require prior authorization from the bankruptcy court. See *Credit Reforms in Organized Wholesale Elec. Markets*, Order No. 741, 133 FERC ¶ 61,060, at P 90 n.115 (2010) (quoting relevant court precedent); *Mirant Americas Energy Marketing, LP*, 106 FERC ¶ 63,028, at P 85 & n.20 (2004) (same).

²¹ See, e.g., existing tariff appendices B.1 (*pro forma* Scheduling Coordinator Agreement), B.11 (*pro forma* Congestion Revenue Rights Entity Agreement) and B.18 (*pro forma* EIM Entity Scheduling Coordinator Agreement).

²² See existing tariff appendix B.2 (*pro forma* Participating Generator Agreement).

²³ Rather, each settlement statement, invoice and payment advice is tied to a Business Associate ID, often referred to as a BAID. The settlement statements and invoices issued to a market

various *pro forma* agreements incorporate relevant provisions from the tariff through reference terms whose language overlaps to a meaningful degree among the various *pro forma* agreements.²⁴ This necessary overlap of settlement, billing, and payment obligations in separate agreements could leave room for creative attorneys to create legal uncertainty. A bankrupt market participant that had, for the pre-petition period, \$80 in charges from CRRs and \$80 in credits from selling energy could attempt to thwart the CAISO from netting or setting off these amounts. Specifically, the bankrupt market participant could argue that the \$80 it owes is governed by its CRR entity agreement, which it would seek to reject (leaving CAISO with a bankruptcy claim worth much less than 100 cents on the dollar), while seeking payment in full for the energy credits, which it would claim are governed separately by the scheduling coordinator agreement.

To prevent this, the CAISO proposes to revise the tariff to clarify which among a market participant's multiple agreements that could govern settlements, billing, and payment will in fact govern these matters for all of its settlement charges. These tariff revisions will also benefit the CAISO market by enhancing the CAISO's ability to collect any late payments. In particular, the tariff revisions will help the CAISO markets by expanding the CAISO's ability to employ recoupment. If a market participant has filed for bankruptcy and defaulted on payments to the CAISO, and then subsequently is due to receive payment, the CAISO would seek to use those funds otherwise payable to the market participant to recover the debt it owes. One of two legal doctrines would govern the CAISO's effort: recoupment or setoff. Recoupment would be preferable because it would authorize the CAISO to collect immediately and authorize collection in a broader range of possible scenarios, to protect the market better in the future. Moreover, recoupment is appropriate because despite the fact that the CAISO utilizes separate agreements for different market products, its settlements, billing and payment provisions represent a single, integrated process. Recoupment may apply, however, only when a single contract governs the financial transactions.²⁵ Otherwise, the law governing setoff would apply, which requires advance authorization from the bankruptcy court before the funds

participant under a single BAID may reflect a range of market products and services that could be governed by different agreements, such as energy and CRRs.

²⁴ See, e.g., Section 5.1 of the Scheduling Coordinator Agreement, Appendix B.1, which incorporates the entire tariff, and Section 4.1 of the CRR Entity Agreement, Appendix B.11, which requires compliance with all terms of the tariff that are applicable to CRR holders. Both sets of incorporated tariff provisions include the billing and payment provisions in Section 11.29.

²⁵ See, e.g., *In re AHN Homecare, L.L.C.*, 222 B.R. 804, 811 (N.D. Tex. 1998) (recoupment "allowed because the 'claims arose from a single contract, thereby satisfying the "same transaction" requirement for recoupment' . . . 'recoupment is justified in the single contract cases because 'there is but one recovery due on a contract . . .'" quoting *In re Heffernan Memorial Hosp. Dist.*, 192 B.R. 228 (S.D. Cal. 1996)).

could be used, thereby delaying payment. The tariff revisions the CAISO proposes will support the application of recoupment in this scenario, thereby facilitating collection and avoiding unnecessary legal costs.

Specifically, the CAISO proposes to add a provision to the tariff stating that one agreement will govern settlement, billing, and payment of all its settlements.²⁶ The provision will apply to every business associate that is a party to more than one agreement with the CAISO that could otherwise govern those matters,²⁷ and will be incorporated into those agreements by their currently effective terms, thereby avoiding the need to amend agreements.²⁸ The types of agreements specified in the tariff provision, which can govern settlement, billing and payment, are: scheduling coordinator agreements, EIM entity scheduling coordinator agreements (regardless whether an addendum for the extended day-ahead market (EDAM) is effective),²⁹ CRR entity agreements, the transmission control agreement (for participating transmission owners), and black start agreements (collectively, “Billing and Payment Agreements”). The CAISO will designate the Billing and Payment Agreement between the business associate and the CAISO that is highest in the following hierarchy to govern all settlements and all billing and payment arising from settlements under all of these agreements:

- (a) Transmission control agreement (highest in the hierarchy)
- (b) Scheduling coordinator agreement
- (c) EIM scheduling coordinator agreement
- (d) CRR entity agreement
- (e) Black start agreement (lowest in the hierarchy).

²⁶ New tariff section 11.29.2.

²⁷ A business associate means any entity with whom the CAISO interacts related to the CAISO market. Tariff appendix A, existing definition of Business Associate. Business associate is an umbrella term that encompasses all such entities, such as participating generators, scheduling coordinators, participating transmission owners, *etc.* Accordingly, the CAISO proposes to revise tariff sections 11.29.5.1, 11.29.5.3, 11.29.7.3.4, and 11.29.7.3.5, to use the term business associate instead of listing those individual entities.

²⁸ See note 24 above regarding the relevant terms of the Scheduling Coordinator Agreement and the CRR Entity Agreement. In addition, see Section 5.1 of the EIM Scheduling Coordinator Agreement, Appendix B.18, and Section 16.1 of the Transmission Control Agreement, CAISO FERC Electric Tariff No. 7, to the same effect. These provisions of the agreements would incorporate proposed new tariff section 11.29.2.

²⁹ See existing tariff appendix B.28 (*pro forma* EDAM Addendum to EIM Entity Scheduling Coordinator Agreement).

If the business associate is party to more than one Billing and Payment Agreement of the same type (e.g., party to two or more scheduling coordinator agreements), then the first-executed agreement of that type will be designated as the governing agreement.

B. Revisions to Enhance the CAISO's Ability to Respond to Defaults

1. Clarify the Rules on Replenishing the CAISO Reserve Account and CAISO Penalty Reserve Account

a. CAISO Reserve Account

The CAISO Reserve Account is available to provide funds to clear the CAISO Clearing Account in the event that there are insufficient funds to pay CAISO creditors.³⁰ The tariff provisions that govern the CAISO Reserve Account state in relevant part that if the CAISO Reserve Account is drawn upon, the CAISO will as soon as possible “thereafter take any necessary steps” against the defaulting entity to replenish the CAISO Reserve Account.³¹ The tariff provisions also state that if the CAISO has debited the CAISO Reserve Account and determines, after taking reasonable action, that the default amount (or any part) and/or interest cannot be recovered “on the next practicable Invoices,” the CAISO will notify market participants of the identity of the defaulting entity together with the unrecoverable amounts and will allocate such amounts.³² Generally speaking, the CAISO replenishes the CAISO Reserve Account either after the CAISO collects the default amount (using the collected funds) or after the CAISO determines that it has exhausted reasonable collection possibilities. In the latter case, the CAISO replenishes the CAISO Reserve Account by allocating the final shortfall to the market and transferring those funds to the CAISO Reserve Account.

The CAISO proposes to clarify that it need not replenish the CAISO Reserve Account in the near term, and instead may continue to use the funds to cover the default, so long as the CAISO ultimately expects to recover the necessary funds from the defaulting entity. This clears up any potential chance the existing tariff language could be read to suggest that the CAISO must quickly replenish the CAISO Reserve Account by charging losses to market participants, even in situations where the CAISO expects its collection efforts to succeed later. In fact, the CAISO's historical practice has always been to wait to replenish the CAISO Reserve Account until it becomes clear the debt is uncollectible. This

³⁰ Existing tariff section 11.29.9.6.2.

³¹ Existing tariff section 11.29.9.6.2.

³² Existing tariff section 11.29.9.6.2.1(c).

avoids the need to allocate the shortfall to the market prematurely, and then repay the market after collecting from the defaulting participant, which would require both the CAISO and many market participants to incur significant administrative costs unnecessarily. Such a practice would be inefficient if the default amount remained collectible, such as when the CAISO is holding collateral to cover the default but is simply waiting for bankruptcy court permission to apply it.

The CAISO proposes two tariff revisions to ensure its historical and intended practice is clearly set forth in the tariff. First, the CAISO proposes to clarify the tariff language regarding the steps it must take to replenish the CAISO Reserve Account by replacing the statement that it will “thereafter take any necessary steps” against the defaulting entity with the statement that the CAISO will “begin collection efforts consistent with” the existing tariff language on defaults (which the CAISO does not propose to change in this tariff amendment).³³ Second, the CAISO proposes to revise the tariff provisions regarding replenishment of the CAISO Reserve Account to delete the phrase “on the next practicable Invoices,”³⁴ because that phrase could be misinterpreted to suggest that the CAISO must either collect on the default or charge the loss to the market on the first possible Invoice available to do so. Such an approach would undermine the effective use of the CAISO Reserve Account and contradict how the CAISO has always used that account.

b. CAISO Penalty Reserve Account

In addition to the CAISO Reserve Account, the CAISO’s settlement systems include a CAISO Penalty Reserve Account, which holds funds collected for late payments of invoices and for late postings of financial security. These funds are available to clear the CAISO Clearing Account if there are insufficient funds to pay CAISO creditors.³⁵ Similar to the CAISO Reserve Account, the tariff provisions state in relevant part that if the CAISO has debited the CAISO Penalty Reserve Account and determines, after taking reasonable action, that the default amount (or any part) and/or interest cannot be recovered, the CAISO will notify

³³ Revised tariff section 11.29.9.6.2 (cross-referencing tariff section 11.29.20). The CAISO also proposes to make the same change in revised tariff section 11.29.9.6.4(c) concerning the CAISO Penalty Reserve Account (which is discussed in the next section of this transmittal letter).

³⁴ Revised tariff section 11.29.9.6.2.1(c).

³⁵ Existing tariff section 11.29.9.6.4.

market participants of the identity of the defaulting entity together with the unrecoverable amounts and will allocate such amounts.³⁶

In contrast with the CAISO Reserve Account, however, the CAISO intended that funds in the CAISO Penalty Reserve Account would be for permanent use, subject only to recovering them from the defaulting market participant.³⁷ If the CAISO were unable to collect the full amount of the default to replenish the funds, there would be no need to allocate the net loss to the market assuming there had been sufficient funds in the CAISO Penalty Reserve Account to make up the shortfall.

Consistent with this purpose of the CAISO Penalty Reserve Account and the CAISO's historical practice, the CAISO proposes to delete in their entirety the existing tariff provisions which could be erroneously interpreted to suggest that losses covered by the CAISO Penalty Reserve Account must be replenished and charged to the market.³⁸

2. Use the CAISO Reserve Account and the CAISO Penalty Reserve Account to Prevent a Payment Shortfall

The existing tariff indicates that use of the reserve accounts is mandatory when the funds in the CAISO Clearing Account are insufficient. It states that if funds are standing to the credit of the CAISO Reserve Account or the CAISO Penalty Reserve Account, the CAISO will debit the CAISO Reserve Account or the CAISO Penalty Reserve Account with the default amount to clear the CAISO Clearing Account and effect payment to the CAISO Creditors.³⁹ Thus, the tariff currently requires the CAISO to use the CAISO Reserve Account, and the CAISO Penalty Reserve Account if needed as a supplemental source of funds, to cover a payment default.

The CAISO has determined these tariff provisions could become disadvantageous to the markets if the amount of a payment default or series of defaults were to exceed the combined balance of the CAISO Reserve Account and the CAISO Penalty Reserve Account. This would be possible in the event of a bankruptcy by a significant market participant that is typically a debtor to the market. Although this has not occurred since the energy crisis of 2000-01, there is nevertheless a possibility that in some instances the funds in the CAISO Reserve Account and the CAISO Penalty Reserve Account would not be

³⁶ Existing tariff section 11.29.9.6.4.1(c).

³⁷ See *Cal. Indep. Sys. Operator Corp.*, 131 FERC ¶ 61,009, at PP 30-32 (2010).

³⁸ Deleted tariff section 11.29.9.6.4.1(c).

³⁹ Existing tariff section 11.29.13.4.

sufficient to make full payment to the market, but instead would only reduce the amount of the shortfall that has to be allocated.

In such a case, depleting the full balance of the CAISO Reserve Account and the CAISO Penalty Reserve Account would provide some benefit to market participants by reducing the amount of the current default, but would not avoid the administrative costs of allocating a smaller loss, and would leave no funds remaining to help prevent further payment shortfalls. Repeated payment defaults could arise any time a market participant files for bankruptcy and would remain possible for up to two years after the bankruptcy filing date, as pre-petition trading days are recalculated.⁴⁰ In these circumstances, the market could be better off overall if the CAISO used the CAISO Reserve Account and CAISO Penalty Reserve Account only when they hold sufficient funds to cover the full payment default. This use of the funds would avoid a short-payment and thereby reduce the administrative burden on both the CAISO and market participants associated with allocating a shortfall.

For these reasons, the CAISO proposes to revise the tariff provisions on the use of the CAISO Reserve Account and the CAISO Penalty Reserve Account to add flexibility in preventing a payment shortfall if funds are insufficient. The revised tariff provisions state that the CAISO will clear the CAISO Clearing Account and effect payment to the CAISO Creditors by debiting the CAISO Reserve Account, the CAISO Penalty Reserve Account, or a combination of those two accounts with the necessary payment amount—but only if sufficient funds are available from one or both of those accounts to clear the market.⁴¹ In no event will the CAISO draw funds from the CAISO Reserve Account to cover a payment default that would leave a balance below \$1,000 in that account.⁴²

If, on the other hand, funds available from the combination of the CAISO Reserve Account and the CAISO Penalty Reserve Account are insufficient to clear the market, the CAISO would have flexibility about whether to use the funds to mitigate a particular default.⁴³ In exercising discretion under this rule, the

⁴⁰ Under the tariff, the CAISO issues recalculation settlement statements approximately 24 months (*i.e.*, two years) from the relevant trading day. Existing tariff section 11.29.7.1.

⁴¹ Revised tariff section 11.29.13.4.

⁴² Revised tariff section 11.29.13.4.

⁴³ The CAISO has flexibility under provisions of the existing tariff, including its credit requirements. See, e.g., existing tariff section 12.6.3(c) (stating that the CAISO “may adjust the credit requirements for holding CRRs with terms of one (1) year or less at the CAISO’s discretion to account for changes in the monthly auction prices for CRRs and changes in the Historical Expected Values for CRRs”); *Cal. Indep. Sys. Operator Corp.*, 120 FERC ¶ 61,147, at P 16 (2007) (finding that tariff section 12.3 “gives the CAISO flexibility to determine the appropriate amount of financial security necessary to cover liabilities of a departing or significantly less active market participant.”).

CAISO must use reasonable diligence to determine what use or expected use of the funds in the CAISO Reserve Account and CAISO Penalty Reserve Account would provide the greatest expected benefit to market participants overall.⁴⁴

3. Refinements to Provisions for Allocating Default Losses

a. Prevent Default Loss Allocations to New Market Participants

Under the existing tariff, each payment default amount allocated to CAISO creditors through a shortfall allocation and that remains unpaid by the defaulting CAISO debtor is subsequently re-allocated to the market as a whole, excluding the CAISO debtor that has not paid the payment default amount, according to percentage shares that the CAISO has calculated “for the current calendar quarter.”⁴⁵

After reviewing scenarios that could arise from the bankruptcy filing of a market participant, the CAISO determined these existing tariff provisions could in some circumstances spread default losses to new market participants that had entered the market after the defaulting entity stopped paying or filed for bankruptcy. New market participants would be at risk of sharing a default loss (albeit a small portion of it), even if the defaulting entity filed for bankruptcy before the new market participants joined the market, and even if the defaulting entity was solvent—after emerging from bankruptcy—by the time the new market participants entered the market.

This risk arises because of the nature of the CAISO’s settlement cycle, in which settlements are subject to adjustment for up to two years after a trading day.⁴⁶ Even the later recalculation settlement statements, issued long after a bankruptcy proceeding has been initiated, are subject to a default risk because they involve transactions occurring on a trading day before the bankruptcy petition was filed. If a defaulting entity were to receive a charge on a later recalculation settlement statement without obtaining special approval from the bankruptcy court to pay pre-petition invoices from the CAISO, the entity might default on those later recalculation settlement statement invoices. As noted above, under the currently effective tariff, the CAISO could allocate a portion of

⁴⁴ Revised tariff section 11.29.13.4. The CAISO also proposes to revise tariff section 11.29.9.6.4(a) to cross-reference tariff section 11.29.13.4 and delete existing provisions superseded by that latter section.

⁴⁵ Existing tariff section 11.29.17.2.1.

⁴⁶ As noted above, the existing tariff states that the CAISO issues Recalculation Settlement Statements approximately 24 months (*i.e.*, two years or T-24 months) from the relevant Trading Day. Existing tariff section 11.29.7.1.

the default amounts to new market participants who joined after the defaulting entity filed for bankruptcy or left the market. This potential outcome is undesirable.

To prevent this potential outcome from occurring, the CAISO proposes to revise the tariff provisions on allocating default losses to clarify that they apply to the “relevant calendar quarter” (rather than the current calendar quarter).⁴⁷ Under the revised tariff provisions, the relevant calendar quarter means the calendar quarter that included the last full trading day before the bankruptcy filing, if the defaulting entity filed for bankruptcy or, if the defaulting entity did not file for bankruptcy, the date of its initial payment default.⁴⁸ These revised tariff provisions will appropriately allocate default losses using the allocation percentages in effect on the earliest date for which the defaulting entity failed to pay its obligations, without requiring default loss allocations to new market participants who subsequently joined the market.

b. Calculate Loss Allocation Percentages Using More Recent Data

The existing tariff calculates the allocation percentages for default losses based on market and payment data from a look-back period.⁴⁹ The current tariff provisions on the default look-back period specify use of data from the most recent four full calendar quarters for which T+70B data are available.⁵⁰

Historically, the tariff provisions on the default look-back period meant the data excluded only the quarter just ended because the second settlement statement was issued after 12 business days (*i.e.*, at T+12B).⁵¹ This changed, however, after the CAISO revised the settlement timeline in 2021, which resulted in the data set excluding the two most recent quarters.⁵² Under the new timeline, the CAISO issues the second settlement statement at T+70B, which takes more than 90 calendar days, and thus it is not available for more than a quarter.

⁴⁷ Revised tariff section 11.29.17.2.1.

⁴⁸ Revised tariff section 11.29.17.2.1.

⁴⁹ Tariff appendix A, definition of Default Look-Back Period.

⁵⁰ Existing tariff section 11.29.17.2.6(a)(iv).

⁵¹ This was in accordance with the timing of the settlements process then in effect under tariff section 11.29.17.1.

⁵² See *Cal. Indep. Sys. Operator Corp.*, Commission letter order, Docket No. ER20-2617-000 (Oct. 2, 2020) (accepting tariff amendment to revise settlement timeline, including revisions to tariff section 11.29.17.1, effective January 1, 2021).

After gaining experience with the settlement timelines revised in 2021, the CAISO determined that, although the T+70B settlements produce more accurate data than the settlements at T+9B,⁵³ the T+9B settlement statements are reasonably accurate. The CAISO therefore proposes to use more current data in the default loss allocation percentages even though that data is subject to revision, because it better reflects the level of market activity.

Specifically, the CAISO proposes to revise the tariff provisions on the methodology for allocating default payment amounts to state the methodology will include the use of data from T+70B recalculation settlement statements or, when it is not yet available, data from T+9B recalculation settlement statements.⁵⁴ The CAISO also proposes to revise the tariff provisions on the default look-back period to state that for the fifth calendar quarter and any subsequent calendar quarter following the calendar quarter in which the market participant begins to participate in the CAISO market, the applicable default look-back period will be a total of four full calendar quarters.⁵⁵

c. Clarify and Consolidate Tariff Provisions on the Distribution of Funds Collected from a Defaulting Entity

The CAISO proposes to clarify the tariff provisions that govern how, after the CAISO has allocated a payment default to the market, the CAISO distributes funds it may later collect from the defaulting entity. The CAISO will use these funds to help pay back the market participants and other accounts that had been previously allocated the default shortfall. The relevant issue is the order in which they will be paid. Currently, the tariff addresses the payment priorities for such funds in several different sections that focus on different aspects of the issue.⁵⁶ The CAISO proposes to consolidate and clarify tariff provisions to avoid the potential for disputes about which market participants should receive payment in that situation.

Under the revised tariff provisions, the CAISO will use any collections to pay defaults caused by the debtor from whom the funds are collected. The CAISO will distribute any collections or other receipt of defaulted receivables (except for interest) according to the following priorities:

⁵³ T+9B data means data for the ninth business day from the relevant Trading Day. Existing tariff section 11.29.7.1.

⁵⁴ Revised tariff section 11.29.17.2.1(c).

⁵⁵ Revised tariff section 11.29.17.2.6(a)(iv).

⁵⁶ See existing tariff sections 11.29.9.6.2, 11.29.17.3, 11.29.13.8, and 11.29.13.10.

- First, distribution to any grid management charge (GMC) the CAISO did not receive due to a debtor's payment default.
- Second, distribution to any FERC annual charges that were not received due to a debtor's payment default.
- Third, distribution to any internal accounts (e.g., balancing accounts for CRRs or resource adequacy availability incentive mechanism (RAAIM) amounts) that were not paid in full due to a debtor's payment default.
- Fourth, distribution to the CAISO reserve account to the extent the CAISO used the funds to cover a debtor's payment default.
- Fifth, distribution either pro rata to CAISO creditors for the payment advices that were subject to default or, if the defaulted receivables were allocated pursuant to the tariff, to default-invoiced scheduling coordinator ID codes in proportion to their allocated shares of the defaulted receivables as calculated pursuant to the tariff for the payment advice on which the payment default occurred. In addition, the CAISO proposes to add a provision to the tariff stating that, regardless of how a default is allocated under this fifth priority, distributions will begin with the oldest payment advice that has unpaid amounts as a result of the debtor's default. These distributions to unpaid market creditors may be timed in order to reduce the associated administrative burden such that, to the extent the CAISO collects small amounts (in this context, amounts less than \$5,000), the CAISO will have discretion to hold those amounts to await further collections.
- Sixth, distribution to the penalty reserve account to the extent the CAISO used the funds to cover the debtor's payment default.
- Seventh (and finally), distribution of any remaining balance to the CAISO reserve account.⁵⁷

These priorities are consistent with the currently effective tariff rules with the sole exception that they are expressed more clearly in order to avoid future disputes.

⁵⁷ Revised tariff section 11.29.17.3. Related to these tariff revisions, the CAISO also proposes to: revise tariff section 11.29.13.1 to state that interest revenue will be distributed to account according to the revised default allocation provisions described above; revise tariff section 11.29.13.9 to state that its provisions on interest accruing while enforcing financial security include the CAISO Penalty Reserve Account; revise tariff sections 11.29.9.6.2.1(b), 11.29.9.6.4.1(b), and 11.29.13.8 to include cross-references to the revised default allocation provisions described above, and delete superseded provisions from existing tariff sections 11.29.13.7 and 11.29.13.10.

4. Extending and Clarifying the Practice of Separate Invoicing

As explained above, the CAISO ordinarily allocates any default losses across the entire market. However, the existing tariff also includes provisions that require or allow the CAISO to issue separate invoices for certain specified charges in special circumstances, so that any default loss would be allocated only to specific market participants.⁵⁸ Historically, the CAISO has engaged in this practice when the CAISO is recalculating settlements from old trading days as the result of resolving a dispute, so that the CAISO would allocate any payment defaults to the market participants from the relevant time rather than current market participants who may not have been involved in the transactions. The CAISO proposes to extend the application of separate invoicing to two new circumstances and clarify the relevant tariff provisions.

First, the CAISO proposes to revise the tariff provisions regarding the issuance of separate invoices to add to the types of settlement charges the CAISO may invoice separately from current market activities penalties that CAISO assesses for paying invoices or posting financial security late.⁵⁹ By way of background, the tariff imposes penalties on market participants that are late either in paying a market invoice or in posting collateral.⁶⁰ Although these penalties serve as a helpful incentive for timely payments and postings, they could also exacerbate a payment default because the amount of the penalties can accumulate rapidly when a market participant that has not filed for bankruptcy stops paying and responding to collateral calls. Accumulated penalties could increase the amount of a future payment default, which could result in the CAISO having to spread a loss to the market unnecessarily.

The risk of penalties causing a default loss that would not occur otherwise arises only in a specific situation. Ordinarily, when the total penalties assessed to an insolvent market participant are small, there should be enough funds in the CAISO Penalty Reserve Account to cover the default. Such a default would not affect the market, even indirectly, because the proceeds from the charges covered by funds from the CAISO Penalty Reserve Account end up being returned to that fund. However, if the total amount of penalties that results from a series of defaults exceeds the balance of the CAISO Penalty Reserve Account, then the CAISO would eventually have to charge the amount of the default to other market participants. Regardless of how small the amount of the loss

⁵⁸ See existing tariff sections 11.29.10.3 and 11.29.7.3.6.

⁵⁹ Revised tariff section 11.29.10.3.

⁶⁰ See existing sections 11.29.14(c) (penalty for paying market invoices late) and 12.5.2(c) (penalty for posting collateral late). These penalties are never less than \$1,000. See existing tariff section 11.29.14(c).

charged to the market is, it will result in administrative costs for both the CAISO and each market participant. The CAISO can avoid this possibility by amending the tariff to make penalties for late payment or posting collateral eligible for separate invoicing.

Second, the CAISO also proposes to add amounts due under black start agreements to the types of amounts that it invoices separately.⁶¹ The financial obligations that arise under black start agreements are “reliability services costs” that are solely chargeable to and recovered by the transmission owner in whose service territory the black start generator is located. They are not chargeable to the entire market. In recognition of this fact, the black start agreements reflect that the black start generator will look exclusively to the transmission owner for payment of the black start services (as opposed to the energy the black start generator may also provide). To the extent that separate invoicing is consistent with the black start agreement, this would involve CAISO issuing an invoice to the transmission owner for the black start services and an offsetting payment advice to the black start generator. Both the invoice and the payment advice would be separate from other market invoices so that, in the event of a default by the transmission owner, the CAISO would allocate the payment shortfall to the black start generator and not to the rest of the market.

In addition, the current tariff provisions on pro rata reductions in payments indicate that the CAISO will allocate default losses to the entire market, without referencing the CAISO’s existing authority to issue separate invoices.⁶² To clarify the existence of that CAISO authority, the CAISO proposes to revise the tariff provisions to state that, except to the extent a payment default is on an invoice that was separate from other market activity, the CAISO will allocate each payment default amount allocated to CAISO creditors through a shortfall allocation that remains unpaid by the defaulting CAISO debtor as provided in the tariff.⁶³

5. Allow the CAISO to Decline to Allocate Old and Small Default Losses to the Market

The existing tariff states that if an entity defaults on a market invoice and the shortfall is small enough to be covered by the CAISO Reserve Account, the CAISO must pursue reasonable collection efforts and either collect the payment in full or, after concluding it cannot, allocate the remaining shortfall to the

⁶¹ Revised tariff section 11.29.10.3.

⁶² Existing tariff section 11.29.17.1

⁶³ Revised tariff section 11.29.17.1.

market.⁶⁴ In ordinary circumstances the CAISO can readily apply these existing tariff provisions, but occasionally the CAISO must invoice a settlement adjustment long after all scheduled recalculations have concluded.⁶⁵ In this type of situation, collection can become more difficult for a variety of reasons, including the fact that some entities have terminated their agreements with the CAISO and ceased operating. Although these former entities remain obligated to make payment, the time required in this situation to collect on small invoices could in some cases better be used for other more pressing and significant purposes.

When the resettlement of old trading days generates invoices in small amounts—e.g., less than \$100—the tariff currently requires CAISO to choose between two undesirable options: collection efforts that will not benefit the market because their cost exceeds the low amounts at stake, or allocating the small shortfall to the market, which would impose significant administrative costs on both the CAISO and market participants. To address this issue, the CAISO proposes to add language to the CAISO Reserve Account tariff provisions stating that, if the CAISO determines after taking reasonable action that a default amount (or any part thereof) and/or interest cannot be recovered for an invoice or invoices that were issued after the invoices containing the T+24 recalculation settlement statements for the relevant trading days, the CAISO has the option of not allocating up to \$2,000 of the default amount. Instead, the CAISO could use the funds from the CAISO Reserve Account to cover the default amount on a permanent basis.⁶⁶ If the CAISO uses this tariff provision, market creditors will receive the funds from the CAISO Reserve Account.

C. Provide Flexibility to Use Developing Payment Options

The existing tariff requires all payments of market invoices be made either by means of the FedWire Funds Service (FedWire) or the Automated Clearing House (ACH).⁶⁷ In recent years, new payments systems have been developed and offered. A prominent example is FedNow, which the U.S. Federal Reserve System began offering in July 2023. FedNow is a real-time payment service designed to provide speed, efficiency, and safety of payments around the clock.

⁶⁴ See existing tariff section 11.29.20(b) (requiring “commercially reasonable endeavors” to collect from defaulting market participant); existing tariff section 11.29.9.6.2.1(c) (stating that, if after taking reasonable action the CAISO determines that the default loss “cannot be recovered,” it must allocate the shortfall to the market and repay the CAISO Reserve Account).

⁶⁵ See *generally* existing tariff section 11.29.7.3.2 (addressing unscheduled directed recalculation settlement statements). A recent example involved invoices directed in litigation regarding Docket No. ER04-835 (Amendment No. 60 to the original CAISO tariff), which began in 2004 and eventually required settlement adjustment to trading days more than a decade old.

⁶⁶ Revised tariff section 11.29.9.6.2.1(c).

⁶⁷ Existing tariff sections 11.1.3(e), 11.29.3(c), and 11.29.9.

FedNow payments will settle instantaneously, potentially providing economic benefits for the CAISO and its customers by allowing parties to make time-sensitive payments whenever needed and providing more flexibility to manage cash flows. The launch of FedNow may lead to additional related services from other financial institutions that could benefit the CAISO market.

Market participants have inquired about the possible use of FedNow, and the CAISO's Finance Group has been reviewing the FedNow service to determine the risks and opportunities related to market clearing and collateral payments. If the CAISO decides to authorize the use of FedNow or other services in the future, it wants to avoid legal uncertainty about whether the tariff authorizes payments by these means, and to afford flexibility to modify the approved means of payment. Accordingly, the CAISO proposes to revise the tariff to state that market participants may make payments of market invoices by electronic means authorized in the business practice manual and to make related tariff revisions.⁶⁸ These tariff revisions will provide the CAISO with useful flexibility to specify in the business practice manual the permissible methods of making market invoice payments to the CAISO.

D. Other Tariff Clarifications and Corrections

The CAISO proposes the tariff clarifications and corrections discussed below to update the tariff consistent with the CAISO's current policies and practices.

1. Expressly Authorize Use of the CAISO Reserve Account to Resolve Small Imbalances Resulting from the Elimination of Invoices Less than \$10

The existing tariff states that the CAISO will eliminate all invoices and payment advices for amounts less than \$10.⁶⁹ Without this rule eliminating small invoices, the cash flow on any payment date should always net to zero, assuming the CAISO receives payment in full on all invoices. By eliminating small invoices, however, cash flow on a payment date can be slightly out of balance, with either a deficiency or a surplus. The CAISO funds any shortfall

⁶⁸ New tariff sections 11.29.9.1(c) and 11.29.11.2(c); revised tariff section 11.29.9.3; deleted tariff section 11.1.3(e).

⁶⁹ The CAISO proposes to move this existing tariff provision, without any changes, from existing tariff section 11.29.7.2.1 (thereby rendering that section not used) to new tariff section 11.29.10.2. The CAISO also proposes to cross-reference the tariff provision using its new section number. Revised tariff sections 11.29.7.4.5, 11.29.9.6.2, and 11.29.12.

from the CAISO Reserve Account, as required by the tariff.⁷⁰ When the imbalance results in the CAISO receiving more funds than necessary to clear the market, the CAISO's practice is to place these funds in the CAISO Reserve Account, which balances the inflows and outflows consistent with the purpose of the CAISO Reserve Account to resolve short-term cash flow issues.

To set forth this practice expressly, the CAISO proposes to revise the tariff to state that if there are excess funds in the CAISO Clearing Account on any payment date due to this elimination of invoices and payment advices for less than \$10, the CAISO will transfer the excess funds from the CAISO Clearing Account to the CAISO Reserve Account.⁷¹

2. Consolidate Tariff Provisions on Billing and Payment

The tariff currently includes two separate sections containing similar provisions indicating that settlement statements form the basis for the billing and payment process.⁷² The CAISO proposes to delete the first of these two essentially duplicative provisions and to use the substantive language from the second section in the surviving first section. In addition, CAISO proposes to make a clarifying change to reflect that the recalculation settlement statement T+70B adjusts the initial settlement statement T+9B without necessarily showing the incremental changes thereto.⁷³

3. Clarify Terminology Regarding Settlement Versus Billing and Payment

Tariff section 11 concerns two related but distinct CAISO functions. One function is settlements, meaning the calculation of settlements and charges that appear on settlement statements. The other function is billing (and payment of those bills), which is addressed mainly in tariff section 11.29. Although settlements and billing are related in the sense that settlements are an input into the billing process, the two processes are distinct. Settlement is a matter of calculation or accounting whereas billing involves cash flow. Most important, issuing a settlement credit does not, by itself, cause cash to flow in that amount. Likewise, receiving a settlement credit may not result in receiving a payment for the relevant period, because a market participant with an accounting credit may have charges that exceed its credits for that payment date. In technical terms,

⁷⁰ See existing tariff section 11.29.9.6.1 ("If required, the CAISO shall instruct the CAISO Bank to transfer amounts from the CAISO Reserve Account to enable the CAISO Clearing Account to clear."); *accord* existing tariff section 11.29.9.6.2.

⁷¹ Revised tariff section 11.29.9.6.2.

⁷² Existing tariff sections 11.29.1 and 11.29.7.2.

⁷³ Revised tariff sections 11.29.1 and 11.29.7.2.

payments result from invoices and payment advices, which reflect the net financial result of several settlement statements, rather than from individual credits or charges.

Certain provisions in tariff section 11 that concern the settlements function, however, use the term “payment” where the words “credit,” “debit,” or “charge” would be more appropriate. Use of the term “payment” should be limited to where money changes hands through the billing and payment process.

A good illustration of the issue is in tariff section 11.14, regarding neutrality. The CAISO issues neutrality charges or credits on each settlement statement to ensure that the Settlement Statements for a given trading day will net to zero. Tariff section 11.14, however, refers to these settlements adjustments as “payments.” The CAISO proposes to clarify tariff section 11.14 to refer to credits rather than payments, to make similar clarifications to other provisions elsewhere in tariff section 11, and to make related changes regarding use of the terms “receive” and “revenue” in tariff section 11.⁷⁴

For similar reasons, the CAISO proposes to revise other provisions in the tariff to refer to amounts the CAISO will assess or invoice rather than pay,⁷⁵ and to refer to charges and credits rather than collections, payments, revenues, and amounts provided.⁷⁶ In addition, the CAISO proposes to change the title of tariff section 11.29 to specify that the section concerns billing and payment.

4. Delete Outdated and Repetitive Tariff Provisions

The CAISO proposes to delete outdated tariff provisions that erroneously indicate the CAISO applies charges on a monthly basis,⁷⁷ or which are otherwise

⁷⁴ Revised tariff sections 11.1, 11.14, 11.2, 11.2.1.1, 11.2.1.5, 11.2.1.7, 11.2.2.2.1, 11.2.3.1.2, 11.2.3.2.2, 11.2.4, 11.2.4.1.2, 11.2.4.3, 11.2.4.3, 11.2.4.4.1, 11.2.4.6, 11.2.4.7, 11.3.1, 11.3.2, 11.4, 11.4.1, 11.4.2, 11.5, 11.5.1.1, 11.5.1.2, 11.5.2, 11.5.4.2, 11.5.4.4, 11.5.6.1, 11.5.6.2, 11.5.6.3.1, 11.5.7.1, 11.5.7.2, 11.5.8.1, 11.5.8.1.1, 11.7.1, 11.7.1.1, 11.8, 11.10.1, 11.10.1.1, 11.10.1.2.1, 11.10.1.3, 11.10.1.4, 11.10.1.7, 11.10.2, 11.10.2.1.1, 11.10.2.1.2, 11.10.2.1.5, 11.10.2.1.6, 11.10.2.2, 11.10.2.2.1, 11.10.2.2.4, 11.10.3.1, 11.10.3.2, 11.10.4.1, 11.10.4.2, 11.10.6, 11.10.7, 11.10.9, 11.10.9.1, 11.10.9.2, 11.10.9.3, 11.10.9.4, 11.11.2, 11.12.3, 11.3, 11.13.5, 11.13.6, 11.13.7, 11.15, 11.16, 11.16.1, 11.17, 11.18.7, 11.23(l), 11.25.2.1, 11.27, 11.29.5.3, and 11.29.7.4.3; deleted tariff sections 11.1.3(a)-(c), 11.29.8.5, 11.29.10, and 11.31.3. However, the CAISO does not propose to change any existing capitalized defined terms, such as “No Pay.”

⁷⁵ Revised tariff sections 23.7, 26.1(a), 26.1.3, and 26.1.4.3.

⁷⁶ Revised tariff sections 26.1.3, 26.1.4, 26.1.4.2, 26.1.4.3, 26.1.4.5, 28.2, 29.11(n)(1), and 40.6.1(3); tariff appendix A, revised definition of Virtual Demand Bid.

⁷⁷ Revised tariff sections 11.14 and 11.29.7.3.5.

no longer necessary.⁷⁸ The CAISO also proposes to delete tariff provisions that merely repeat other provisions elsewhere in the tariff, and are thus duplicative.⁷⁹

5. Reorganize Certain Provisions in Tariff Section 11

To provide a more logical and clear presentation, the CAISO proposes to move certain tariff provisions within tariff section 11, either without changing the text or, in some cases, with only minor wording changes. For example, the CAISO proposes to move two tariff sections that concern the payment process—section 11.29.3 (concerning prepayment) and 11.29.4 (concerning payment in the event of system failure—from their current location amidst provisions that govern settlement to new subsections under tariff section 11.29.11, where they will be among other provisions concerning payment.⁸⁰ Reorganizational changes like this will keep topics together, thereby improving the organization and readability of tariff section 11, and helping the reader more quickly locate potentially relevant provisions.

6. Miscellaneous Minor Changes

In addition to the changes described above, the CAISO proposes to make miscellaneous minor changes to clarify and improve the accuracy of the tariff.⁸¹

⁷⁸ In what will now be tariff section 11.1.1(a), per the reorganization discussed below, the CAISO proposes to omit what used to be tariff section 11.29(a)(ii), because that provision concerns transactions associated with trading days that occurred prior to September 1, 2012—*i.e.*, transactions that have long since been settled. Thus, this provision no longer provides any useful clarification.

⁷⁹ Deleted tariff section 11.1.2 (repetitive of provisions in revised tariff section 11.1).

⁸⁰ See movement of provisions from tariff section 11.1.3(d) and -(e) to tariff section 11.29.9.1(b) and -(c); movement of provisions from tariff section 11.29(a) and -(b) to tariff section 11.1.1(a) and -(b); movement of provisions from tariff section 11.29(c) and -(d) to tariff section 11.29.5.2(a) and -(b) (with change from the phrase “Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO” in subsection (c) to the more general defined term “Business Associate” and other simplifying changes); movement of provisions from tariff section 11.29.6 to tariff section 11.29.10.4; movement of provisions from tariff section 11.29.10.2 to tariff section 11.29.7.2.

⁸¹ Revised tariff sections 11.2.4.4.1 (delete unnecessary use of the word “revenue” before “adjustments”), 11.2.4.4.2 (same), 11.2.5.2 (correct section title), 11.10.2.1.4 (delete unnecessary word “collected”), 11.10.3.4 (same), 11.10.4.4 (same), 11.17.1.2 (change “ISO” to “CAISO”), 11.18.1 (make change described above), 11.18.2 (add clarifying phrase “sums representing”), 11.29.7.3.5 (delete unnecessary phrase “for the end of the month”), 11.29.9.6.1 (correct tariff cross-references), 11.29.11.1 (add clarifying title), 11.29.13.1 (clarify provisions on treatment of interest revenue), 11.29.13.8 (clarify treatment of funds received by the CAISO), 11.29.17.2.6(ii)-(iv) (delete unnecessary phrase “each payment default that occurs in”), 26.1.4.3.1 (delete unnecessary phrase “payment of”), 26.1.4.3.2 (same), and 26.1.4.4 (clarify language regarding payment); tariff appendix A, revised definitions of IFM Load Uplift Obligation (clarify by replacing the phrase “to pay” with “for”), Non-Spinning Reserve Obligation (same), Operating Reserve Obligation (same), Regulation Up Reserve Obligation (same), Settlement Statement (specify that

For example, the CAISO proposes to delete a sentence from tariff section 11.18.1 requiring that scheduling coordinators make payment of emissions cost charges; these charges appear on settlement statements and thus are already covered by more general provisions in tariff section 29 that require scheduling coordinators to make payments.

III. Effective Date

The CAISO requests that the Commission accept the tariff revisions contained in this filing in an order to be issued no later than January 29, 2025, and authorize CAISO to make the amendments effective upon five days prior notice to the Commission. The Commission has authorized a similar five-business-day notification period for a number of amendments to the CAISO tariff,⁸² and should do likewise here.

Although the CAISO believes each element of this tariff amendment filing is just and reasonable, the tariff revisions described in each subsection of this transmittal letter are severable from the tariff revisions described in every other subsection—for example, the tariff revisions described in subsection II.B.3.a (about preventing default loss allocations to new market participants) are severable from the tariff revisions described in the following subsection II.B.3.b (about calculating loss allocation percentages using more recent data), and from those described in every other subsection. Accordingly, the Commission could issue an order accepting the balance of the tariff revisions contained in this filing even if it were to reject the proposed amendments described in any one subsection.

the definition of a settlement statement includes a settlement statement authorized by the Commission), Spinning Reserve Obligation (clarify by replacing the phrase “to pay” with “for”), and Virtual Demand Bid (clarify by replacing the phrase “commitment to pay” with “financial commitment”). The CAISO also proposes to revise tariff section 11.29.12 to clarify that FERC Annual Charges have the same collection priority as the Grid Management Charge, as specified in existing tariff section 11.29.9.6.1.

⁸² See, e.g., *Cal. Indep. Sys. Operator Corp.*, 187 FERC ¶ 61,154, at P 37 (2024); *Cal. Indep. Sys. Operator Corp.*, 185 FERC ¶ 61,210, at P 41 (2023); *Cal. Indep. Sys. Operator Corp.*, 181 FERC ¶ 61,067, at P 13 (2022). In the cited orders the Commission authorized the CAISO to file a notice within five business days after the actual effective date, rather than five business days prior to the actual effective date as proposed in the instant filing, but the principle that the Commission has authorized CAISO notification of the actual effective date is the same.

IV. Communications

Correspondence and other communications regarding this filing should be directed to:

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V. Service

The CAISO has served copies of this filing on the California Public Utilities Commission, the California Energy Commission, and all parties with scheduling coordinator agreements under the CAISO tariff. In addition, the CAISO has posted a copy of the filing on the CAISO website.

VI. Contents of this Filing

Besides this transmittal letter, this filing includes the following attachments:

Attachment A	Clean CAISO tariff sheets to implement this tariff amendment
Attachment B	Red-lined CAISO tariff sheets to implement this tariff amendment
Attachment C	Draft Final Proposal
Attachment D	Memorandum

VII. Conclusion

For the reasons set forth in this filing, the CAISO respectfully requests that the Commission issue an order accepting this tariff amendment by January 29, 2025, and make the tariff revisions effective upon five days prior notice to the Commission.

Respectfully submitted,

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Attachment A – Clean Tariff

Tariff Amendment – Billing, Payment, and Credit Enhancements

California Independent System Operator Corporation

October 11, 2024

Section 11

11. CAISO Settlements and Billing

11.1 Settlement Principles

The CAISO shall calculate and account for credits and debits, and settle with Business Associates in accordance with the following principles:

- (a) The CAISO shall be responsible for calculating Settlement balances for any penalty or dispute in accordance with the CAISO Tariff, and any transmission Access Charge to UDCs or MSSs and Participating TOs;
- (b) The CAISO shall create and maintain computer back-up systems, including off-site storage of all necessary computer hardware, software, records and data at an alternative location that, in the event of a Settlement system breakdown at the primary location of the day-to-day operations of the CAISO, could serve as an alternative location for day-to-day Settlement operations within a reasonable period of time;
- (c) The CAISO shall retain all Settlement data records for a period which, at least, allows for the re-run of data as required by this CAISO Tariff and any adjustment rules of the Local Regulatory Authority governing the Scheduling Coordinators and their End-Use Customers and FERC;
- (d) The CAISO shall calculate, account for, and settle all debits and credits based on the Settlement Quality Meter Data it has received, or, if Settlement Quality Meter Data is not available, based on the best available information or estimate it has received in accordance with the provisions in Section 10 and the applicable Business Practice Manuals; and
- (e) Day-Ahead Schedules, RUC Awards and AS Awards shall be settled at the relevant LMP, RUC Price, and ASMPs, respectively. FMM Schedules shall be settled at the relevant FMM LMP at the relevant Scheduling Point. FMM AS Awards shall be settled at the relevant FMM ASMP. All Dispatch Instructions shall be deemed delivered and settled at relevant Real-Time Market prices. Deviations from Dispatch Instructions shall be

settled as Uninstructed Deviations.

11.1.1 CAISO as Counterparty

- (a) The CAISO shall be the contracting counterparty, in its own name and right, to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for any purchase or sale of any product or service, or for any other transaction, that is financially settled by the CAISO under the CAISO Tariff, except under the following circumstances:
 - (i) The CAISO shall not be the contracting counterparty for transactions that procure Station Power for a Generating Unit located in Mexico or for transactions that procure Energy or Ancillary Services within Mexico; for such transactions, the CAISO will not act as principal but instead as agent for and on behalf of the relevant Scheduling Coordinators.
 - (ii) [Not Used]
 - (iii) The CAISO's status as contracting counterparty is not intended to affect the tax-exempt status of transmission facilities or entitlements subject to the CAISO's operational control.

Bids for Supply submitted by a Scheduling Coordinator for any resource funded by Municipal Tax Exempt Debt are not, and shall not be construed or deemed to be, a sale to the CAISO or other transaction that is financially settled by the CAISO to the extent that the load serving entity that holds entitlements to the resource for which such Bids for Supply are submitted is using its Entitlements to serve native load during that interval. For purposes of this subsection only, a load serving entity is using its entitlements to a resource to serve native load under the following conditions: (A) For a Load Serving Entity that is serving demand inside the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the metered CAISO Demand for that Settlement Interval for the Load Serving Entity that holds entitlements to the resources for which such Bids for Supply are submitted; or (B) for load serving entities that serve demand outside of the CAISO Balancing Authority Area by Wheeling Through or exporting from the CAISO Balancing Authority Area, if the

total MW volume of such Bids for Supply that clear in any Settlement Interval is less than or equal to the total of wheel throughs or exports that are used to serve the native load for the load serving entity that holds entitlements to the resources for which such Bids for Supply are submitted during that Settlement Interval. Nothing in the two preceding sentences shall affect credit requirements under Section 12 of the CAISO Tariff or settlements charges or credits issued pursuant to any section of the CAISO Tariff. The details of such Bids for Supply may be included in Settlement Statements by the CAISO for purposes of calculating settlement charges and credits other than for Supply.

- (b) The purchase or sale of any products or service, or any other transaction, which is financially settled by the CAISO under the CAISO Tariff shall be deemed to occur within the State of California. To the extent permitted by applicable law, any warranties provided by the sellers to the CAISO of such products or services, whether express, implied, or statutory, are hereby passed to the Business Associates who purchase such products or services from the CAISO on a "pass through basis" and to the extent not passed through, any such warranties are hereby assigned by the CAISO to the purchasing Business Associates. Sellers to the CAISO and Business Associates acknowledge that warranties on such products are limited to that offered by the seller to the CAISO and will exist, if at all, solely between the seller to the CAISO and the purchasing Business Associate. AS BETWEEN THE PURCHASING BUSINESS ASSOCIATE AND THE CAISO AS COUNTERPARTY, NO EXPRESS OR IMPLIED WARRANTIES ARE MADE BY THE CAISO REGARDING THE PRODUCTS AND SERVICES SOLD BY THE CAISO AS COUNTERPARTY, AND ANY SUCH PRODUCTS AND SERVICES ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. THE CAISO MAKES NO WARRANTY OR REPRESENTATION THAT THE PRODUCTS OR SERVICES WILL BE UNINTERRUPTED OR ERROR-FREE. PURCHASING BUSINESS ASSOCIATES HEREBY WAIVE, AND THE CAISO HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A

PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. THE CAISO DOES NOT WARRANT THAT THE PRODUCTS AND SERVICES OFFERED WILL MEET CUSTOMER'S REQUIREMENTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY THE CAISO OR ANY AUTHORIZED REPRESENTATIVE OF THE CAISO SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY PASS THROUGH OR ASSIGNED WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES IN CERTAIN CIRCUMSTANCES, SO THE ABOVE EXCLUSION APPLIES ONLY TO THE EXTENT PERMITTED BY APPLICABLE LAW.

11.1.2 [Not Used]

11.1.3 [Not Used]

11.1.4 [Not Used]

11.1.5 [Not Used]

11.2 Settlement of Day-Ahead Market Transactions

All transactions in the IFM and RUC as specified in the Day-Ahead Schedule, AS Awards and RUC Awards, respectively, are financially binding and will be settled based on the Day-Ahead LMP, ASMP or RUC Price for the relevant Location for the specific resource or transaction identified for the Bid. The CAISO will settle the costs of Demand, capacity, Energy and Ancillary Services as separate Settlement debits and credits for each Settlement Period of the Day-Ahead Schedule, Day-Ahead AS Award or RUC Award, as appropriate.

11.2.1 IFM Settlements

11.2.1.1 IFM Payments for Supply of Energy

For each Settlement Period for which the CAISO clears Energy transactions in the IFM, the CAISO shall

credit the relevant Scheduling Coordinator for the MWh quantity of Supply of Energy from all Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Distributed Energy Resource Aggregations and System Resources in an amount equal to the IFM LMP at the applicable PNode or Aggregated PNode multiplied by the MWh quantity specified in the Day-Ahead Schedule for Supply (which consists of the Day-Ahead Scheduled Energy).

* * * * *

11.2.1.5 IFM Congestion Credit for ETCs, TORs, and Converted Rights

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced ETC Self-Schedule, TOR Self-Schedule or Converted Rights Self-Schedule, the CAISO shall not impose any debit or credit to the Scheduling Coordinator related to the MCC associated with such Self-Schedules. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Congestion Credit, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCC at each eligible Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC, TOR, and Converted Rights Self-Schedules.

* * * * *

11.2.1.7 IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or issue any credit to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable losses charges as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a

Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.2.1.7. Where the provisions of this Section 11.2.1.7 do not conflict with the provisions of the agreement, the provisions of this Section 11.2.1.7 shall apply to the subject TORs. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCL at each eligible Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules.

* * * * *

11.2.2.2.1 Undispatchable RUC Capacity

If a Scheduling Coordinator has Undispatchable Capacity that it is obligated to supply to the CAISO during a Settlement Interval, the RUC Availability Payment, if applicable for any non-Resource Adequacy Capacity, for the amount of Energy that cannot be delivered from the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Settlement Interval shall be rescinded. If a Partial Resource Adequacy Resource is providing RUC Capacity from both the non-Resource Adequacy Capacity and the Resource Adequacy Capacity the rescission of the credit will occur for the non-Resource Adequacy Capacity prior to eliminating any capacity for the Resource Adequacy Capacity of the Partial Resource Adequacy Resource.

* * * * *

11.2.3 IFM Energy Charges and Payments for Metered Subsystems

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11.2.3.1.2 IFM Payments for MSS Supply under Gross Energy Settlement

The CAISO shall credit Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Supply from the MSS in its Day-Ahead Schedule at the corresponding PNode and the applicable IFM LMP.

* * * * *

11.2.3.2.2 IFM Payment for MSS Supply under Net Energy Settlement

The CAISO shall credit Scheduling Coordinators that submit Bids for MSS Operators that have selected net Energy Settlement an amount equal to the product of the net MSS Supply in the Day-Ahead Schedule and the weighted average price of all IFM LMPs for all applicable PNodes within the relevant MSS. The net MSS Supply is the quantity of MSS Generation that exceeds the MSS Demand for the applicable MSS. The weights used to compute the weighted average LMPs shall be equal to MSS Generation scheduled in the Day-Ahead Schedule.

11.2.4 CRR Settlements

The CAISO will credit or debit CRR Holders as further specified in this Section 11.2.4 and its subsections.

* * * * *

11.2.4.1.2 Calculation of Hourly CRR Congestion Fund

The CAISO calculates an Hourly CRR Congestion Fund for every Transmission Constraint that is congested in the IFM in a Settlement Period. The Hourly CRR Congestion Fund specific to a particular binding Transmission Constraint in a given Settlement Period is the sum of the: (a) portion of the IFM Congestion Fund in that Settlement Period attributable to congestion on the Transmission Constraint to which the congestion fund corresponds; (b) charges specific to the Transmission Constraint calculated pursuant to Section 11.2.4.4.1; and (c) CRR credit adjustments the CAISO may make pursuant to Sections 11.2.4.6 or 11.2.4.7 that are associated with the Transmission Constraint.

* * * * *

11.2.4.3 Credits and Debits for Monthly and Annual Auctions

The CAISO will charge CRR Holders for the Market Clearing Price for CRRs obtained through the clearing of the CRR Auction as described in Section 36.13.6. To the extent the CRR Holder purchases a CRR through a CRR Auction that has a negative value, the CAISO will retain the CRR Auction proceeds and apply them to credit requirements of the applicable CRR Holder, in accordance with Section 12.6.3 of the CAISO Tariff. The CAISO will net all credits and debits issued through this process to determine the net revenue amount. CRR Auction net revenue amounts for on-peak and off-peak usage from each CRR Auction will be separated. The CAISO will allocate CRR Auction revenues for each season coming from the annual auction uniformly across the three months comprising each season based on time of use. The CAISO will then add these on-peak and off-peak monthly amounts from the seasonal auctions to the corresponding monthly on-peak and off-peak amounts from the monthly CRR Auction for the same month to form the monthly net CRR Auction on-peak and off-peak revenues, respectively. Furthermore, the CAISO will convert these monthly net CRR Auction revenues into daily values and add them to the daily CRR Balancing Account. In particular, the daily CRR Balancing Account contribution will be the sum of: (1) the monthly net CRR Auction on-peak amount multiplied by the ratio of daily on-peak hours to monthly on-peak hours; and (2) the monthly net CRR Auction off-peak amount multiplied by the ratio of daily off-peak hours to monthly off-peak hours.

11.2.4.4 Hourly CRR Calculations, Daily CRR Settlement, and Potential Monthly Surplus Distribution Payments

11.2.4.4.1 Calculating CRR Holders' Congestion-Supported Values

For each Settlement Period, the CAISO uses the funds in the Hourly Congestion Funds calculated in Section 11.2.4.1.2 to determine the Congestion-Supported Values credited and charged to CRR Holders, by first determining all Net Modeled CRR Flow quantities. The CAISO then determines whether the Net Modeled CRR Flow results in a credit or debit to the CRR Holder.

For a CRR Holder whose Net Modeled CRR Flow over a binding Transmission Constraint is in the prevailing direction, the Congestion-Supported Value is a credit equal to the ratio of that CRR Holder's prevailing Net Modeled CRR Flow over that Transmission Constraint (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7), as compared to the sum of all CRR Holders' prevailing Net

Modeled CRR Flow over that Transmission Constraint (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). The CAISO will not credit a CRR Holder from an Hourly CRR Congestion Fund in excess of the CRR Holder's Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint, minus any adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7 that are allocated to that Transmission Constraint.

For a CRR Holder whose Net Modeled CRR Flow over a binding Transmission Constraint is in the counter-flow direction, the Congestion-Supported Value is a charge equal to the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint.

The lower bound of the sum of Congestion-Supported Values for a CRR Option across the Settlement Periods of a day is zero.

The CAISO transfers any funds in an Hourly CRR Congestion Fund associated with binding Transmission Constraints to which no CRR has a positive or negative difference between the source and sink PTDFs to the CRR Balancing Account.

Any funds remaining in an Hourly CRR Congestion Fund after all funds have been allocated to CRRs or transferred to the CRR Balancing Account for that hour are reserved for potential Daily CRR Surplus Distribution Payments or Monthly CRR Surplus Distribution Payments to CRR Holders. The funds the CAISO holds in reserve for a CRR Holder pertaining to a Transmission Constraint are held in proportion to that CRR Holder's Net Modeled CRR Flow in that Settlement Period (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7) relative to the Net Modeled CRR Flow over that Transmission Constraint for all CRR Holders in that Settlement Period (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7).

11.2.4.4.2 Calculating Daily CRR Surplus Payments

The CAISO allocates the funds in a Daily Congestion Fund as a Daily CRR Surplus Distribution Payment to CRR Holders that have funds reserved for them in a Daily CRR Congestion Fund pursuant to Section 11.2.4.4.1, and whose total Congestion-Supported Values pertaining to that Transmission Constraint during the day are less than the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across the day (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). A Daily CRR Surplus Distribution Payments specific to a CRR Holder and

Transmission Constraint cannot exceed the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across all Settlement Periods of the day (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). The CAISO adds any funds remaining in a Daily CRR Congestion Fund after it has made all necessary Daily CRR Surplus Distribution Payments to that Transmission Constraint's Monthly CRR Congestion Fund.

11.2.4.4.3 Monthly Clearing of the Monthly Constraint-Specific CRR Congestion Fund

The CAISO distributes the total of the Monthly CRR Congestion Fund at the end of each month.

The CAISO first distributes the funds in a Monthly CRR Congestion Fund as Monthly CRR Surplus Distribution Payments to CRR Holders that have funds reserved for them in a Monthly CRR Congestion Fund pursuant to Section 11.2.4.4.1 and whose total Congestion-Supported Values pertaining to that Transmission Constraint during the month, plus the Daily CRR Surplus Distribution Payments, are less than the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across all Settlement Periods of the month (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7).

The CAISO distributes any funds remaining in a Monthly CRR Congestion Fund after it has made all required Monthly CRR Surplus Distribution Payments to Scheduling Coordinators in an amount equal to:

(a) the funds in the Monthly CRR Congestion Fund, multiplied by (b) the ratio of each Scheduling Coordinator's Measured Demand for the relevant Trading Month (net of the Scheduling Coordinator's Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Month), divided by (c) the total Measured Demand for all Scheduling Coordinators for the relevant Trading Month (net of the total Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Month).

* * * * *

11.2.4.6 Adjustment of CRR Credits and Debits Related to Virtual Awards

In accordance with this Section 11.2.4.6, the CAISO will adjust the credits and debits from the CRRs of a CRR Holder that is also a Convergence Bidding Entity whenever either of the following creates a significant impact on the value of the CRRs held by that entity: the CRR Holder/Convergence Bidding Entity submits Virtual Bids; or the CRR Holder/Convergence Bidding Entity reduces in the RTM an import or export awarded in a Day-Ahead Schedule. As set forth in Section 11.32, the CAISO will also adjust the credits and debits from the CRRs of a CRR Holder (regardless of whether the CRR Holder is also a Convergence Bidding Entity) where the Scheduling Coordinator representing that CRR Holder reduces in the RTM an import or export awarded in a Day-Ahead Schedule.

- (a) For purposes of this Section 11.2.4.6 and the definition of Flow Impact, a reduction by a Scheduling Coordinator submitting Schedules on behalf of an entity that is a CRR Holder to an import or export Schedule in the RTM will be treated as a Virtual Award if the segment of Economic Bids (but not Self-Schedule) leading to the Schedule reduction is: at an Energy Bid price greater than the Day-Ahead Market LMP at the relevant intertie, in the case of an import; or at any Energy Bid price less than the Day-Ahead Market LMP at the relevant intertie, in the case of an export.

In addition, if the RTM Bid does not include the full MW quantity of the Day-Ahead Schedule through some combination of Economic Bid and Self-Schedule, then the MW range not covered by the RTM Bid that was included in the Day-Ahead Schedule will be treated as a Virtual Award.

For each CRR Holder subject to this Section 11.2.4.6, for each hour, and for each Transmission Constraint binding in the IFM or FMM the CAISO will calculate the Flow Impact of the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. For the purposes of calculating the CRR adjustments as specified in this Section 11.2.4.6, the CAISO will include nodal MW constraints that the CAISO applies to Eligible PNodes in the IFM pursuant to Section 30.10.

- (b) The CAISO will determine the peak and off-peak hours of the day where Congestion on the Transmission Constraint was significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. Congestion on the

Transmission Constraint will be deemed to have been significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder if the Flow Impact passes two criteria. First, the Flow Impact must be in the direction to increase the sum of the CRR Holder's Notional CRR Values in their portfolio in that Settlement Period. Second, the Flow Impact must exceed the threshold percentage of the flow limit for the Transmission Constraint. The threshold percentage is ten (10) percent of the flow limit for each Transmission Constraint.

- (c) For each peak or off-peak hour that passes both criteria in Section 11.2.4.6(b), the CAISO will compare the Transmission Constraint's impact on the Day-Ahead Market value of the CRR Holder's CRR portfolio with the Transmission Constraint's impact on the FMM value of the CRR Holder's CRR portfolio, as applicable.
- (d) The CAISO will adjust the peak or off-peak period credits and debits from the CRR Holder's CRRs in the event that, over the peak or off-peak period of a day, the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio, as applicable. The amount of the peak period adjustment will be the amount that the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the peak-period hours that passed both criteria in Section 11.2.4.6(b), as applicable. The amount of the off-peak period adjustment will be the amount that the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the off-peak period hours that passed both criteria in Section 11.2.4.6(b), as applicable.

The CAISO includes all adjustments of CRR credits and debits calculated pursuant to this Section 11.2.4.6 in the Hourly CRR Congestion Fund for the applicable Transmission Constraint corresponding to the CRR credits and debits that would have been issued but for the adjustments as specified in Section

11.2.4.1.2.

11.2.4.7 Adjustment of CRR Credits and Debits Related to Schedules that Source and Sink in the Same Balancing Authority Area

The CAISO will adjust the credits and debits from the CRRs of a CRR Holder where the Scheduling Coordinator representing that CRR Holder has submitted Bids (including Self-Schedules), in violation of Section 30.5.5 and the resulting Schedule(s) impacts the value of the CRRs in the DAM held by that CRR Holder. Such adjustment will occur if the following circumstances are all met:

- (a) A portion of the E-Tag that uses the CAISO Controlled Grid relates to a Schedule in the Day-Ahead Market;
- (b) The scheduled MW on the portion of the E-Tag using the CAISO Controlled Grid has a positive PTDF on a congested transmission element, where that congestion is measured in the direction of the CRR; and
- (c) The CRR Holder would receive credits from CRRs on the congested transmission element.

If such circumstances occur, the CAISO adjusts the CRR credits and debits in that Settlement Period so that the additional net CRR revenue that otherwise would be earned from the congestion created by the Schedule that results from the Bids submitted in violation of Section 30.5.5 is not credited to the CRR Holder. Instead, the CAISO will add those amounts to the Hourly CRR Congestion Fund for the applicable Transmission Constraint.

* * * * *

11.3 Settlement of Virtual Awards

11.3.1 Virtual Supply Awards

The CAISO will credit each Scheduling Coordinator with Virtual Supply Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the Day-Ahead LMP at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Supply Awards. Virtual Supply Awards subject to price correction will be settled as specified in Section 11.21. The CAISO will charge each Scheduling

Coordinator with Virtual Supply Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the simple average of the four FMM LMPs for the applicable Trading Hour at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Supply Awards.

11.3.2 Virtual Demand Awards

The CAISO will charge each Scheduling Coordinator with Virtual Demand Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the Day-Ahead Market LMP at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Demand Awards. Virtual Demand Awards subject to price correction will be settled as specified in Section 11.21. The CAISO will credit each Scheduling Coordinator with Virtual Demand Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the simple average of the four FMM LMPs for the applicable Trading Hour at the Eligible PNode or Eligible Aggregated PNode multiplied by the IFM MWhs of Virtual Demand Awards.

11.4 Black Start Settlements

Credits for Black Start capability shall consist of any credits under any Black Start Agreement. If the Energy price and Start-Up Costs are not specified in the Black Start Agreement, the Black Start Energy will be credited as an Exceptional Dispatch in accordance with Section 11.5.6.1 and the commitment costs for the resource will be eligible for Bid Cost Recovery under Section 11.8. Black Start Energy resulting from a performance test shall also be credited as an Exceptional Dispatch in accordance with Section 11.5.6.1. RMR Units providing Black Start are compensated in accordance with the RMR Contract rather than this Section 11.4.

11.4.1 Black Start Energy

The Black Start Energy credit user rate for any Settlement Period will be calculated based on the sum of Black Start Energy credits to Scheduling Coordinators in the applicable Settlement Period divided by Measured Demand, excluding exports to neighboring Balancing Authority Areas. The Black Start Energy user charge for any Settlement Period for a Scheduling Coordinator will be the Black Start Energy credit user rate multiplied by the quantity of Measured Demand, excluding exports to neighboring Balancing Authority Areas, for which that Scheduling Coordinator is responsible in that Settlement Period.

11.4.2 Black Start Capability

The CAISO shall allocate credits for Black Start capability under a Black Start Agreement as Reliability

Services Costs to the Participating Transmission Owner in whose TAC Area where the Black Start Unit is located.

11.5 Real-Time Market Settlements

The CAISO shall calculate and account for imbalance energy for each Dispatch Interval and settle imbalance energy in the Real-Time Market for each Settlement Interval for each resource within the CAISO Balancing Authority Area and all System Resources dispatched in Real-Time. There are four (4) categories of imbalance energy: FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Imbalance Energy. FMM Instructed Imbalance Energy includes all Energy associated with the FMM Schedule. FMM Instructed Imbalance Energy is settled pursuant to Section 11.5.1.1, including any Energy related with HASP Intertie Block Schedules cleared through the FMM. RTD Instructed Imbalance Energy is settled pursuant to Section 11.5.1.2, Uninstructed Imbalance Energy is settled pursuant to Section 11.5.2, and Unaccounted For Energy is settled pursuant to Section 11.5.3. To the extent that the sum of the Settlements Amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy does not equal zero, the CAISO will assess charges or issue credits for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval, as further described in Section 11.5.4. FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy due to Exceptional Dispatches, as well as the allocation of related costs, including Excess Costs Payments, are settled as described in Section 11.5.6. The CAISO shall reverse RTM Congestion Charges for valid and balanced ETC and TOR Self-Schedules as described in Section 11.5.7. The CAISO will settle Energy for emergency assistance as described in Section 11.5.8.

11.5.1 Imbalance Energy Settlements

11.5.1.1 FMM Instructed Imbalance Energy Settlements

For each Settlement Interval, FMM Instructed Imbalance Energy consists of the following types of Energy: (1) FMM Optimal Energy; (2) FMM Minimum Load Energy; (3) FMM Exceptional Dispatch Energy; (4) FMM Derate Energy; and (5) FMM Pumping Energy. Credits and charges for FMM Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting,

as appropriate, the specific Scheduling Coordinator's FMM IIE Settlement Amount. The FMM IIE Settlement Amounts for FMM Optimal Energy, FMM Minimum Load Energy, FMM Derate Energy, and FMM Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the FMM LMP. For MSS Operators that have elected net Settlement, the FMM IIE Settlement Amounts for Energy dispatched through the FMM optimization shall be calculated as the product of the FMM MSS Price and the sum of the following types of Energy: FMM Minimum Load Energy from System Units dispatched in FMM, FMM Derate Energy, and FMM Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the FMM Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.1. The remaining FMM IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.1.2 RTD Instructed Imbalance Energy Settlements

For each Settlement Interval, RTD Instructed Imbalance Energy consists of the following types of Energy: (1) RTD Optimal Energy; (2) Residual Imbalance Energy; (3) RTD Minimum Load Energy; (4) RTD Exceptional Dispatch Energy; (5) Regulation Energy; (6) Standard Ramping Energy; (7) Ramping Energy Deviation; (8) RTD Derate Energy; (9) MSS Load Following Energy; (10) RTD Pumping Energy; and (11) Operational Adjustments. Credits and charges for RTD Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's RTD IIE Settlement Amount. The RTD IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The RTD IIE Settlement Amounts for RTD Optimal Energy, RTD Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, and RTD Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the RTD LMP. For MSS Operators that have elected net Settlement, the RTD IIE Settlement Amounts for Energy dispatched through the RTD optimization shall be calculated as the product of the RTD MSS Price and the sum of the following types of Energy: RTD Minimum Load Energy from System Units dispatched in Real-Time, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, MSS Load Following Energy, and RTD Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the RTD

Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.2. The remaining RTD IIE Settlement Amounts are determined as follows: (1) RTD IIE Settlement Amounts for Residual Imbalance Energy are determined pursuant to Section 11.5.5; and (2) RTD IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.2 Uninstructed Imbalance Energy

Scheduling Coordinators shall be credited or charged a UIE Settlement Amount for each LAP, PNode or Scheduling Point for which the CAISO calculates an Uninstructed Imbalance Energy quantity for each Settlement Interval. Uninstructed Imbalance Energy quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the Uninstructed Imbalance Energy for such entities is settled similarly to how Uninstructed Imbalance Energy for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for Uninstructed Imbalance Energy every five minutes based on the resource's Dispatch Instruction. For all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources, Distributed Energy Resource Aggregations and all Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy MWh quantity and the applicable RTD LMP. The UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy quantity and RTD MSS Price.

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11.5.4 Imbalance Energy Pricing; Non-Zero Offset Amount Allocation

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11.5.4.2 Allocations of Non-Zero Amounts of the Sum of the FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Real-Time Virtual Awards Settlements

The CAISO will first compute (1) the Real-Time Congestion Offset and allocate it to all Scheduling Coordinators, based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a RTM Congestion Credit was provided as specified in Section 11.5.7, and excluding Demand associated with ETC, Converted Right, or TOR Self-Schedules for which an IFM Congestion Credit was provided as specified in Section 11.2.1.5; and (2) the Real-Time Marginal Cost of Losses Offset and allocate it to all Scheduling Coordinators based on Measured Demand, excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS operators that have elected to Load follow or net settlement, or both, the Real-Time Marginal Cost of Losses Offset will be allocated based on their MSS Aggregation Net Measured Demand excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS Operators regardless of whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset, and less the Real-Time Marginal Cost of Losses Offset, does not equal zero, the CAISO will assess charges or issue credits for the resulting

differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected net Settlement, the CAISO will assess charges or issue credits for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset, based on their MSS Aggregation Net Measured Demand. For Scheduling Coordinators for MSS Operators that have elected Load following, the CAISO will not assess any charges or issue credits for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset.

11.5.5 Settlement Amount for Residual Imbalance Energy

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11.5.5.4 Rerated Minimum Load

When a Scheduling Coordinator increases the Minimum Load pursuant to Section 9.3.3, for the Settlement Interval(s) during which the affected resource is ramping up towards or ramping down from such a Minimum Load change, the Residual Imbalance Energy for the applicable Settlement Interval(s) will be re-classified as Derate Energy and will be credited at the applicable RTD Locational Marginal Price.

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11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration or to Prevent or Relieve Imminent System Emergencies

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for System Emergency conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two steps: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price subject to Section 39.6.1.4; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy

that is delivered from an RMR Resource as a result of an Exceptional Dispatch for Emergency System conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, is the minimum of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

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11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered by an RMR Resource as a result of Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of: (a) the applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two steps: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental FMM Instructed

Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch from an RMR Resource is the minimum of: (a) the FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are settled in two steps: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

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11.5.6.3 Settlement for Instructed Imbalance Energy from Exceptional Dispatches for Condition 2 Legacy RMR Units

11.5.6.3.1 Pricing for Exceptional Dispatch of Legacy RMR Units

If the CAISO dispatches a Legacy RMR Unit that has selected Condition 2 of its Legacy RMR Contract to Start-Up or provide Energy other than a Start-Up or Energy pursuant to the Legacy RMR Contract, the CAISO shall issue credits as follows:

- (a) if the Owner has elected Option A of Schedule G, two times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and 1.5 times the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instructions;
- (b) if the Owner has elected Option B of Schedule G, three times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and the

rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instruction.

Equation 1a

$$\text{Energy Price (\$/MWh)} = \frac{(AX^3 + BX^2 + CX + D) * P * E}{X} + \text{Variable O\&M Rate}$$

Equation 1b

$$\text{Energy Price (\$/MWh)} = \frac{A * (B + CX + DeFX) * P * E}{X} + \text{Variable O\&M Rate}$$

Where:

- for Equation 1a, A, B, C, D and E are the coefficients given in Table C1-7a of the applicable Legacy RMR Contract;
- for Equation 1b, A, B, C, D, E and F are the coefficients given in Table C1-7b of the applicable Legacy RMR Contract;
- X is the Unit output level during the applicable settlement period, MWh;
- P is the Hourly Fuel Price as calculated by Equation C1-8 in Schedule C using the Commodity Prices in accordance with the applicable Legacy RMR Contract;

Variable O&M Rate (\\$/MWh): as shown on Table C1-18 of the applicable Legacy RMR Contract.

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11.5.7 Congestion Credit and Marginal Cost of Losses Credit

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11.5.7.1 RTM Congestion Credit for ETCs and TORs

The CAISO shall not apply charges or issue credits to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules after the Day-Ahead Market. The balanced portion for each ETC

or TOR contract for each Settlement Interval will be based on the difference between: (1) the minimum of (a) the total Demand, (b) the total ETC or TOR Supply Self-Schedule submitted in RTM, including changes after twenty (20) minutes before the applicable Trading Hour if such change is permitted by the Existing Contract, or (c) the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the valid and balanced portion of the Day-Ahead Schedule. In determining the balanced portions, the CAISO evaluates the amounts based on the following variables: (a) for exports and imports, the CAISO shall use the schedule quantity specified in the Interchange schedule used for check out between CAISO and other Balancing Authority Areas; (b) for CAISO Demand, the CAISO shall use the Gross Load associated with the applicable ETC or TOR; and (c) for all Generation the CAISO shall use the quantity specified in the Dispatch Instructions. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Congestion Credit for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the applicable weighted average MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the (a) deviation of the FMM Schedule or the CAISO Forecast of CAISO Demand used in the FMM from Day-Ahead Schedules and (b) deviation of the RTD schedule or the CAISO Forecast of CAISO Demand used in the RTD from Day-Ahead Schedules.

11.5.7.2 RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted to the RTM pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or issue any credit to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable charges for losses as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.7.2. Where the provisions of this Section 11.5.7.2 do not conflict with the provisions

of the agreement, the provisions of this Section 11.5.7.2 shall apply to the subject TORs. The balanced portion of the TOR Self-Schedule after the Day-Ahead Market is the same balanced quantity mentioned in this Section 11.5.7.2 for the TOR Self-Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the weighted average MCL at each of the eligible Points of Receipt and Points of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the: (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules; and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules. For losses that the CAISO shall charge pursuant to Section 17.3.3, the specific loss charge amount shall be the product of: (a) the specific loss percentage as may be specified in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO; (b) the weighted average SMEC price from the FMM and RTD markets with weights based on the absolute values of (1) deviation of FMM schedule or CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (2) deviation of RTD schedule or CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules; and (c) the balanced contract quantity mentioned in Section 11.5.7.1.

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11.5.8 Settlement for Emergency Assistance

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11.5.8.1 Settlement for Energy Purchased by the CAISO for System Emergency Conditions, to Avoid Market Disruption, or to Prevent or Relieve Imminent System

Emergencies, Other than Exceptional Dispatch Energy

The Settlement price for Energy that is delivered to the CAISO from a utility in another Balancing Authority Area as a result of a CAISO request pursuant to Section 42.1.5 or any other provision for assistance in System Emergency conditions, to avoid a Market Disruption, or to prevent or relieve an imminent System Emergency, other than Energy from an Exceptional Dispatch, shall be either (i) a negotiated price agreed upon by the CAISO and the seller or (ii) a price established by the seller for such emergency assistance in advance, as may be applicable. In the event no Settlement price is established prior to the delivery of the emergency Energy, the default Settlement price shall be the simple average of the relevant FMM and RTD LMPs at the applicable Scheduling Point, plus all other charges applicable to imports to the CAISO Balancing Authority Area, as specified in the CAISO Tariff. If the default Settlement price is determined by the seller not to compensate the seller for the value of the emergency Energy delivered to the CAISO, then the seller shall have the opportunity to provide the CAISO with cost support information demonstrating that a higher price is justified. The cost support information must be provided in writing to the CAISO within thirty (30) days following the date of the provision of emergency assistance. The CAISO shall have the discretion to credit that higher price based on the seller's justification of this higher price. The CAISO will provide notice of its determination whether to credit such a higher price within thirty (30) days after receipt of the cost support information. Any dispute regarding the CAISO's determination whether to credit a higher price for emergency assistance based on cost support information shall be subject to the CAISO ADR Procedures. Credit by the CAISO for such emergency assistance will be made in accordance with the Settlement process, billing cycle, and billing and payment timeline set forth in the CAISO Tariff. The costs for such emergency assistance, including the credit of a price based on cost support information, will be settled in two steps: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total FMM IIE Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the FMM IIE Settlement Amount and RTD IIE Settlement Amount settled in accordance with Sections 11.5.1.1 and 11.5.1.2 will be settled according to Section 11.5.4.2.

11.5.8.1.1 Settlement and Allocation of Excess Costs Payments for Emergency Energy Purchases, Other than Exceptional Dispatch Energy, to Scheduling Coordinators

The Excess Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 is calculated for each purchase for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.8.1 for the delivered purchase quantity and the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point. The Excess Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 shall be allocated in the same manner as specified in Section 11.5.6.2.5.2 for the allocation of the Excess Cost Payments portion of credits for Exceptional Dispatches for emergency conditions.

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11.7 Additional MSS Settlements Requirements

11.7.1 MSS Load Following Deviation Penalty

For MSS Operators that have elected to follow their Load as described in Section 4.9.13.2, the Scheduling Coordinator for a Load following MSS Operator shall be charged for: (i) excess MSS Generation supplied to the CAISO Markets and (ii) excess MSS Load relying on CAISO Markets and not served by MSS generating resources. The revenue received from these charges will be used as an offset to the CAISO's Grid Management Charge. The charges due from a Scheduling Coordinator will be calculated as follows:

11.7.1.1 If the metered Generation resources and imports into the MSS exceed: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the credits for excess Energy outside of the MSS Deviation Band shall be rescinded and CAISO will charge the Scheduling Coordinator for the MSS Operator an amount equal to one hundred percent (100%) of the product of the highest LMP credited to the MSS Operator for its Generation in the Settlement Interval and the amount of the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is supplied in excess of the MSS Deviation

Band.

11.7.1.2 If metered Generation resources and imports into the MSS are insufficient to meet: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the CAISO will charge the Scheduling Coordinator for the MSS Operator an amount equal to the product of the Default LAP price for the Settlement Interval and two hundred percent (200%) of the shortfall that is outside of the MSS Deviation Band. The charge in the previous sentence is in addition to the charges for the FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that serves the excess MSS Demand that may be applicable under Section 11.5.

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11.8 Bid Cost Recovery

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 Bid Cost Shortfall, RUC Bid Cost Shortfall, or RTM Bid Cost Shortfall) or negative (IFM Bid Cost Surplus, RUC Bid Cost Surplus, or RTM Bid Cost Surplus) in the IFM, RUC, and the Real-Time Market, as the algebraic difference between the respective IFM Bid Cost, RUC Bid Cost or RTM Bid Cost and the IFM Market Revenues, RUC Market Revenues, or RTM Market Revenues as further described below in this Section 11.8. The RTM Energy Bid Costs and RTM Market Revenues include the FMM Energy Bid Costs. In any Settlement Interval a resource is eligible for Bid Cost Recovery credits pursuant to the rules described in the subsections of Section 11.8 and Section 11.17. Bid Cost Recovery Eligible Resources for different MSS Operators are supply resources listed in the applicable MSS Agreement. All Bid Costs shall be based on Bids as mitigated pursuant to the requirements specified in Section 39.7. Virtual Awards are not eligible for Bid Cost Recovery. Virtual Awards are eligible for make-whole credits 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 Bid Costs, Minimum Load Bid Costs, Pumping Costs, Pump Shut-Down Costs, or Transition Bid Costs but are eligible to recover Energy Bid Costs, RUC Availability Payments and Ancillary Service Bid Costs.

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11.10 Settlements for Ancillary Services

11.10.1 Settlements for Contracted Ancillary Services

The CAISO shall operate a daily Settlement function for Ancillary Services it contracts for with Scheduling Coordinators. The Scheduling Coordinators supplying Ancillary Services will be credited based on the prices and quantities determined in accordance with this Section 11.10.

11.10.1.1 Ancillary Services in DAM

Payments to Scheduling Coordinators with AS Awards shall be equal to the ASMP calculated as provided in Section 27.1.2 for each Ancillary Service for the applicable trading hour in which the capacity is procured multiplied by the quantity of the capacity awarded for the Ancillary Service in each of the Ancillary Service Regions for the applicable trading hour in which the capacity is procured. Suppliers with Self-Provided Ancillary Services are not eligible to receive credit for Ancillary Service Awards based on ASMPs; Self-Provided Ancillary Services are compensated at the user rate for the service being self-provided as described in Sections 11.10.2, 11.10.3 and 11.10.4.

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11.10.1.2.1 Congestion Charges

If a Scheduling Coordinator, including a Scheduling Coordinator for a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area, receives an Ancillary Services Award or provides a qualified Self-

Provided Ancillary Service at a congested Scheduling Point, the CAISO will charge or credit the Scheduling Coordinator for Congestion. The charge or credit for Congestion at such locations is equal to the simple average of the fifteen (15) minute applicable intertie constraint Shadow Price over the applicable Trading Hour at the location of the Ancillary Service Award, multiplied by the quantity of Ancillary Services Award or the capacity of the qualified Self-Provided Ancillary Service for the Settlement Period. No such charge or credit for Congestion will apply when the Scheduling Coordinator provides Ancillary Services from HASP Block Intertie Schedules at Scheduling Points pursuant to the CAISO Tariff rules that apply to Existing Rights and Transmission Ownership Rights.

11.10.1.3 Ancillary Services Provided in the FMM

Suppliers of Ancillary Services from resources awarded in FMM are credited at a price equal to one-quarter of the fifteen (15) minute ASMP (in \$/MW/h) in each fifteen (15) minute interval of the applicable Trading Hour in which the capacity is procured for each Ancillary Service times the amount of the capacity awarded (MW) for the Ancillary Service in the relevant Ancillary Services Region for the applicable trading hour in which the capacity is procured. For each Ancillary Service, the ASMP is calculated as set forth in Section 27.1.2. Suppliers of Self-Provided Ancillary Services in the Real-Time Market are not eligible to receive credit using the ASMP; rather to the extent the self-provision is qualified it will be valued at the user rate for the relevant service (i.e., will either reduce the Ancillary Services Obligation or receive the user rate if it exceeds the Scheduling Coordinator's Ancillary Service Obligation) as described in Sections 11.10.2, 11.10.3 and 11.10.4.

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11.10.1.4 Voltage Support

The total credits for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of commitment costs, FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy Settlement as a result of Exceptional Dispatch pursuant to CAISO Tariff Section 11.5.6 and any opportunity costs, if any, due to an Exceptional Dispatch that limits Energy output to enable reactive

energy production. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price. The Opportunity Cost for an RMR Resource shall be calculated based on the product of the Energy amount that would have cleared the market and the price of the FMM or RTD LMP minus the higher of the Energy Bid price adjusted to remove Opportunity Costs or the Default Energy Bid price adjusted to remove Opportunity Costs.

If applicable, Scheduling Coordinators shall also receive any credits under any long-term contracts due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant to Section 34.11.2 will be credited and settled in accordance with Section 11.5.6. RMR Resources and Condition 2 Legacy RMR Units providing Voltage Support are not eligible for an Opportunity Cost pursuant to this Section 11.10.1.4.

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11.10.1.7 Regulation Performance Credits and Accuracy Adjustments

Resources supplying Mileage from contracted or self-provided Regulation in the Day-Ahead Market are credited a Mileage clearing price for each MW of Instructed Mileage during the Settlement Period. If a resource is awarded incremental Regulation in the Real-Time Market, the Instructed Mileage shall be divided between the Day Ahead Market and Real Time Market, in proportion to the Day-Ahead and Real-Time Regulation Capacity awards. Instructed Mileage associated with a Day-Ahead Market award will be credited the Day-Ahead Mileage clearing price. Instructed Mileage associated with a Real-Time Market award will be credited the Real-Time Mileage clearing price. The CAISO will adjust a resource's Mileage credits based on the accuracy of the resource's response to CAISO EMS signals. To determine this accuracy adjustment, the CAISO will sum a resource's Automatic Generation Control set points for each four (4) second Regulation interval every fifteen (15) minutes and then sum the absolute value of the deviations from the Automatic Generation Control set point for each four (4) second regulation interval during that fifteen (15) minute period. The CAISO will divide the sum of the resource's Automatic

Generation Control set points less the sum of the resource's total deviations by the sum of the resource's Automatic Generation Control set points. The CAISO will apply the resulting accuracy percentage to the resource's Regulation performance credits. In the event of lost accuracy data, the CAISO will use the simple average of the resource's previous ten (10) accuracy percentages for the periods of missing data for settlement purposes.

11.10.2 Settlement for User Charges for Ancillary Services

The CAISO shall determine a separate hourly user rate for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve purchased for each Settlement Period. The hourly user rates for Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve include the cost incurred by the CAISO across the Day-Ahead Market and the Real-Time Market to procure this service. In computing the user rate for each service the quantity (MW) and costs of any substituting Ancillary Service will be treated as if they are costs and MW associated with the Ancillary Service need they are being used to fulfill. Each rate will be charged to Scheduling Coordinators on a volumetric basis applied to each Scheduling Coordinator's obligation for the specific Ancillary Service concerned which it has not self-provided, as adjusted by any Inter-SC Trades of Ancillary Services. Each Scheduling Coordinator's obligation for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve shall be calculated in accordance with this Section 11.10.2, notwithstanding any adjustment to the quantities of each Ancillary Service purchased by the CAISO in accordance with Section 8.2.3.5.

Ancillary Services Obligations for an individual Scheduling Coordinator (before taking into account Self-Provided Ancillary Services) or Inter-SC Trades of Ancillary Services may be negative. Credits for such negative obligations will be in accordance with the rates calculated in this Section 11.10.2, except that a Scheduling Coordinator's credit shall be reduced pro rata to the extent the sum of the negative obligations of all Scheduling Coordinators with the negative Ancillary Services Obligation (before self-provision or Inter-SC Trade) exceeds the obligation of all Scheduling Coordinators with positive obligation net of Self-Provided Ancillary Services, as specified in Section 11.10.5 in any Settlement Period, the net procurement quantity of Regulation Up, Regulation Down, Spinning Reserve, or Non-Spinning Reserve purchased by the CAISO in the Day-Ahead Market and the Real-Time Market due to the operation of

Section 8.2.3.5 is zero (0), then the user rate for that Ancillary Service type will be zero (0). With respect to each Settlement Period, in addition to the user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged an additional amount equal to its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve of the amount, if any, by which (i) the total credits to Scheduling Coordinators pursuant to this Section 11.10.2 for the Day-Ahead Market and the Real-Time Market, exceed (ii) the total amounts charged to Scheduling Coordinators pursuant to this Section 11.10.2, for the Day-Ahead Market and the Real-Time Market. If total amounts charged to Scheduling Coordinators exceed the total credits to Scheduling Coordinators, each Scheduling Coordinator will be refunded its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve.

With respect to each Settlement Period, in addition to Ancillary Service charges at the applicable user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged additional neutrality adjustment amounts for each Ancillary Service type pursuant to Sections 11.10.2.1.4, 11.10.2.2.3, 11.10.3.4, and 11.10.4.4 and a neutrality adjustment amount for upward Ancillary Service types pursuant to Section 11.14.

11.10.2.1 Regulation Service

Regulation Up Reserve and Regulation Down Reserve charges shall be calculated separately.

11.10.2.1.1 Regulation Down Reserve

The charges to a Scheduling Coordinator for Regulation Down Reserve for each Settlement Period of the Trading Day are based upon the product of Scheduling Coordinator's hourly obligation for Regulation Down Reserve (MW) and the hourly user rate for Regulation Down Reserve (\$/MW).

11.10.2.1.2 Hourly User Rate for Regulation Down Reserve

The hourly user rate for Regulation Down is the total Regulation Down Reserve Cost (\$) for each Settlement Period divided by the total Net Procurement of Regulation Down by the CAISO (MW) for each Settlement Period. The CAISO's Regulation Down Reserve Cost is equal to: (i) the revenues credited to the suppliers of the total awarded Regulation Down Reserve capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the credits rescinded in the Settlement Period due to

the unavailability of the Regulation Down under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Down Reserves is equal to: (i) the amount (MW) of total awarded Regulation Down Reserve capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the Regulation Down Reserve capacity associated with credits rescinded for the Settlement Period pursuant to any of the provisions of Section 8.10.8.

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11.10.2.1.4 Regulation Down Neutrality Adjustment

For each Settlement Period, the difference between the Regulation Down Reserve Cost determined in Section 11.10.2.1.2 and the total revenue from all Scheduling Coordinators in the Regulation Down charge pursuant to Section 11.10.2.1.3 shall be allocated to all Scheduling Coordinators in proportion to their Regulation Down obligation quantity.

11.10.2.1.5 Regulation Down Mileage Costs

The charges to a Scheduling Coordinator for Regulation Down Mileage in any Settlement Period of the Trading Day are the product of the Scheduling Coordinator's Ancillary Services Obligation percentage in that Settlement Period and the user rate for Regulation Down Mileage (\$/MW) for that Settlement Period. The user rate for Regulation Down Mileage is the total cost for Regulation Down Mileage (\$) for each Settlement Period divided by the total Regulation Down Ancillary Service Obligation (MW) for each Settlement Period.

11.10.2.2 Regulation Up

The charges to a Scheduling Coordinator for Regulation Up for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Regulation Up (MW) and the hourly user rate for Regulation Up (\$/MW).

11.10.2.2.1 Hourly User Rate for Regulation Up

The hourly user rate for Regulation Up is the total Regulation Up cost (\$) for each Settlement Period divided by the total Net Procurement of Regulation Up by the CAISO (MW) for each Settlement Period. The CAISO's Regulation Up cost is equal to: (i) the revenues credited to the suppliers of the total

awarded Regulation Up capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the credits rescinded in the Settlement Period due to the unavailability of the Regulation Up under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Up is equal to: (i) the amount (MWs) of total awarded Regulation Up capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the Regulation Up capacity associated with credits rescinded for the Settlement Period, pursuant to any of the provisions of Section 8.10.8.

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11.10.2.2.4 Regulation Up Mileage Costs

The charges to a Scheduling Coordinator for Regulation Up Mileage in any Settlement Period of the Trading Day are the product of the Scheduling Coordinator's Ancillary Services Obligation percentage in that Settlement Period and the user rate for Regulation Up Mileage (\$/MW) in that Settlement Period.

The user rate for Regulation Up Mileage is the total cost for Regulation Up Mileage (\$) for each Settlement Period divided by the total Regulation Up Ancillary Service Obligation (MW) for each Settlement Period.

11.10.3 Spinning Reserves

11.10.3.1 Spinning Reserves Obligation

The charges to a Scheduling Coordinator for Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Spinning Reserves (MW) and the hourly user rate for Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the SC may be entitled to a credit rather than a charge. In that case, the quantity of the SC's negative Operating Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAP) computed for the Trading Hour as specified in Section 11.10.5.

11.10.3.2 Hourly User Rate for Spinning Reserves

The hourly user rate for Spinning Reserves is the ratio of: (1) the sum of the portion of Spinning Reserve Cost used to meet the spin requirement and the portion of Regulation Up cost that can substitute for Spinning Reserve and (2) the Net Procurement quantity of Spinning Reserves by the CAISO (\$/MW).

The cost of Regulation Up substituting for Spinning Reserve is the user rate for Regulation Up multiplied by the quantity of Regulation Up used to satisfy the Spinning Reserve requirement.

The CAISO's Spinning Reserve Cost is equal to: (i) the revenues credited to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the credits rescinded due to either the failure to conform to Dispatch Instructions or the unavailability of the Spinning Reserves under Section 8.10.8. The Net Procurement of Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the Spinning Reserve capacity associated with credits rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve capacity used as Spinning Reserve under Section 8.2.3.5.

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11.10.3.4 Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Spinning Reserve net requirement at the hourly Spinning Reserve user rate determined in Section 11.10.3.2 and the total revenue from all Scheduling Coordinators in the Spinning Reserve charge pursuant to Section 11.10.3.3 shall be allocated to all Scheduling Coordinators in proportion to their Spinning Reserve obligation quantity. The Spinning Reserve net requirement is the Real-Time Spinning Reserve requirement net of the sum of effective qualified Spinning Reserve self-provision over all resources.

11.10.4 Non-Spinning Reserves

11.10.4.1 Non-Spinning Reserves Obligation

The charges to an SC for Non-Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of SC's hourly obligation for Non-Spinning Reserves (MWs) and the hourly user

rate for Non-Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the Scheduling Coordinator may be entitled to a credit rather than a charge. In that case, the quantity of the Scheduling Coordinator's negative Non-Spinning Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAP) computed for the Trading Hour as specified in Section 11.10.5.

11.10.4.2 Hourly User Rate Non-Spinning Reserves

The hourly user rate for Non-Spinning Reserves is calculated as the ratio of: i) the sum of the portion of the Non-Spinning Reserve Cost used to meet the Non-Spinning requirement and a portion of the Regulation Up and Spinning Reserve costs that can substitute for Non-Spinning Reserve and ii) the Net Procurement quantity of Non-Spinning Reserves by the CAISO (\$/MW). The CAISO's Non-Spinning Reserve Cost includes the costs associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

The CAISO's Non-Spinning Reserve Cost is equal to: (i) the revenues credited to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the credits rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8. The Net Procurement of Non-Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Non-Spinning Reserve capacity in the Day- Ahead Market and Real-Time Market, minus, (ii) the Non-Spinning Reserve capacity associated with credits rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Non-Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

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11.10.4.4 Non-Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Non-Spinning Reserve net requirement at the

hourly Non-Spinning Reserve user rate determined in Section 11.10.4.2 and the total revenue from all Scheduling Coordinators in the Non-Spinning Reserve charge pursuant to Section 11.10.4.3 shall be allocated to all Scheduling Coordinators in proportion to their Non-Spinning Reserve Obligation quantity. The Non-Spinning Reserve net requirement is the Real-Time Non-Spinning Reserve requirement net of the sum of effective qualified Non-Spinning Reserve self-provision over all resources.

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11.10.6 Upward Ancillary Services Neutrality Adjustment

For each Settlement Period the difference between the upwards Ancillary Service cost and the sum of the total Ancillary Services obligation and neutrality adjustments will be allocated to all Scheduling Coordinators in proportion to their upward Ancillary Service Obligation (before taking into consideration the Inter-SC Trades of Ancillary Services). The CAISO shall exclude EIM Transfers between the CAISO and an EIM Entity from the calculation of the upwards Ancillary Service Obligation for this neutrality adjustment. The upwards Ancillary Service cost is the sum of the upward Ancillary Services credits issued pursuant to Sections 11.10.1.1, 11.10.1.2, and 11.10.3.1. The total upward Ancillary Services obligation and neutrality adjustments is the sum of the requirements in Sections 11.10.2.2.2, 11.10.2.2.3, 11.10.3.1, 11.10.3.4, 11.10.4.1, and 11.10.4.4.

11.10.7 Voltage Support

The Voltage Support user rate for any Settlement Period shall be calculated based on the sum of Voltage Support credits issued to Scheduling Coordinators in accordance with Section 11.10.1.4, divided by Gross Load, excluding metered Demand inside an MSS except as provided by Section 4.9.4.4.

The Voltage Support charge for any Settlement Period payable by a Scheduling Coordinator is the Voltage Support user rate multiplied by the quantity of Gross Load, excluding Demand within an MSS except as provided by Section 4.9.4.4, for which that Scheduling Coordinator is responsible in that Settlement Period.

11.10.8 [Not Used]

11.10.9 Settlements of Rescission of Credits for AS Capacity

The rescission of credits for Ancillary Services for Undispatchable, Unavailable, and Undelivered Capacity applies to Ancillary Services that are awarded in the Day-Ahead Market or Real-Time Market and the rescission will be the weighted average of the Ancillary Service Marginal Prices (ASMPs) and Ancillary Services Award amounts for a resource across the Day-Ahead Market and Real-Time Market. For Self-Provided Ancillary Service capacity that becomes Undispatchable Capacity, Unavailable Capacity, or Undelivered Capacity, the rescission of Ancillary Services self-provision in the Day-Ahead Market and Real-Time Market reduces the relevant Scheduling Coordinator's effective Ancillary Services self-provision in the Ancillary Services cost allocation, effectively resulting in a charge back at the relevant Ancillary Services rate. The rescission of credits in this Section 11.10.9 shall not apply to a capacity credit for any particular Ancillary Service if the weighted average Ancillary Service Marginal Price (ASMP) is less than or equal to zero (0).

11.10.9.1 Rescission Undispatchable AS

If a Scheduling Coordinator has Undispatchable Capacity that it is obligated to supply to the CAISO during a Settlement Interval, the Ancillary Service capacity credit for the amount of Energy that cannot be delivered from the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Settlement Interval shall be rescinded; provided, however, that to the extent an Ancillary Service procured in the IFM from a Non-Dynamic System Resource to the CAISO Balancing Authority Area becomes Undispatchable Capacity due to an Intertie transmission derate before the Operating Hour for which it was procured, in rescinding the Ancillary Service capacity credit, the CAISO shall credit back to the Scheduling Coordinator any charge for Congestion assessed pursuant to Section 11.10.1.1.1, but at the lower of the Day-Ahead and simple average of the fifteen (15) minute Real-Time Shadow Price over the applicable Trading Hour on the corresponding Intertie.

11.10.9.2 Rescission of Credits for Unavailable Ancillary Service Capacity

Credits to the Scheduling Coordinator representing the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall not be eliminated to the extent of the deficiency if: (i) the deficiency in the availability of Ancillary Service capacity from the Generating Unit, Participating Load, Proxy

Demand Resource, System Unit or System Resource is attributable to control exercised by the CAISO in that Settlement Interval through AGC operation, an RMR Dispatch Notice, or an Exceptional Dispatch; or (ii) a penalty is imposed under Section 8.10.7 with respect to the deficiency.

In calculating the amount of the credit to be rescinded under Section 8.10.8.2, the CAISO shall reduce the credit for Ancillary Service capacity otherwise payable for the Settlement Interval by the product of the applicable prices and the amount of Ancillary Service capacity from which the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource has supplied Uninstructed Imbalance Energy in that Settlement Interval.

11.10.9.3 Rescission of Credits for Undelivered Ancillary Service Capacity

If the total metered output of a Generating Unit, Participating Load, System Unit or System Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Spinning Reserves or awarded or self-provided Non-Spinning Reserves in any Settlement Interval, then the capacity credit associated with the difference between the scheduled amount of each Ancillary Service for which insufficient Energy was delivered and the actual output attributed to the response to the Dispatch Instruction shall be rescinded. If, after the issuance of a Dispatch Instruction associated with Non-Spinning Reserves, the actual response of a Proxy Demand Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Non-Spinning Reserves, then the capacity credit associated with the difference between the scheduled amount and the actual amount attributed to the response to the Dispatch Instruction (as established pursuant to the applicable Business Practice Manual) shall be rescinded. However, no capacity credit shall be rescinded if the shortfall in the metered output of the Generating Unit, Participating Load, Proxy Demand Resource, System Unit, or System Resource is less than a deadband amount published by the CAISO on the CAISO Website at least twenty-four hours prior to the Settlement Interval. For any Settlement Interval with respect to which no deadband amount has been published by the CAISO, the deadband amount shall be zero MWh. For purposes of these calculations, total metered output will not include Energy provided or reduced as a result of AGC signals.

11.10.9.4 Allocation of Rescinded Ancillary Services Capacity Credits

Credits rescinded pursuant to Sections 8.10.8 and 11.10.9 shall be allocated to Scheduling Coordinators in proportion to their Ancillary Services Obligation for the same Trading Day.

11.11 RACs and Wheeling Transactions

11.11.1 Regional Access Charge

Regional Access Charges will be levied in accordance with Section 26.1 and Appendix F, Schedule 3.

11.11.2 Wheeling Through and Wheeling Out Transactions

The CAISO shall calculate, account for and settle charges and credits for Wheeling Through and Wheeling Out transactions in accordance with Section 26.1.4 and Appendix F, Schedule 3, Section 14.

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11.12.3 Participating Intermittent Resource Fees

11.12.3.1 Forecasting Fee

A fee to defray the costs of the implementation of the forecasting service for Eligible Intermittent Resources shall be assessed to Scheduling Coordinators for Eligible Intermittent Resources as specified in Schedule 4 of Appendix F.

11.12.3.2 [Not Used]

11.12.3.3 [Not Used]

11.12.4 [Not Used]

11.13 Settlements of RMR Charges and Credits

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

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11.13.5 Daily RMR Excess Revenues

For each Trading Day, the CAISO will calculate the Daily RMR Excess Revenues as the total CAISO daily

sum of IFM excess credit, RC excess credit, and RTM excess credit. The RMR Resource will have its RMR Capacity Payment reduced by the IFM excess credit, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RUC excess credit, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RTM excess credit, if the net of all RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 over a Trading Day is negative.

11.13.6 Daily RMR Exceptional Dispatch Excess Revenues

Daily Exceptional Dispatch excess credit is the total CAISO daily sum of Settlement Interval Exceptional Dispatch surplus credits. For each Settlement Interval, the Exceptional Dispatch surplus credit is the net of Settlement Bid Cost Amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch and FMM IIE Settlement Amounts and RTD Instructed Imbalance Energy from Exceptional Dispatch pursuant to Section 11.5.6, where Exceptional Dispatch Settlement amounts for exceeds Exceptional Dispatch Bid Cost Settlement amounts. Bid Cost Settlement amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch is calculated as the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant Bid Cost Settlement price. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs.

11.13.7 Daily RMR Cost Allocation

The CAISO shall allocate amounts credited to RMR Resources through the Daily RMR Settlement to Scheduling Coordinators representing Load-Serving Entities that serve load in the TAC Area(s) in which

the need for the RMR Contract arose. These amounts will be allocated to each such Scheduling Coordinator based on the pro-rated share of each Load-Serving Entity's TAC Area Metered Demand to the total TAC Area metered Demand recorded in the CAISO settlement system for actual days of any settlement month period for which the RMR Contract was in effect.

11.13.8 [Not Used]

11.13.9 [Not Used]

11.13.10 [Not Used]

11.14 Neutrality

The CAISO shall be authorized to issue charges or credits as special adjustments in regard to:

- (a) amounts required to reach an accounting trial balance of zero in the course of the Settlement process in the event that the charges calculated as due from CAISO Debtors are lower than credits calculated as due to the CAISO Creditors for the same Trading Day, which includes any amounts required to round up any invoice amount expressed in dollars and cents to the nearest whole dollar amount. These charges will be allocated amongst the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day. In the event that the charges due from CAISO Debtors are higher than the credits due to CAISO Creditors, the CAISO shall allocate a credit to the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day; and
- (b) awards payable by or to the CAISO pursuant to good faith negotiations or CAISO ADR Procedures that the CAISO is not able to allocate to or to collect from a Market Participant or Market Participants in accordance with Section 13.5.3. These charges will be allocated among Scheduling Coordinators over an interval determined by the CAISO and pro rata based on EIM Measured Demand during that interval, if the dispute concerned the Real-Time Market, or otherwise Measured Demand during that interval.

11.15 Section 42.1 Contracts

The CAISO shall calculate and levy charges for the recovery of costs incurred under contracts entered into by the CAISO under the authority granted in Section 42.1 in accordance with Section 42.1.8 or any

other contract approved by FERC.

11.16 Additional AS and RUC Credit Rescission Requirements

The following provisions apply to the Settlement of rescission of credits for Ancillary Services and RUC Capacity in addition to the provisions of Sections 8.10.8 and 11.10.9 for Ancillary Services and Sections 31.5.7 and 11.2.2.2 for RUC Capacity.

11.16.1 Resources with More Than One Capacity Obligation

If the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource is scheduled to provide more than one capacity obligation in a Settlement Interval, the order in which the non-compliant Ancillary Service and RUC Capacity will be apportioned to the various services under Section 8.10.8 is as follows. For Undispatchable Capacity the non-compliant capacity is first apportioned to RUC Capacity and then to any Non-Spinning Reserves. If the amount of Undispatchable Capacity exceeds the amount of Non-Spinning Reserves, then the credit shall be eliminated for Spinning Reserves. For Unavailable Capacity or Undelivered Capacity the non-compliant capacity is first apportioned to any Non-Spinning Reserves. If the amount of non-compliant Ancillary Service capacity exceeds the amount of Non-Spinning Reserves, then the credit shall be eliminated for Spinning Reserves. If the same Ancillary Service is scheduled in the Day-Ahead Market or Real-Time Market, then the credits shall be rescinded in proportion to the amount of each Ancillary Service scheduled in each market. If the same Ancillary Service is self-provided and Bid, the order of rescission will be first the amount of Ancillary Service amounts submitted in Bids and then the Self-Provided Ancillary Service.

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11.17 Application of the Persistent Deviation Metric

The CAISO will modify the Bid Cost Recovery calculations described in Section 11.8 and Residual Imbalance Energy credits in Section 11.5.5 as described below to address persistent deviations that expand Bid Cost Recovery credits beyond what is necessary for purposes of ensuring Bid Cost Recovery.

11.17.1 Persistent Deviation Threshold and Mitigation

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11.17.1.2 Persistent Deviation Adjustments

The CAISO will apply the following rules to evaluate the resource's performance relative to the Persistent Deviation Metric Threshold and will apply the Persistent Deviation Metric as specified below.

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11.18 Emissions Costs

11.18.1 Emissions Costs Charges

The CAISO shall charge each Scheduling Coordinator in accordance with this Section 11.18, which will be used to fund the verified Emissions Costs incurred by an Emissions Eligible Generator during a CAISO Commitment Period. The CAISO shall levy this administrative charge (the Emissions Cost charge) each month, against all Scheduling Coordinators based upon each Scheduling Coordinator's (1) Balancing Authority Area Gross Load, and (2) Demand within California outside of the CAISO Balancing Authority Area that is served by exports from the CAISO Balancing Authority Area.

11.18.2 CAISO Emissions Costs Trust Account

All sums representing Emissions Cost charges received by the CAISO shall be deposited in the CAISO Emissions Cost Trust Account. The CAISO Emissions Cost Trust Account shall be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time.

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11.18.7 Emissions Cost Invoices

The CAISO shall credit Scheduling Coordinators for all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period. If the Emissions Costs indicated in the applicable air quality districts' final invoice statements include emissions produced by operation not

during a CAISO Commitment Period, the CAISO shall credit an amount equal to Emissions Costs multiplied by the ratio of the MWh associated with the CAISO Commitment Period to the total MWh associated with such Emissions Costs. The CAISO shall credit Emissions Cost Invoices each month in accordance with the CAISO Payments Calendar from the funds available in the CAISO Emissions Cost Trust Account. To the extent there are insufficient funds available in the CAISO Emissions Cost Trust Account in any month to credit all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period, the CAISO shall make pro rata credit of such Emissions Costs and shall adjust the rate at which the CAISO will assess the Emissions Cost charge in accordance with Section 11.18.4. Any outstanding Emissions Costs owed from previous months will be paid in the order of the month in which such costs were invoiced to the CAISO. The CAISO's obligation to credit Emissions Costs is limited to the obligation to credit Emissions Cost charges received. All disputes concerning credit of Emissions Cost Invoices shall be subject to CAISO ADR Procedures, in accordance with Section 13.

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11.23 Penalties for Uninstructed Imbalance Energy

Effective December 1, 2004, the CAISO shall not charge any Uninstructed Deviation Penalties pursuant to this Section 11.23 until FERC issues an order authorizing the CAISO to charge Uninstructed Deviation Penalties pursuant to this section. Beginning with Settlement Statements for the first Trading Day for which FERC authorizes the CAISO to charge Uninstructed Deviation Penalties pursuant to this section, the CAISO shall charge Scheduling Coordinators Uninstructed Deviation Penalties for Uninstructed Imbalance Energy resulting from resource deviations outside a Tolerance Band from their Dispatch Operating Point, for dispatched resources, or their Day-Ahead Schedule otherwise. The Uninstructed Deviation Penalty will be applied as follows:

* * * * *

- (l) The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to one hundred (100) percent of the corresponding LMP. The relevant LMP will be calculated for each UDP Location as the ten-minute weighted average price of two five-minute Dispatch Interval LMPs and the two five-minute optimal Instructed Imbalance Energy quantities. The net effect of the Uninstructed Deviation Penalty and the Settlement for positive Uninstructed Imbalance Energy beyond the Tolerance Band will be that the CAISO will not issue a credit for such Energy.

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11.25 Settlement of Flexible Ramping Product

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11.25.2 Settlement of Uncertainty Requirement

11.25.2.1 Credit to Resources.

On a daily basis, the CAISO will settle Uncertainty Awards to resources for providing the Uncertainty Requirement at the applicable Flexible Ramp Up Price or Flexible Ramp Down Price less any credit rescission for each interval pursuant to Section 11.25.3.

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11.27 Voltage Support Charges

The CAISO shall calculate, account for and settle charges and credits for Voltage Support as set out in Sections 11.10.1.4, 11.10.7, and the applicable Business Practice Manual.

11.28 Calculating, Charging and Disbursing Default Interest

The CAISO shall calculate, charge and disburse all collected default Interest in accordance with the

CAISO Tariff.

11.29 Accounting, Billing, and Payment

11.29.1 Billing and Payment Process Based on Settlement Statements

The Initial Settlement Statement T+9B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+9B will constitute the basis for billing in the first instance. The Recalculation Settlement Statements will constitute the basis for billing for adjustments to the Initial Settlement Statement T+9B.

11.29.2 One Agreement Will Govern All Settlement, Billing, and Payment

This Section applies to every Business Associate that is a party to more than one agreement with the CAISO that governs settlement, billing and payment. These agreements are: Scheduling Coordinator Agreements, EIM Entity Scheduling Coordinator Agreements (regardless whether the addendum for EDAM is effective), CRR Entity Agreements, the Transmission Control Agreement (for Participating Transmission Owners) and Black Start Agreements. Collectively, these agreements, including any successors to these agreements, are referred to in this Section as "Billing and Payment Agreements." One of the Billing and Payment Agreements between the Business Associate and the CAISO will be designated to govern all CAISO settlements, whether those settlements are under this Section 11, Section 29.11 or Section 33.11, and all billing and payment arising from those settlements, including but not limited to payment and collection of all amounts due from the Business Associate to the CAISO and all amounts due from the CAISO to the Business Associate under all Billing and Payment Agreements between the Business Associate and the CAISO. For avoidance of doubt, Scheduling Coordinators, Candidate CRR Holders, CRR Holders, CRR Entities, Participating Transmission Owners and Black Start Generators that are party to Black Start Agreements are obligated to pay all Invoices and entitled to receive payment on Payment Advices issued to the Business Associate pursuant to Section 11, Section 29.11 or Section 33.11. The designated agreement will be the agreement that appears first on this list:

- a) Transmission Control Agreement;
- b) Scheduling Coordinator Agreement;
- c) EIM Scheduling Coordinator Agreement;
- d) CRR Entity Agreement;

e) Black Start Agreement.

If the Business Associate is party to more than one agreement of the same type, such as two or more Scheduling Coordinator Agreements, then the first-executed agreement of that type is designated.

Nothing in this Section shall limit or otherwise affect the obligation of the Business Associate to comply with the terms of every Billing and Payment Agreement to which it is a party.

11.29.3 [Not Used]

11.29.4[Not Used]

11.29.5 General Principles for Production of Settlement Statements

11.29.5.1 Basis of Settlement

The basis of each Settlement Statement will be the debiting or crediting of an account in the name of the relevant Business Associate.

11.29.5.2 Settlement Statements

- (a) For each Settlement Period of the Trading Day, the CAISO will calculate for each charge the amounts debited and the amounts credited and shall arrive at a net amount debited or credited. Each of these net amounts will appear in the Settlement Statements that the CAISO will provide to the relevant Business Associate.
- (b) The components of the Grid Management Charge will be included in an Initial Settlement Statement T+9B, and any Recalculation Settlement Statement with the other types of charges referred to in Section 11.

11.29.5.3 Data Files

Settlement Statements will be accompanied by data files of supporting information for the relevant Business Associate that includes the following for each Settlement Period of the Trading Day:

- (a) the aggregate quantity (in MWh) of Energy supplied or withdrawn by the Scheduling Coordinator Metered Entities represented by the Scheduling Coordinator;
- (b) the aggregate quantity (in MW) and type of Ancillary Services capacity provided or

- purchased;
- (c) the relevant prices that the CAISO has applied in its calculations;
- (d) details of the scheduled quantities of Energy and Ancillary Services accepted by the CAISO in the Day-Ahead Market and the RTM;
- (e) details of FMM Instructed Imbalance Energy or RTD Imbalance Energy and penalties;
- (f) details of any credits or charges associated with the CRR Auctions; and
- (g) detailed calculations of all fees, charges and credits allocated among Scheduling Coordinators and each Scheduling Coordinator's share.

11.29.5.4 Settlement Software

The CAISO Settlement software will be audited by an independent firm of auditors competent to carry out audits of such software to determine its consistency with the CAISO Tariff. In any dispute regarding Settlement calculations, a certificate from the firm of auditors that the CAISO software is consistent with the CAISO Tariff will be prima facie proof that the charges shown in a Settlement Statement have been calculated in a method consistent with the CAISO Tariff. Nothing in this section will be deemed to establish the burden of proof with respect to Settlement calculations in any proceeding.

11.29.6 [Not Used]

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11.29.7 Settlements Cycle

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11.29.7.2

Interest

Interest will be applied to any incremental changes between Initial Settlement Statement T+9B and Recalculation Settlement Statement T+70B, and thereafter to any incremental changes between each subsequent Recalculation Settlement Statement through Recalculation Settlement Statement T+24M. Interest will be calculated on a daily basis and will apply from the Payment Date for the Invoice of Payment Advice to the Payment Date for the next Recalculation Settlement Statement. The rate of interest will be the interest rate calculated in accordance with 18 C.F.R. Section 35.19a.

11.29.7.2.1 [Not Used]

11.29.7.3 Unscheduled Recalculation Settlement Statements

11.29.7.3.1 Unscheduled Reissue Recalculation Settlement Statement

The CAISO will issue an Unscheduled Reissue Recalculation Settlement Statement to correct a miscalculation that occurred on a Recalculation Settlement Statement T+11M if the following criteria are met:

- The miscalculation occurred as a result of a CAISO data transfer error or other similar data processing error;
- The miscalculation was identified by the CAISO, Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO on a timely basis within the dispute timeline applicable to the Recalculation Settlement Statement; and
- The financial impact of the miscalculation on the market as a whole was greater than \$1,000,000 for the Trading Day. For purposes of determining whether the \$1,000,000 threshold for issuing the unscheduled recalculation settlement statement has been met, the CAISO will calculate the financial impact resulting from an error based on the dollar value of the charges that were mistakenly assessed due to the error.

The CAISO will issue a Market Notice to advise the Market Participants that a miscalculation occurred and that it will be corrected in an Unscheduled Reissue Recalculation Settlement Statement. The CAISO will issue the Unscheduled Reissue Recalculation Settlement Statement no less than thirty (30) days after the date that the Market Notice was issued and will include the net adjustment amounts in the next available regularly scheduled invoice. Any miscalculation due to a CAISO data transfer error or other similar data processing error that does not meet the criteria set forth in this section will be corrected on the next Recalculation Settlement Statement T+21M or Recalculation Settlement Statement T+24M as appropriate.

11.29.7.3.2 Unscheduled Directed Recalculation Settlement Statement

Except as provided in 11.29.7.4, the CAISO will not issue Recalculation Settlement Statements other than Recalculation Settlement Statements T+70B; Recalculation Settlement Statements T+11M, Recalculation

Settlement Statements T+21M, Recalculation Settlement Statements T+24M, and Unscheduled Reissue Recalculation Settlement Statements unless directed by the CAISO Governing Board or pursuant to a FERC order.

11.29.7.3.3 If an Unscheduled Directed Recalculation Settlement Statement is ordered by the CAISO Governing Board, the CAISO will arrange to have the Recalculation Settlement Statement carried out as soon as is reasonably practicable following the CAISO Governing Board's order, subject to the availability of staff and computer time, compatible software, appropriate data, and other resources.

11.29.7.3.4 The cost of an Unscheduled Directed Recalculation Settlement Statement will be borne by the Business Associate requesting it, unless an additional Recalculation Settlement Statement was needed due to a clerical oversight or error on the part of the CAISO staff.

11.29.7.3.5 Where an Unscheduled Directed Recalculation Settlement Statement indicates that the accounts of Business Associates should be debited or credited to reflect alterations to Settlements previously made under the CAISO Tariff, for those Business Associates affected by the additional Recalculation Settlement Statement, the CAISO will reflect the amounts to be debited or credited in the next scheduled weekly Invoice or Payment Advice.

11.29.7.3.6 Unscheduled Directed Recalculation Settlement Statements may be invoiced separately from market activities in accordance with Section 11.29.10.3.

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11.29.7.4.3 CAISO Estimates for Initial Settlement Statement T+3B

Notwithstanding any other provisions of the CAISO Tariff, Initial Settlement Statement T+3B shall be solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand, metered Generation, and Demand Response. CAISO Estimated Settlement Quality Meter Data shall be calculated as follows:

- (a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on total Expected Energy.
- (b) CAISO Estimated Settlement Quality Meter Data for metered Demand, including Non-

Participating TO demand, will be based on Scheduled Demand by the appropriate LAP. This value will be increased by fifteen (15) percent if the total actual system Demand in Real Time, as determined by the CAISO each hour, is greater than the total Scheduled Demand by more than fifteen (15) percent. CAISO Estimated Settlement Quality Meter Demand for Participating Load will not be increased by fifteen (15) percent.

- (c) CAISO Estimated Settlement Quality Meter Data for Demand Response will be calculated using the same method as set forth in Section 11.1.4(a) for metered Generation. The Proxy Demand Response Default Load Adjustment will not be estimated or applied for purposes of calculating Initial Settlement Statement T+3B.
- (d) To estimate net load for a Metered Subsystem, the CAISO will apply a monthly historical based net/gross ratio to the MSS's estimated gross load. The historical monthly ratio shall be specific to each MSS Operator and shall be calculated as the sum of each entity's monthly actual net load divided by the sum of each entity's monthly actual gross load of the previous year.
- (e) The CAISO will estimate E-Tag for Interchange Schedules for System Resources based on total Expected Energy, and for EIM Transfer system resources based on Dispatch Instructions.
- (f) The CAISO will not estimate Unaccounted For Energy under Section 11.5.3, Real-Time Imbalance Energy Offset adjustment under Section 11.5.4.1(c), allocation of RTM Bid Cost Up-lift adjustment under Section 11.8.6.3.2(iv), or MSS deviation charges under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.

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11.29.7.4.5 Basis for Billing and Payment

Instead of Section 11.29.10.2, the following will apply: The Initial Settlement Statement T+3B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+3B will constitute the basis for billing for all charges in the first

instance. The Recalculation Settlement Statements will constitute the basis for billing for adjustments to charges set forth in the Initial Settlement Statement T+3B.

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11.29.8 Confirmation and Validation

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11.29.8.5 CAISO Timeline for Determining Settlement Statement Disputes

The timeline for the CAISO to reach a determination on a settlement statement dispute will be as follows:

- (a) The CAISO will reach a determination to approve or deny a dispute, and provide electronic notice of the outcome to the Scheduling Coordinator that submitted the dispute, no later than thirty-one (31) business days after the end of the dispute period for that settlement statement; with the exception of complex disputes or unless otherwise agreed to by the disputing Scheduling Coordinator. In the event that the CAISO's determination results in an adjustment to credits and/or charges, the CAISO in its notice to the disputing Scheduling Coordinator will identify the subsequent recalculation settlement statement expected to include the adjustment.
- (b) Complex settlement statement disputes involve policy considerations, entail extensive research, require granular review of previous market runs, include complicated data or calculations, or depend on additional information to be provided by the disputing Scheduling Coordinator or a third party. The CAISO in its sole discretion may designate a settlement statement dispute to be a complex dispute. The CAISO will advise the disputing Scheduling Coordinator within thirty-one (31) business days after the end of the dispute period for that settlement statement if a dispute is a complex dispute. The CAISO will make reasonable efforts to reach a determination to approve or deny a complex dispute resulting from: (i) an Initial Settlement Statement T+9B no later than

nine (9) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+11M; and (ii) Recalculation Settlement Statement T+70B or a Recalculation Settlement Statement T+11M and an Unscheduled Recalculation Settlement Statement, no later than nineteen (19) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+21M.

11.29.8.6 Payment Pending Dispute

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that receives an Invoice or Payment Advice must pay any net debit and, subject to the limitations in Section 11.29.17.1, will be entitled to receive any net credit shown in the Invoice or Payment Advice on the Payment Date, whether or not there is any dispute regarding the amount of the debit or credit. The settlement dispute process in Section 11.29.8.2 (or 11.29.7.4.8) will apply to the disputed amount, and any claims related to the outcome of the settlement dispute process will be governed by Section 13.

11.29.8.7 CAISO Determination of Disputes and Further Dispute Resolution

Valid disputes regarding data appearing on a Settlement Statement will be reflected in a later Recalculation Settlement Statement for that Trading Day. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the CAISO's resolution of a dispute, it may initiate dispute resolution under Section 13 of the CAISO Tariff pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate dispute resolution under Section 13 of the CAISO Tariff within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated the Settlement Statement. Once validated, a Settlement Statement will be binding, meaning that the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to waives any and all right to bring any form of legal or equitable challenge in any forum to any of the charges or credits on the Settlement Statement.

11.29.9 Payment Procedures

11.29.9.1 Payments by and to the CAISO

- (a) All Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating

TOs shall discharge their obligations to pay the amounts owed by them and shall receive payments of all amounts owed to them solely in accordance with this CAISO Tariff.

- (b) All financial transactions are denominated in United States dollars and cents.
- (c) All payments by the CAISO to Business Associates or to the CAISO by Business Associates shall be made by electronic means authorized in the Business Practice Manual.

11.29.9.2 CAISO Accounts to be Established

The CAISO is authorized to establish and maintain bank accounts and obtain lines of credit and other banking facilities (not exceeding an aggregate amount set by the CAISO Governing Board) necessary for the operation of its Settlement and billing procedures. Each such account shall be maintained at a bank or other financial institution in California. Unless otherwise specified in this CAISO Tariff the CAISO will recover all costs incurred in connection with these CAISO banking facilities through the appropriate component of the Grid Management Charge. The CAISO shall establish and operate the following accounts:

11.29.9.2.1 A CAISO Clearing Account to and from which all payments under this Section 11.29 are made;

11.29.9.2.2 A CAISO Reserve Account from which any debit balances on the CAISO Clearing Account at the close of banking business on each Business Day shall be settled or reduced in accordance with this CAISO Tariff. The CAISO shall use the Financial Security provided by a Scheduling Coordinator, CRR Holder, or Candidate CRR Holder pursuant to Section 12, if necessary, to clear any debit balances on the CAISO Reserve Account that may arise as a result of that Scheduling Coordinator's or CRR Holder's failure to pay an amount due under this CAISO Tariff;

11.29.9.2.3 A CAISO Surplus Account;

11.29.9.2.4 A CAISO Penalty Reserve Account; and

11.29.9.2.5 Such other accounts as the CAISO deems necessary or convenient for the purpose of efficiently implementing the funds transfer system under this CAISO Tariff. The CAISO shall notify Market Participants of the establishment of such accounts through the CAISO Website and by issuance of a Market Notice.

11.29.9.3 Accounts of Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs

Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via electronic means as specified in the Business Practice Manual where payments to and from the CAISO Clearing Account shall be made in accordance with this CAISO Tariff. Scheduling Coordinators, CRR Holders, and Black Start Generators may, but will not be required to, maintain separate accounts for receipts and payments. Each Scheduling Coordinator, CRR Holder, and Black Start Generator shall notify the CAISO of its account details and of any changes to those details in accordance with the provisions of its Scheduling Coordinator Agreement, CRR Entity Agreement, or Black Start Agreement. Participating TOs will notify the CAISO of their Settlement Account details in accordance with Section 2.2.1 of their Transmission Control Agreement and may notify the CAISO from time to time of any changes by giving at least seven (7) days written notice before the new account becomes operational.

11.29.9.4 [Not Used]

11.29.9.5 No Co-Mingling

The CAISO shall not co-mingle any funds standing to the credit of a CAISO Account with its other funds and shall promptly withdraw any amounts paid into a CAISO Account representing amounts paid for the account of the CAISO.

11.29.9.6 Use of Accounts

11.29.9.6.1 Clearing Account

- (a) Subject to Section 11.29.11.2, and unless the CAISO instructs otherwise pursuant to Section 11.29.11, each CAISO Debtor shall ensure that the amount shown on the Invoice as payable by that CAISO Debtor shall be received into the CAISO Clearing Account for value not later than 10:00 a.m. on the Payment Date.
- (b) On the Payment Date, the CAISO shall be entitled to cause the transfer of such amounts held in a Scheduling Coordinator's or CRR Holder's CAISO prepayment account to the CAISO Clearing Account as provided in Section 11.29.11.2.

The CAISO shall calculate the amounts available for distribution to CAISO Creditors on the Payment Date and shall give irrevocable instructions to the CAISO Bank to remit from the CAISO Clearing Account to the relevant Settlement Accounts maintained by the CAISO Creditors, the aggregate amounts determined by the CAISO to be available for payment to CAISO Creditors for value by close of business on the Payment Date if no CAISO Debtors are in default. If a CAISO Debtor is in default and until all defaulting amounts have been collected, the CAISO shall remit payments as soon as practical within five (5) Business Days of the collection date posted in the CAISO Payments Calendar. If required, the CAISO shall instruct the CAISO Bank to transfer amounts from the CAISO Reserve Account to enable the CAISO Clearing Account to clear.

The CAISO is authorized to instruct the CAISO Bank to debit the CAISO Clearing Account and transfer to the relevant CAISO Account sufficient funds to pay in full the Grid Management Charge and FERC Annual Charges falling due on any Payment Date with priority over any other payments to be remitted on that or on subsequent days out of the CAISO Clearing Account.

11.29.9.6.2 Reserve Account

The CAISO Reserve Account shall be available to the CAISO for the purpose of providing funds to clear the CAISO Clearing Account in the event that there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors. If there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors and clear the account on any Payment Date due to either payment default by one or more CAISO Debtors or to application of Section 11.29.10.2, the CAISO shall transfer funds from the CAISO Reserve Account to the CAISO Clearing Account to clear it by close of banking business on that Payment Date pursuant to Section 11.29.13.4. If there are excess funds in the CAISO Clearing Account on any Payment Date due to application of Section 11.29.10.2, the CAISO shall transfer the excess funds from the CAISO Clearing Account to the CAISO Reserve Account.

If the CAISO Reserve Account is drawn upon, the CAISO shall as soon as possible begin collection efforts consistent with Section 11.29.20 against the defaulting Scheduling Coordinator or CRR Holder, including making any calculations or taking any other appropriate action in order to replenish the CAISO Reserve Account including drawing on any credit support or other Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder pursuant to Section 12 or serving demands on any

defaulting Scheduling Coordinator or CRR Holder if Financial Security has been exhausted or if no Financial Security is available due to establishment of an Unsecured Credit Limit.

11.29.9.6.2.1 Replenishing the CAISO Reserve Account Following Payment Default

If the CAISO has debited the CAISO Reserve Account then:

- (a) If, after the CAISO has debited the CAISO Reserve Account on a Payment Date, the CAISO Bank receives a payment from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Reserve Account, such payment shall be credited to the CAISO Reserve Account.
- (b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Reserve Account in accordance with the priorities specified in Section 11.29.17.3.
- (c) If, after taking reasonable action, the CAISO determines that the default amount (or any part) and/or Interest cannot be recovered, the CAISO shall notify Market Participants of the identity of the defaulting Business Associate together with the unrecoverable amounts and such amounts shall be allocated in accordance with Section 11.29.17 of the CAISO Tariff with corresponding credits to the CAISO Reserve Account. Provided, however, that if the default amount is for an invoice or invoices that were issued after the invoices containing the T+24M Recalculation Settlement Statements for the relevant Trading Days, then CAISO has the option of not allocating in accordance with Section 11.29.17 up to \$2,000 of the default amount, and instead using the funds from the CAISO Reserve Account to cover the default amount on a permanent basis.

11.29.9.6.3 Surplus Account

The CAISO shall establish and maintain a bank account denominated the CAISO Surplus Account. The CAISO Surplus Account shall include the following:

- (a) Any amounts paid to the CAISO in respect of penalties or Sanctions referred to in Section 11.14 shall be credited to the CAISO Surplus Account, subject, however, to Section 11.29.9.6.1(b).
- (b) The funds referred to in Section 11.29.9.6.1(a) pertaining to penalties or Sanctions as provided in

Section 11.14 shall first be applied towards any expenses, loss or costs incurred by the CAISO except for that portion of those amounts collected pursuant to 37.9.4. Any excess after such application will be credited to the CAISO Surplus Account pursuant to 11.29.9.6.1(a).

(c) The funds referred to in Section 11.29.9.6.1(a) pertaining to default Interest referred to in Section 11.29.13.1 shall first be applied towards any unpaid CAISO Creditor balances for the Trading Month in which the default Interest was assessed and second to any other unpaid CAISO Creditor balances. Only after all unpaid CAISO Creditor balances are satisfied in full will any excess funds pertaining to default Interest be credited to the CAISO Surplus Account pursuant to Section 11.29.9.6.1(a).

In the event that there are funds in the CAISO Surplus Account in excess of an amount to be determined by the CAISO Governing Board and identified in a Market Notice by the CAISO to Market Participants, the amount of such excess will be distributed to Scheduling Coordinators using the same method of apportioning the refund as the method employed in apportioning the liability for the Grid Management Charge.

11.29.9.6.4 CAISO Penalty Reserve Account

- (a) The CAISO Penalty Reserve Account will be available to the CAISO for the purpose of using funds collected for late payments of amounts set forth in Invoices pursuant to Section 11.29.14(c) and for late postings of Financial Security pursuant to Section 12.5.2(c) to clear the CAISO Clearing Account in the event that there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors according to the rules in Section 11.29.13.4. The CAISO Penalty Reserve Account will be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds will be commingled in it at any time.
- (b) On December 31 of each year, the CAISO will draw any funds then available in the CAISO Penalty Reserve Account in excess of five (5) million dollars and will apply that excess to offset the following year's Grid Management Charge revenue requirement pursuant to Schedule 1 of Appendix F.
- (c) If the CAISO Penalty Reserve Account is drawn upon, the CAISO will as soon as possible thereafter begin collection efforts consistent with Section 11.29.20 against the

defaulting Scheduling Coordinator or CRR Holder, including making any calculations or taking any other appropriate action in order to replenish the CAISO Penalty Reserve Account, including drawing on any credit support or other Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder pursuant to Section 12 or serving demands on any defaulting Scheduling Coordinator if Financial Security has been exhausted or if no Financial Security is available due to establishment of an Unsecured Credit Limit.

11.29.9.6.4.1 Replenishment Following Payment Default

If the CAISO has debited the CAISO Penalty Reserve Account, then:

- (a) If, after the CAISO has debited the CAISO Penalty Reserve Account on a Payment Date, the CAISO Bank receives a payment from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Penalty Reserve Account, such payment shall be credited to the CAISO Penalty Reserve Account, less any amounts due to Market Participants.
- (b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Penalty Reserve Account in accordance with the priorities specified in Section 11.29.17.3.

11.29.10 Billing and Payment

The CAISO shall prepare and issue to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO an Invoice or Payment Advice on Wednesday of each week, which will be deemed to have been issued on Wednesday if it is issued by 5:00 a.m. the next calendar day. If Wednesday falls on a federal holiday, the CAISO will issue the Invoice or Payment Advice on the next business day. Each Invoice or Payment Advice shall show the amount that is payable by or to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO, which amount shall equal the positive or negative total of all net charges reflected on the relevant Settlement Statements, the Payment Date, being the date on which such amounts is to be paid or received, and details of the CAISO Clearing Account to which any amounts owed by or to Scheduling Coordinators, CRR Holder, Black Start Generator, or Participating TO

is to be paid. Amounts owed from a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that is a CAISO Debtor are expressed as a positive amount on an Invoice. Amounts owed to a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that is a CAISO Creditor are expressed as a negative amount on a Payment Advice. Payments for the items referred to in an Invoice shall be made four (4) business days after the date on which the weekly Invoice or Payment Advice is issued. If the fourth (4) business day after an Invoice or Payment Advice is issued falls on a federal holiday, then the Payment Date for the Invoice or Payment Advice shall be the next business day. For Section 11.29.10, the use of the uncapitalized term “business day” refers to a day that the CAISO is open for business. This deviates from the formal definition in Appendix A of the capitalized term “Business Day” because it includes certain holidays that are federally recognized but remain regular operation days for the CAISO. Please see the Business Practice Manual for the most current list of affected holidays.

11.29.10.1 Billing Periods

Each Invoice or Payment Advice will include Settlement Statements as provided in the CAISO Payments Calendar. Each billing period will be shown and totaled separately on the Invoice or Payment Advice but the net Invoice or Payment Advice will reflect the entity’s net financial obligations in all billing periods included on the Invoice or Payment Advice.

11.29.10.2 Elimination of Invoices and Payment Advices Under \$10.00

Invoices and Payment Advices due to or from any Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for amounts less than \$10.00 will be adjusted to \$0.00 and no amount will be due to or from that Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for that Invoice or Payment Advice.

11.29.10.3 Other Invoicing Provisions

The Invoices or Payment Advices will also include any disbursements associated with a shortfall receipt distribution.

A separate Invoice for the FERC Annual Charges due annually will be issued by the CAISO to the Scheduling Coordinator in accordance with Section 11.19.1.2. The CAISO will issue separate Invoices for NERC/WECC Charges as described in Section 11.20.

A shortfall invoice showing the adjustments to payments resulting from any shortfall allocation will be issued by the CAISO to Scheduling Coordinators in the event of a payment default in accordance with Section 11.29.17.1.

In the event of an allocation of a payment default in accordance with Section 11.29.17.2, the CAISO may issue a shortfall invoice to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1.

Unscheduled Directed Recalculation Settlement Statements, the financial outcomes of CAISO ADR Procedures and any other dispute resolution, amounts due under Black Start Agreements and penalties for paying Invoices or posting Financial Security late may be invoiced separately from market activities. The CAISO shall provide a Market Notice at least five (5) business days prior to such invoicing identifying the components of such Invoice or Payment Advice.

11.29.10.4 Balancing of Market Accounts in Absence of Meter Data

Settlements shall not be cleared for final processing until the accounting trial balance is zero. In order to publish a Settlement Statement, the CAISO may use estimated, disputed, or calculated Meter Data.

When actual verified Meter Data is available and all of the disputes raised by Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs during the validation process described in Section 11.29.8 have been determined, the CAISO shall recalculate the amounts payable and receivable by the affected Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs or by all Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs, if applicable, as soon as reasonably practical and shall show any required adjustments as a debit or credit in the next Settlement Statement. **11.29.10.5 Use of Estimated Data**

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may use estimated Settlement Statements and Invoices and Payment Advices and may implement any temporary variation of the timing requirements relating to the Settlement Statements and Invoices and Payment Advices. Details of the variation and the method chosen to produce estimated data, Settlement Statements and Invoices and Payment Advices will be published on the CAISO Website.

11.29.10.6 Payment of Estimated Statements and Invoices

When estimated Settlement Statements and Invoices or Payment Advices are issued by the CAISO, payments between the CAISO and Market Participants shall be made on an estimated basis and the

necessary corrections shall be made by the CAISO as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO unless the CAISO has authorized the adjustment pursuant to Section 11.29.11. Failure to make such estimated payments shall result in the same consequences as a failure to make actual payments.

11.29.10.7 Validation of Estimated Statements and Invoices

The CAISO shall use its best efforts to verify the estimated data and to make the necessary corrections as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO.

11.29.10.8 Estimated Statements to be Final

In the event that the CAISO is of the opinion that, despite its best efforts, it is not possible for it to verify the estimated data because actual data is not reasonably expected to become available to the CAISO in the foreseeable future, the CAISO shall consult with the Market Participants in order to develop the most appropriate substitute data including using data provided by Market Participants. Following such determination of substitute data, the CAISO shall send to the relevant Market Participants revised Settlement Statements and Invoices and Payment Advices. The provisions of Section 11.29.8.6 shall apply to payment of revised Invoices issued in accordance with these emergency procedures. Failure to make payments of such revised Invoices shall result in the same consequences as a failure to make actual payments.

11.29.11 Instructions for Payment

Unless the CAISO instructs otherwise, each Scheduling Coordinator or CRR Holder shall ensure that the amount shown on the Invoice as payable by that Scheduling Coordinator or CRR Holder is received into the CAISO Clearing Account for value no later than 10:00 a.m. on the Payment Date.

11.29.11.1 Payment in Event of Verifiable Error

In the event of a verifiable error that would be reversed on a future Invoice or Payment Advice, the CAISO may instruct a CAISO Debtor to reduce its payment in the amount of a specific charge reflected on an Invoice. Any such occurrence will not constitute a payment default under the CAISO Tariff. If the CAISO directs such a reduction in payment, it shall make offsetting adjustments on future Invoices or Payment

Advices of the Business Associates that received settlement credits corresponding to the verifiably erroneous charge. The CAISO will inform those entities of the adjustments to their Invoices or Payment Advices.

11.29.11.2 Prepayments

- (a) A Scheduling Coordinator or CRR Holder may choose to pay at an earlier date than the Payment Date specified in the CAISO Payments Calendar by way of prepayment, provided it notifies the CAISO by electronic means before submitting its prepayment.
- (b) Prepayment notifications must specify the dollar amount prepaid.
- (c) Prepayments must be made by Scheduling Coordinators or CRR Holders via electronic means authorized in the Business Practice Manual into their CAISO prepayment accounts designated by the CAISO. The relevant Scheduling Coordinator or CRR Holder shall grant the CAISO a security interest on all funds in its CAISO prepayment account.
- (d) On any Payment Date the CAISO shall be entitled to cause funds from the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account to be transferred to the CAISO Clearing Account in such amounts as may be necessary to discharge in full that Scheduling Coordinator's or CRR Holder's payment obligation arising in relation to that Payment Date by way of set-off or recoupment.
- (e) Any funds held in the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall be treated as part of that Scheduling Coordinator's or CRR Holder's Financial Security.
- (f) Interest (or other income) accruing on the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall inure to the benefit of that Scheduling Coordinator or CRR Holder and shall be added to the balance of its CAISO prepayment account on a monthly basis.
- (g) Funds held in a CAISO prepayment account by a Scheduling Coordinator or CRR Holder may be recouped, offset or applied by the CAISO to any outstanding financial obligations of that Scheduling Coordinator or CRR Holder to the CAISO.

11.29.11.3 System Failure

11.29.11.3.1 At CAISO Debtor's Bank

If any CAISO Debtor becomes aware that a payment will not, or is unlikely to be, received by the CAISO Bank by 10:00 am on the relevant Payment Date for any reason (including failure of the Fedwire or any computer system), it shall immediately notify the CAISO, giving full details of the payment delay (including the reasons for the payment delay). The CAISO Debtor shall make all reasonable efforts to remit payment as soon as possible, by an alternative method if necessary, to ensure that funds are received for value no later than 10:00 am on the Payment Date, or as soon as possible thereafter.

11.29.11.3.2 At the CAISO's Bank

In the event of failure of any electronic transfer system affecting the CAISO Bank, the CAISO shall use reasonable efforts to establish alternative methods of remitting funds to the CAISO Creditors' Settlement Accounts by close of banking business on that Payment Date, or as soon as possible thereafter. The CAISO shall notify the CAISO Debtors and the CAISO Creditors of occurrence of the system failure and the alternative methods and anticipated time of payment. In the event that a payment is received late by the CAISO Bank due to either a system failure affecting the CAISO Bank or untimely performance of an ACH draft debit for which the CAISO is responsible, the enforcement actions set forth in Section 11.29.14 shall not apply to such late payment.

11.29.12 CAISO's Responsibilities

On the due date for payment of amounts shown in an Invoice, the CAISO shall ascertain whether all amounts required to be received into the CAISO Clearing Account have been credited to it. If any such amount has not been so credited, it shall ascertain which CAISO Debtors have failed to pay the amount owed by them and it may, subject to any notice or cure provisions in this Section 11.29, exercise any rights available under the CAISO Tariff or under applicable law to recover any overdue amount. The obligation of the CAISO to pay CAISO Creditors monies owed for a given billing period shall be limited so that the aggregate liability of the CAISO for such payments does not exceed the sum of

- a) the amounts paid to the CAISO Clearing Account for that billing period,
- b) additional amounts recovered by the CAISO by enforcing any Financial Security provided by a defaulting CAISO Creditor to cover any shortfall for that billing period, and

- c) amounts transferred to the CAISO Clearing Account from the CAISO Reserve Account and the CAISO Penalty Reserve Account pursuant to Section 11.29.9.6.1 to cover any shortfall for that billing period

less GMC due to the CAISO and FERC Annual Charges for the same billing period and amounts shown as due to other internal accounts, such as the balancing accounts for CRRs, RAAIM or penalties issues under Section 37, and adjusted to account for the application of Section 11.29.10.2 to Payment Advices.

11.29.13 Non-Payment by a Scheduling Coordinator or CRR Holder

11.29.13.1 Notification and Interest

If a CAISO Debtor becomes aware that a payment for which it is responsible will not be received into the CAISO Clearing Account on time, it shall immediately notify the CAISO of the fact and the reason for the non-payment. If the CAISO Debtor fails to pay any sum to the CAISO when due and after the CAISO draws upon any available Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder, the CAISO Debtor shall owe Interest on the overdue amount for the period from the Payment Date to the date on which the payment is received into the CAISO Clearing Account, together with any related transaction costs incurred by the CAISO. The CAISO shall apply all Interest revenue on the default amount according to the accounts or Market Participants that were affected by the default, whether that was CAISO Reserve Account, the Penalty Reserve Account, any other internal accounts, losses allocated on a *pro rata* basis to CAISO Creditors in relation to amounts past due, or, if the default amount was allocated pursuant to Section 11.29.17.2, to Default-Invoiced SCIDs. Interest revenue shall be distributed to accounts in the same order as payment of defaulted receivables set forth in Section 11.29.17.3, in relation to amounts past due in the order of the creation of such debts.

11.29.13.2 Payment Default

Subject to Section 11.29.13.6, if by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes that all or any part of any amount due to be received into the CAISO Clearing Account from any CAISO Debtor has not been received and there are insufficient funds in the relevant CAISO Debtor's CAISO prepayment account (the amount of insufficiency being referred to as the "default amount"), the CAISO shall take the following actions to enable the CAISO Clearing Account to clear not later than the close of banking business on the relevant Payment Date.

11.29.13.3 Enforcing the Financial Security of a Defaulting Scheduling Coordinator or CRR Holder

Subject to Section 11.29.13.6, the CAISO shall make reasonable endeavors to enforce the defaulting CAISO Debtor's Financial Security (if any) to the extent necessary to pay the default amount. If it is not practicable to obtain clear funds in time to effect payment to CAISO Creditors on the same day the CAISO shall proceed in accordance with Sections 11.29.13.4 or 11.29.17.1 as applicable.

11.29.13.4 Use of CAISO Reserve Account and CAISO Penalty Reserve Account

If there are funds standing to the credit of the CAISO Reserve Account or the CAISO Penalty Reserve Account (including the proceeds of drawings under banking facilities described in Sections 11.29.9.6.2 and 11.29.9.6.4), the CAISO shall, assuming sufficient funds are available from the one or both accounts to clear the CAISO Market, debit the CAISO Reserve Account, the CAISO Penalty Reserve Account or a combination of the two with the default amount to clear the CAISO Clearing Account and effect payment to the CAISO Creditors. Provided, however, that the CAISO shall not draw funds from the CAISO Reserve Account for the purpose of covering a payment default that would leave a balance in the CAISO Reserve Account below \$1,000.

If funds available from the two accounts combined are not sufficient to clear the market, the CAISO may in its discretion use the funds nevertheless to mitigate the default. In exercising discretion under this rule, the CAISO shall use reasonable diligence to determine what use or expected use of the funds in the reserve accounts would provide the greatest expected benefit to Market Participants overall.

11.29.13.5 Action against a Defaulting CAISO Debtor

The CAISO shall as soon as possible after taking action under 11.29.13.4 take any steps it deems appropriate against the defaulting CAISO Debtor to recover the default amount (and any Interest as set out in Section 11.29.13.3 including enforcing any Financial Security, exercising its rights of recoupment or set-off and/or bringing proceedings against the defaulting CAISO Debtor pursuant to Section 11.29.21.1.

11.29.13.6 Default to be Remedied Promptly

In the event that the CAISO reasonably believes that an outstanding amount which has not been paid by 10:00 am on the relevant Payment Date, is likely to be paid no later than close of banking business on the next Business Day then the CAISO may, but shall not be obliged to, delay enforcing that CAISO Debtor's

Financial Security or taking other measures to recover payment until after the close of banking business on the next Business Day but Interest shall nonetheless accrue pursuant to Section 11.29.13.1.

11.29.13.7 Set-Off and Recoupment

The CAISO is authorized to recoup, set off and apply any amount owed on any Payment Advice to which any defaulting CAISO Debtor is or will be entitled, in or towards the satisfaction of any of that CAISO Debtor's debts on any Invoice arising under the CAISO Settlement and billing process.

11.29.13.8 Application of Funds Received

The CAISO shall apply payments received or other amounts collected in connection with default amounts in accordance with Section 11.29.17.3 and, for Interest amounts, Section 11.29.13.1.

11.29.13.9 Interest Accruing while Enforcing the Financial Security

If the CAISO has debited the CAISO Reserve Account or the Penalty Reserve Account and it subsequently succeeds in enforcing the Financial Security provided by the defaulting CAISO Debtor, the CAISO shall be entitled to withdraw from such Financial Security in addition to the default amount, all costs incurred and Interest accrued to the CAISO as a result of debiting the CAISO Reserve Account or the Penalty Reserve Account from the date of such debit to the date of enforcement of the said Financial Security.

11.29.13.10 [Not Used]

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11.29.17 Alternative Payment Procedures

11.29.17.1 Pro Rata Reduction to Payments

If it is not possible to clear the CAISO Clearing Account on a Payment Date because of nonpayment by a CAISO Debtor, which cannot be covered using funds available in the CAISO Reserve Account or the CAISO Penalty Reserve Account, or by enforcing any Financial Security provided by a defaulting CAISO Debtor, the CAISO shall, after deducting Grid Management Charge and FERC Annual Charges in accordance with Section 11.29.9.6.1 and paying amounts shown as due to internal accounts rather than to CAISO Creditors, such as the balancing accounts for CRRs, RAIM or penalties issued under Section 37, (1) first pay in full every CAISO Creditor whose net amounts receivable on the relevant Payment Date

is less than \$5,000; and (2) second, reduce payments to all remaining CAISO Creditors proportionately to the net amounts payable to them on the relevant Payment Date to the extent necessary to clear the CAISO Clearing Account through a shortfall allocation. Except to the extent a payment default is on an Invoice that was separate from other market activity under Section 11.29.10.3, each payment default amount allocated to CAISO Creditors through a shortfall allocation under this Section 11.29.17.1 that remains unpaid by the defaulting CAISO Debtor will be allocated as set forth in Section 11.29.17.2. The provisions of this Section 11.29.17.1 shall not apply to the extent the CAISO invokes Section 11.29.11 to direct a CAISO Debtor to not pay charges that are verifiably erroneous, or to non-payment of any penalty amount that a Scheduling Coordinator or CRR Holder has disputed and FERC has specifically authorized the Scheduling Coordinator or CRR Holder to net its payment to the CAISO by the amount of the penalty in question in accordance with Section 37.9.3.

11.29.17.2 Payment Default Allocation

11.29.17.2.1 Methodology for Allocating Payment Default Amounts

Each payment default amount allocated to CAISO Creditors through a shortfall allocation pursuant to Section 11.29.17.1 and that remains unpaid by the defaulting CAISO Debtor will be allocated on the next practicable Invoices to the Default-Invoiced SCIDs identified in the percentage shares calculated pursuant to Section 11.29.17.2.7 for the relevant calendar quarter, excluding the CAISO Debtor that has not paid the payment default amount. The relevant calendar quarter will be the calendar quarter that included the last full Trading Day before the bankruptcy filing, if the defaulting Market Participant filed for bankruptcy or, if the defaulting Market Participant did not file for bankruptcy, the date of its initial payment default.

Percentage shares for a calendar quarter will be calculated pursuant to the following methodology:

- (a) Twenty (20) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the net amounts that were payable in each applicable calendar quarter (and averaged within such calendar quarter) to the Default-Invoiced SCIDs over the applicable Default Look-Back Periods. For Market Participants subject to Default Election option 1, these net amounts will be calculated on an SCID-by-SCID

basis. For Market Participants that are eligible for and have chosen Default Election option 2, these net amounts will be calculated by consolidating all of the data for the applicable SCIDs, recognizing any offsetting effect of an individual SCID's positive or negative dollar amount in the consolidated total.

- (b) Thirty (30) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the sum of the absolute values of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter (and averaged within such calendar quarter) over the applicable Default Look-Back Periods, after excluding dollar amounts shown on the Invoices for payments and charges for GMC, RMR, and Wheeling Access Charge costs, and after excluding the billing of Access Charges and the payment of Transmission Revenue Requirements to Participating Transmission Owners. For Market Participants subject to Default Election option 1, the sum of the absolute values of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, the absolute values of the net sum of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter will be calculated by consolidating all of the data for the applicable SCIDs, recognizing any offsetting effect of an individual SCID's positive or negative dollar amount in the consolidated total.
- (c) Fifty (50) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the largest of the following five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar quarter) for each Default-Invoiced SCID over the applicable Default Look-Back Periods using data from T+70B Recalculation Settlement Statements or, when it is not yet available, data from T+9B Recalculation Settlement Statements:
 - (1) Cleared Day-Ahead Schedules to supply Energy, plus Day-Ahead Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus scheduled

supply obligation for Ancillary Services (including imports but excluding RUC Schedules), plus Virtual Supply Awards;

- (2) Metered Generation, plus Real-Time Interchange Import Schedules, plus Real-Time Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus FMM Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus Real-Time supply obligation for Ancillary Services;
- (3) Cleared Day-Ahead Schedules for Demand (including Demand served by Pumped-Storage Hydro Units and exports) multiplied by one-hundred three (103) percent to reflect Transmission Losses, plus scheduled demand obligation for Ancillary Services, plus Virtual Demand Awards;
- (4) Metered Load multiplied by one-hundred three (103) percent to reflect Transmission Losses, plus Real-Time Interchange Export Schedules, plus Real-Time demand obligation for Ancillary Services; or
- (5) The greater of (A) the quantity of CRRs acquired in CRR Auctions or transferred through the Secondary Registration System (excluding CRRs acquired in CRR Allocations) or (B) Inter-SC Trades of Energy.

For Market Participants subject to Default Election option 1, each of the five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar quarter) will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, each of the five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar quarter) will be calculated by consolidating all of the data for the applicable SCIDs.

11.29.17.2.2 [Not Used]

11.29.17.2.3 Interest on Allocated Payment Default Amounts

In accordance with Section 11.29.7.2, Interest will be charged to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1 or to SCIDs pursuant to Section 11.29.17.2.2 to the extent the payment default amounts allocated to those Default-Invoiced SCIDs or SCIDs exceed the payment default amounts allocated to them through a shortfall allocation pursuant to Section 11.29.17.1, and Interest will be paid to

Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1 or to SCIDs pursuant to Section 11.29.17.2.2 to the extent the payment default amounts allocated to those Default-Invoiced SCIDs or SCIDs are exceeded by the payment default amounts allocated to them through a shortfall allocation pursuant to Section 11.29.17.1, for the period between the date of the shortfall allocation and the date payments are due for the Invoices on which the allocation of the payment default amounts appear. The Interest payable pursuant to this Section 11.29.17.2.3 will be included on the Invoices on which the allocation of the payment default amounts appear.

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11.29.17.2.6 Default Look-Back Period

- (a) The following provisions will apply to each Default-Invoiced SCID for an entity that is a new Market Participant that begins to participate in the CAISO Markets following the effective date of this Section 11.29.17.2.6:
 - (i) The Default-Invoiced SCID for that Market Participant will first be subject to allocation of payment default amounts under Section 11.29.17.2.1 in the second calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets and the applicable Default Look-Back Period will be the calendar quarter in which the Market Participant began to participate in the CAISO Markets.
 - (ii) For the third calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets, the applicable Default Look-Back Period will be the Market Participant's first two (2) calendar quarters of participation in the CAISO Markets.
 - (iii) For the fourth calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets, the applicable Default Look-Back Period will be the Market Participant's first three (3) calendar quarters of participation in the CAISO Markets.

- (iv) For any subsequent calendar quarter in which Section 11.29.17.2.1 is in effect, the applicable Default Look-Back Period will be a total of four (4) full calendar quarters.

11.29.17.2.7 Provision of Information on Percentage Shares

Beginning with the second calendar quarter of 2011, the CAISO will provide to each Default-Invoiced SCID on or about the first Business Day of the applicable calendar quarter its own percentage share of any payment default amount for the calendar quarter that is beginning, subject to adjustment to account for any non-paying CAISO Debtor, based on application of the methodology for allocating payment default amounts set forth in Section 11.29.17.2.1 to the applicable Default Look-Back Period. In calculating the percentage share for each Default-Invoiced SCID pursuant to this Section 11.29.17.2.7, the CAISO will determine the percentage share for each full calendar quarter and will average those quarterly percentage shares.

11.29.17.2.8 Scope of Payment Default Allocation Provisions

The provisions of Section 11.29.17.2 will not apply to the allocation of payment default amounts and interest accrued thereon that are associated with Trading Days that occurred prior to April 1, 2009.

11.29.17.3 Payment of Defaulted Receivables

Collections or any other receipt of defaulted receivables (other than Interest) will be distributed according to the following priorities: First, to any GMC that the CAISO did not receive as a result of any debtor's defaults. Second, to any FERC Annual Charges that were not received as a result of any debtor's defaults. Third, to any internal accounts, for example balancing accounts for CRRs or RAAIM, that were not paid in full as a result of the debtor's defaults. Fourth, to the CAISO Reserve Account to the extent funds were used to cover the debtor's payment default.

Fifth, either *pro rata* to CAISO Creditors for the Payment Advices that were subject to default or, if the defaulted receivables were allocated pursuant to Section 11.29.17.2, to Default-Invoiced SCIDs in proportion to their allocated shares of the defaulted receivables as calculated pursuant to Section 11.29.17.2.1 for the Payment Advice on which the payment default occurred. In either case, distributions will begin with the oldest Payment Advice that has unpaid amounts as a result of the debtor's default.

These distributions to unpaid market creditors may be timed in order to reduce the associated administrative burden according to the following rules:

- (1) If the total available for payment is less than \$5,000, then the funds shall accumulate in an interest-bearing account until either: (a) the account exceeds \$5,000, (b) there have been no distributions from the account for six months, or (c) all defaults for a given Payment Advice are available for payment.
- (2) If all CAISO Creditors for that Payment Advice have been paid, then the proceeds will either be paid *pro rata* to the CAISO Creditors in the oldest unpaid Payment Advice, or, if the defaulted receivables are allocated pursuant to Section 11.29.17.2, the proceeds will be paid to the Default-Invoiced SCIDs in proportion to their allocated shares of the default amount, as calculated pursuant to Section 11.29.17.2.1 in the oldest unpaid Payment Advice.
- (3) All defaulted receivables disbursed under this Section shall be disbursed in accordance with the timeframes set forth in Section 11.29.9.6.1.

Sixth, to the Penalty Reserve Account to the extent funds were used to cover the debtor's payment default. Seventh, any remaining balance to the CAISO Reserve Account.

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11.31.3 Allocation of Under/Over Delivery Charges

For any Trading Day on which the CAISO assesses an Under/Over Delivery Charge, each Scheduling Coordinator receives a credit on its Settlement Statement for its share of the total Under/Over Delivery Charges collected for that day. The CAISO distributes the total revenue pro rata based on a Scheduling Coordinator's Measured CAISO Demand on that day as a percent of total Measured CAISO Demand for the CAISO Balancing Authority Area on that day. Both the numerator and denominator of the pro rata calculation exclude demand served by ETCs and TORs.

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Section 12

12. Creditworthiness

12.1 Credit and Minimum Participation Requirements

- (a) The creditworthiness and minimum participation requirements in this section apply to the CAISO's acceptance of any transaction in a CAISO Market, to the payment of charges pursuant to the CAISO Tariff (including the Grid Management Charge), and to establish credit limits for participation in any CAISO auction of CRRs and to CRR Holders for the holding of CRRs. Each Market Participant that has a direct financial relationship with the CAISO (including each Scheduling Coordinator, UDC, MSS, CRR Holder, or Candidate CRR Holder) shall secure its financial transactions with the CAISO (including its participation in any auction of CRRs and for the holding of CRRs) by maintaining an Unsecured Credit Limit and/or by posting Financial Security, the level of which constitutes the Market Participant's Financial Security Amount. For each Market Participant, the sum of its Unsecured Credit Limit and its Financial Security Amount shall represent its Aggregate Credit Limit. Each Market Participant shall have the responsibility to maintain an Aggregate Credit Limit that is at least equal to its Estimated Aggregate Liability.

- (b) In order to participate in the CAISO Markets, each prospective Market Participant or existing Market Participant with a direct financial relationship with the CAISO must satisfy all of the following minimum participation requirements:
 - (i) Provide the CAISO annually, as detailed in the Business Practice Manual, a certified statement executed by an officer of the prospective or existing Market Participant certifying that the prospective or existing Market Participant has met the following criteria and relevant requirements consistent with these criteria set forth in the Business Practice Manual:
 - (1) Has undergone training commensurate and proportional in sophistication, scope,

and frequency to the volume of transactions and the nature and extent of the risk taken by the prospective or existing Market Participant, including but not limited to any applicable CAISO training requirements as specified in Sections 4.5.1.1.10.1 and 36.5.2;

- (2) Has and maintains written policies, procedures, and controls approved by the appropriate officer or corporate authority of the prospective or existing Market Participant's governing body which provide an appropriate, comprehensive risk management framework that, at a minimum, clearly identifies and documents the range of risks to which the prospective or existing Market Participant is exposed, including, but not limited to, legal risk, credit risk, liquidity risk, risk of loss of financial security amounts held and invested by the CAISO, investment risk, concentration risk, default risk, operation risk, market risk, and business risk;
- (3) To the extent the Market Participant engages in the CRR market, the Market Participant must demonstrate that it has policies in place that are consistent with generally accepted industry risk management standards;
- (4) Has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all CAISO communications and directions, including, but not limited to, the CAISO's issuance of invoices and collateral requests to the prospective or existing Market Participant; and
- (5) Satisfies the requirements of Section 12.1(b)(iv).

- (ii) Provide annually for CAISO review and verification, as detailed in the Business Practice Manual, the risk management policies, procedures, and controls applicable to the CRR

trading activities of the prospective or existing Market Participant, if the prospective or existing Market Participant has a CRR portfolio that meets the applicable risk criterion set forth in the Business Practice Manual.

- (iii) Satisfy the capitalization requirement pursuant to Sections 12.1 and 12.1.1; the prospective or existing Market Participant or its guarantor must have at least \$1 million in Tangible Net Worth or \$10 million in total assets, or post Financial Security of \$500,000 using one or more of the forms specified in Section 12.2. In the event the prospective or existing Market Participant must post Financial Security, that financial security will not be added to Market Participant's Aggregate Credit Limit and, therefore, cannot be used to meet Market Participant's minimum credit requirements to participate in a Congestion Revenue Rights auction or to offset any market obligations as reflected in Market Participant's Estimated Aggregate Liability. However, all Financial Security in any form may be used to satisfy any financial obligation of the Market Participant.

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Section 23

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23.7 Use of ETC or TOR Capacity to Support a Wheeling Through Priority

A Scheduling Coordinator may use ETC or TOR capacity to support a Wheeling Through Priority. The Scheduling Coordinator may use ETC or TOR capacity for that portion of the Wheeling Through Priority from the import Scheduling Point to the export Scheduling Point that is covered by the ETC or TOR capacity the Scheduling Coordinator chooses to use. The Scheduling Coordinator must use transmission capacity on the CAISO Controlled Grid to support the balance of the Wheeling Through Priority. The Scheduling Coordinator will be assessed the applicable Wheeling Through Priority charges pursuant to

Section 26.1.4.5 for the MW quantity of the Wheeling Through Priority.

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Section 26

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26. Transmission Rates and Charges

26.1 Access Charge

- (a) **In General.** All Market Participants withdrawing Energy from the CAISO Controlled Grid shall be assessed Access Charges in accordance with this Section 26.1 and Appendix F, Schedule 3, except (1) as provided in Section 4.1 of Appendix I (Station Power Protocol) and (2) for storage resources, including Non-Generator Resources and Pumped-Storage Hydro Units, withdrawing Energy for later resale to the CAISO Markets or to provide Ancillary Services. The Access Charge shall comprise two components, which together shall be designed to recover each Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement. The first component shall be the annual authorized revenue requirement, as approved by FERC, associated with (1) the transmission facilities and Entitlements turned over to the Operational Control of the CAISO by a Participating TO or (2) transmission facilities that are not yet in operation, but approved under Section 24, and assigned to an Approved Project Sponsor. The second component shall be based on the Transmission Revenue Balancing Account (TRBA), which shall be designed to flow through the Participating TO's Transmission Revenue Credits calculated in accordance with Section 5 of the TO Tariff and other credits identified in Sections 6 and 8 of Schedule 3 of Appendix F of the CAISO Tariff. Non-Subscribers scheduling transactions on transmission assets or Entitlements of a Subscriber Participating TO shall be assessed the Access Charge and Wheeling Access

Charge, as applicable.

The Access Charges shall be paid by any UDC or MSS Operator that is serving Gross Load in a PTO Service Territory, and shall consist, where applicable, of a Regional Access Charge, and a Local Access Charge. The Regional Access Charge and the Local Access Charges shall each comprise two components, which together shall be designed to recover each Participating TO's Regional Transmission Revenue Requirement and Local Transmission Revenue Requirement, as applicable. The Regional Access Charge and the Local Access Charge for the applicable Participating TO shall be paid by each UDC and MSS Operator based on its Gross Load in the PTO Service Territory.

- (b) **Allocation of Transmission Revenue Requirement.** Each Participating TO or Approved Project Sponsor shall provide in its TO Tariff or Approved Project Sponsor Tariff filing with FERC an appendix to such filing that states the Participating TO's or Approved Project Sponsor's Regional Transmission Revenue Requirement, its Local Transmission Revenue Requirement (if applicable) and its Gross Load used in developing the rate. The allocation of each Participating TO's Transmission Revenue Requirement between the Regional Transmission Revenue Requirement and the Local Transmission Revenue Requirement shall be undertaken in accordance with Section 11 of Schedule 3 of Appendix F. To the extent necessary, each Participating TO shall make conforming changes to its TO Tariff. A Participating TO that is a UDC or MSS Operator to whom the Local Access Charge of a Non-Load-Serving Participating TO is assessed shall include these billed Local Access Charge amounts in its Local TRBA adjustment for its Local Access Charge, together with all other applicable Local TRBA adjustments. If an Approved Project Sponsor that is a Non-Load-Serving Participating TO has been assigned responsibility to construct and own a Local Transmission Facility because the CAISO concluded, pursuant to Section 24.4.10, that it was not reasonable to divide construction responsibility, the Approved Project Sponsor shall include any pre-operational cost recovery approved by FERC for the Local Facility in its Local

Transmission Revenue Requirement, The division of the total revenue requirement associated with the facility between Regional and Local Transmission Revenue Requirements shall consistent with Appendix F, Schedule 3, Sections 11 and 12.

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26.1.3 Distribution of RAC Revenues

The CAISO shall charge and credit, on a monthly basis, to Participating TOs and Approved Project Sponsors all Regional Access Charge revenues, and shall credit to Subscriber Participating TOs all Non-Subscriber Usage Payment Amounts, at the same time as other CAISO charges are settled and invoiced. Regional Access Charge revenues received with respect to the Regional Access Charge shall be distributed to Participating TOs and Approved Project Sponsors in accordance with Appendix F, Schedule 3, Section 10. Non-Subscriber Usage Payment Amounts will be provided to the Subscriber Participating TO in accordance with Appendix F, Schedule 3, Sections 10 and 15.

26.1.4 Wheeling

Any Scheduling Coordinator or other such entity submitting a Bid or Self-Schedule for a Wheeling transaction shall be charged the product of (i) the applicable Wheeling Access Charge, and (ii) the total hourly Schedules and awards of Wheeling in kilowatt-hours for each month at each Scheduling Point associated with that transaction, except as provided in Section 4.1 of Appendix I (Station Power Protocol). Schedules and awards that include Wheeling transactions shall be subject to any charges resulting from the CAISO Markets in accordance with Section 27.

26.1.4.1 Wheeling Access Charge

The Wheeling Access Charge shall be determined by the transmission ownership or Entitlement, less all Encumbrances, associated with the Scheduling Point at which the Energy exits the CAISO Controlled Grid. The Wheeling Access Charge for Scheduling Points that are not joint facilities shall be equal to the Regional Access Charge in accordance with Schedule 3 of Appendix F plus the applicable Local Access Charge if the Scheduling Point is on a Local Transmission Facility. Wheeling Access Charges shall not apply for Wheeling under a bundled non-economy Energy coordination agreement of a Participating TO

executed prior to July 9, 1996.

26.1.4.2 Wheeling Over Joint Facilities

To the extent that more than one Participating TO owns or has Entitlement to transmission capacity, less all Encumbrances, exiting the CAISO Controlled Grid at a Scheduling Point, the Scheduling Coordinator shall be charged each month a rate for Wheeling at that Scheduling Point which reflects an average of the Wheeling Access Charge applicable to those Participating TOs, weighted by the relative share of such ownership or Entitlement to transmission capacity, less all Encumbrances, at such Scheduling Point. If the Scheduling Point is located at Regional Transmission Facilities, the Wheeling Access Charge will consist of a Regional Wheeling Access Charge component. Additionally, if the Scheduling Point is located at Local Transmission Facilities, the applicable Local Wheeling Access Charge component will be added to the Wheeling Access Charge. The methodology for developing the weighted average rate for Wheeling at each Scheduling Point is set forth in Appendix F, Schedule 3, Section 14.4.

26.1.4.3 Disbursement of Wheeling Revenues

The CAISO shall collect and credit to Participating TOs and other entities as provided in Section 24.14.4 all Wheeling revenues at the same time as other CAISO charges and credits are settled and invoiced. For Wheeling revenues associated with CRRs allocated to Load Serving Entities outside the CAISO Balancing Authority Area, the CAISO shall credit to the Participating TOs and other entities as provided in Section 24.14.3 any excess prepayment amounts within thirty (30) days of the end of the term of the CRR Allocation. The CAISO shall provide to the applicable Participating TO and other entities as provided in Section 24.14.4 a statement of the aggregate amount of Energy delivered to each Scheduling Coordinator using such Participating TO's Scheduling Point to allow for calculation of Wheeling revenue and auditing of disbursements. Wheeling revenues shall be disbursed by the CAISO based on the following:

26.1.4.3.1 Scheduling Point with All Participating TOs in the Same TAC Area

With respect to revenues received for the Regional Wheeling Access Charges for Wheeling to a Scheduling Point at which all of the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in the same TAC Area, Wheeling revenues shall be disbursed to each such Participating TO based on the ratio of each Participating TO's Regional Transmission Revenue

Requirement to the sum of all such Participating TOs' Regional Transmission Revenue Requirements. If the Scheduling Point is located at a Local Transmission Facility, revenues received with respect to Local Wheeling Access Charges for Wheeling to that Scheduling Point shall be disbursed to the Participating TOs that own facilities and Entitlements making up the Scheduling Point in proportion to their Local Transmission Revenue Requirements. Additionally, if a Participating TO has a transmission upgrade or addition that was funded by a Project Sponsor, the Wheeling revenue allocated to such Participating TO shall be disbursed as provided in Section 24.14.4.

26.1.4.3.2 Scheduling Point without All Participating TOs in the Same TAC Area

With respect to revenues received for the Wheeling Access Charges for Wheeling to a Scheduling Point at which the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in different TAC Areas, Wheeling revenues shall be disbursed to such Participating TOs as follows. First, the revenues shall be allocated between such TAC Areas in proportion to the ownership and Entitlements of transmission capacity, less all Encumbrances, at the Scheduling Point of the Participating TOs in each such TAC Area. Second, the revenues thus allocated to each TAC Area shall be disbursed among the Participating TOs in the TAC Area in accordance with Section 26.1.4.3.1.

26.1.4.3.3 Scheduling Point of a Subscriber Participating TO

With respect to Non-Subscriber Usage Payment Amounts provided for Wheeling to a Scheduling Point at which all of the facilities and Entitlements, less all Encumbrances, are owned by Subscriber Participating TOs, the Non-Subscriber Usage Payment Amounts shall be provided to Subscriber Participating TO based on the Non-Subscriber's usage of the Scheduling Point in accordance with Sections 10 and 15 of Schedule 3 of Appendix F. Additionally, if a Subscriber Participating TO has a transmission upgrade or addition that was funded by a Project Sponsor, the Wheeling revenue allocated to the Subscriber Participating TO shall be disbursed as provided in Section 24.14.4.

26.1.4.4 Information Required from Scheduling Coordinators

Scheduling Coordinators for Wheeling Out or Wheeling Through transactions to a Bulk Supply Point, or other point of interconnection between the CAISO Controlled Grid and the transmission system of a Non-Participating TO, that are located within the CAISO Balancing Authority Area, shall provide the CAISO, by eight (8) Business Days after the Trading Day (T+8B), details of such transactions (other than

transactions submitted as Self-Schedules pursuant to Existing Contracts) sorted by Bulk Supply Point or point of interconnection for each Settlement Period (including kWh for each transaction). The CAISO shall use such information, which may be subject to review by the CAISO, to settle and pay Wheeling Access Charges. The CAISO shall publish a list of the Bulk Supply Points or interconnection points to which this Section 26.1.4.4 applies together with details of the electronic form and procedure to be used by Scheduling Coordinators to submit the required information on the CAISO Website.

26.1.4.5 Charges for Wheeling Through Priorities

Scheduling Coordinators for customers with a monthly or daily Wheeling Through Priority awarded under Section 23 will be charged the applicable Wheeling Access Charge, as illustrated in the Business Practice Manual, based on the MW amount and total hours of the priority for the applicable period of the Wheeling Through Priority. For example, a Scheduling Coordinator with a monthly Wheeling Through Priority based on a (six) 6-day-by-sixteen (16)-hours power supply contract would be charged Wheeling Access Charges on a six (6)-day-by-sixteen (16)-hour basis for all applicable days during the entire month of the Wheeling Through Priority regardless of the Scheduling Coordinator's actual scheduled Priority Wheeling Throughs during that period. A Scheduling Coordinator with a one (1)-day Wheeling Through Priority based on an eight (8)-hour power supply contract would be charged Wheeling Access Charges for eight (8) hours regardless of the Scheduling Coordinator's actual scheduled Wheeling Throughs during that day. To the extent a Scheduling Coordinator with a Wheeling Through Priority schedules a Wheeling Through transaction in excess of its Wheeling Through Priority quantity or outside of the hours associated with its Wheeling Through Priority, such volumes are not covered by the Wheeling Through Priority and will be separately charged at the applicable Wheeling Access Charge based on the amount of scheduled energy delivered.

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Section 28

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28.2 Inter-SC Trades of Ancillary Services

Inter-SC Trades of Ancillary Services enable a Scheduling Coordinator to transfer any fixed quantity of Ancillary Services (MW) to another Scheduling Coordinator. An Inter-SC Trade of AS shall consist of a quantity in MWs traded between two Scheduling Coordinators for a specific hour and for a specific Ancillary Service type. The Inter-SC Trade of AS is a financial trade. The CAISO shall charge and credit the two parties of the trade based on the quantity (MW) of the Ancillary Service Obligation traded times the user rate for the Ancillary Service trades for the Trading Hour. Scheduling Coordinators may submit Inter-SC Trades of Ancillary Services for Regulation Up, Regulation Down, Spinning and Non-Spinning Reserves.

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Section 29

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29.11 Settlements and Billing for EIM Market Participants.

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- (n) **EIM Transfers and Settlement for Contingency Reserve Obligations.** The CAISO shall allocate Operating Reserve Obligations to EIM Entity Scheduling Coordinators for EIM Transfers as follows –
 - (1) EIM Entity Scheduling Coordinators will receive a credit equal to three (3) percent of the hourly MW EIM Transfer into the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively; and

- (2) EIM Entity Scheduling Coordinators will receive a charge equal to three (3) percent of the hourly MW EIM Transfer out of the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively.

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Section 40

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40.6.1 Day-Ahead Availability

Except as otherwise provided in Sections 40.6.1.1 and 40.6.4, Scheduling Coordinators supplying Resource Adequacy Capacity shall make such Resource Adequacy Capacity, available Day-Ahead to the CAISO as follows:

- (1) Resource Adequacy Resources physically capable of operating must submit: (a) Economic Bids for Energy and/or Self-Schedules for all their Resource Adequacy Capacity and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services in the IFM for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services. For Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids for each Ancillary Service for which the resource is certified. For Resource Adequacy Capacity subject to this requirement for which no Economic Energy Bid or Self-Schedule has been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8. For Resource Adequacy Capacity subject to this requirement for which no Economic Bids for Ancillary Services or Submissions to Self-Provide Ancillary Services have been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8 for each Ancillary Service the

resource is certified to provide.

- (2) Resource Adequacy Resources must be available except for limitations specified in the Master File, legal or regulatory prohibitions or as otherwise required by this CAISO Tariff or by Good Utility Practice.
- (3) Through the IFM co-optimization process, the CAISO will utilize available Resource Adequacy Capacity to provide Energy or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services. In so doing, the IFM will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy one hundred percent (100%) of the Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self-Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. If the IFM reduces the Energy Self-Schedule of Resource Adequacy Capacity to provide an Ancillary Service, the Ancillary Service Marginal Price for that Ancillary Service will be calculated in accordance with Section 27.1.2 using the Ancillary Service Bids submitted by the Scheduling Coordinator for the Resource Adequacy Resource or inserted by the CAISO pursuant to this Section 40.6.1, and using the resource's Generated Energy Bid to determine the Resource Adequacy Resource's opportunity cost of Energy. If the Scheduling Coordinator for the Resource Adequacy Resource believes that the opportunity cost of Energy based on the Resource Adequacy Resource's Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit evidence justifying the increased amount to the CAISO and to the FERC no later than seven (7) days after the end of the month in which the submitted Energy Self-Schedule was reduced by the CAISO to provide an Ancillary Service.

The CAISO will treat such information as confidential and will apply the procedures in

Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall credit any higher opportunity costs approved by FERC.

- (4) A Resource Adequacy Resources must participate in the RUC to the extent that the resource has available Resource Adequacy Capacity that is not reflected in a Day-Ahead Schedule. Resource Adequacy Capacity participating in RUC will be optimized using a zero dollar (\$0/MW-hour) RUC Availability Bid.
- (5) Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.

40.6.1.1 Day-Ahead Availability - Specific RA Resource Types

- (a) **Distributed Generation Facilities.** Distributed Generation Facilities shall comply with the IFM and RUC bidding requirements that apply to the same technology type of a resource connected to the CAISO Controlled Grid.
- (b) **Non-Generator Resources**
 - (1) Non-Generator Resources that do not use Regulation Energy Management shall submit Economic Bids or Self-Schedules into the IFM for all RA Capacity for all hours of the month the resource is physically capable of operating.
 - (2) Non-Generator Resources using Regulation Energy Management shall submit Economic Bids or Self-Schedules into the IFM for all RA Capacity for Regulation for all hours of the month the resource is physically capable of operating.
- (c) **Extremely Long-Start Resources.** Extremely Long-Start Resources that are Resource Adequacy Resources must make themselves available to the CAISO by complying with:
 - (1) the Extremely Long-Start Commitment Process under Section 31.7 or otherwise committing the ELS Resource upon instruction from the CAISO, if physically capable; and
 - (2) the applicable provisions of Section 40.6.1 regarding Day-Ahead availability for the Trading Days for which it was committed.

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Appendix A

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- IFM Load Uplift Obligation

The obligation of a Scheduling Coordinator for its share of unrecovered IFM Bid Costs paid to resources through Bid Cost Recovery.

- Non-Spinning Reserve Obligation

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Non-Spinning Reserve.

- Operating Reserve Obligation

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Operating Reserves.

- Regulation Up Reserve Obligation

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Regulation Up Reserves.

- Settlement Statement Any one of the following: Initial Settlement Statement T+3B, Initial Settlement Statement T+9B, Recalculation Settlement Statement T+12B, Recalculation Settlement Statement T+55B, Recalculation Settlement Statement T+70B, Recalculation Settlement Statement T+9M, Recalculation Settlement Statement T+11M, Recalculation Settlement Statement T+18M, Recalculation

Settlement Statement T+21M, Recalculation Settlement Statement T+24M, Recalculation Settlement Statement T+33M, Recalculation Settlement Statement T+36M, Unscheduled Reissue Recalculation Settlement Statement, or any other Recalculation Settlement Statement authorized by the CAISO Governing Board or FERC.

- Spinning Reserve Obligation

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Spinning Reserve.

- Virtual Demand Bid

A Bid submitted in the DAM that, if cleared in the IFM, represents a financial commitment for Energy at the LMP in the DAM and to receive credits as specified in Section 11.3.

Attachment B – Marked Tariff

Tariff Amendment – Billing, Payment, and Credit Enhancements

California Independent System Operator Corporation

October 11, 2024

Section 11

11. CAISO Settlements and Billing

11.1 Settlement Principles

The CAISO shall calculate and, account for credits and debits, and settle ~~payments and charges~~ with Business Associates in accordance with the following principles:

- (a) The CAISO shall be responsible for calculating Settlement balances for any penalty or dispute in accordance with the CAISO Tariff, and any transmission Access Charge to UDCs or MSSs and Participating TOs;
- (b) The CAISO shall create and maintain computer back-up systems, including off-site storage of all necessary computer hardware, software, records and data at an alternative location that, in the event of a Settlement system breakdown at the primary location of the day-to-day operations of the CAISO, could serve as an alternative location for day-to-day Settlement operations within a reasonable period of time;
- (c) The CAISO shall retain all Settlement data records for a period which, at least, allows for the re-run of data as required by this CAISO Tariff and any adjustment rules of the Local Regulatory Authority governing the Scheduling Coordinators and their End-Use Customers and FERC;
- (d) The CAISO shall calculate, account for, and settle all ~~charges-debits~~ and ~~payment~~credits based on the Settlement Quality Meter Data it has received, or, if Settlement Quality Meter Data is not available, based on the best available information or estimate it has received in accordance with the provisions in Section 10 and the applicable Business Practice Manuals; and
- (e) Day-Ahead Schedules, RUC Awards and AS Awards shall be settled at the relevant LMP, RUC Price, and ASMPs, respectively. FMM Schedules shall be settled at the relevant FMM LMP at the relevant Scheduling Point. FMM AS Awards shall be settled at the relevant FMM ASMP. All Dispatch Instructions shall be deemed delivered and settled at relevant Real-Time Market prices. Deviations from Dispatch Instructions shall be

settled as Uninstructed Deviations.

11.1.1 ~~[Not Used]~~ CAISO as Counterparty

- (a) The CAISO shall be the contracting counterparty, in its own name and right, to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for any purchase or sale of any product or service, or for any other transaction, that is financially settled by the CAISO under the CAISO Tariff, except under the following circumstances:
- (i) The CAISO shall not be the contracting counterparty for transactions that procure Station Power for a Generating Unit located in Mexico or for transactions that procure Energy or Ancillary Services within Mexico; for such transactions, the CAISO will not act as principal but instead as agent for and on behalf of the relevant Scheduling Coordinators.
- (ii) [Not Used]
- (iii) The CAISO's status as contracting counterparty is not intended to affect the tax-exempt status of transmission facilities or entitlements subject to the CAISO's operational control.
- Bids for Supply submitted by a Scheduling Coordinator for any resource funded by Municipal Tax Exempt Debt are not, and shall not be construed or deemed to be, a sale to the CAISO or other transaction that is financially settled by the CAISO to the extent that the load serving entity that holds entitlements to the resource for which such Bids for Supply are submitted is using its Entitlements to serve native load during that interval. For purposes of this subsection only, a load serving entity is using its entitlements to a resource to serve native load under the following conditions: (A) For a Load Serving Entity that is serving demand inside the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the metered CAISO Demand for that Settlement Interval for the Load Serving Entity that holds entitlements to the resources for which such Bids for Supply are submitted; or (B) for load serving entities that serve demand outside of the CAISO Balancing Authority Area by Wheeling Through or exporting from the CAISO Balancing Authority Area, if the

total MW volume of such Bids for Supply that clear in any Settlement Interval is less than or equal to the total of wheel throughs or exports that are used to serve the native load for the load serving entity that holds entitlements to the resources for which such Bids for Supply are submitted during that Settlement Interval. Nothing in the two preceding sentences shall affect credit requirements under Section 12 of the CAISO Tariff or settlements charges or credits issued pursuant to any section of the CAISO Tariff. The details of such Bids for Supply may be included in Settlement Statements by the CAISO for purposes of calculating settlement charges and credits other than for Supply.

(b) The purchase or sale of any products or service, or any other transaction, which is financially settled by the CAISO under the CAISO Tariff shall be deemed to occur within the State of California. To the extent permitted by applicable law, any warranties provided by the sellers to the CAISO of such products or services, whether express, implied, or statutory, are hereby passed to the Business Associates who purchase such products or services from the CAISO on a “pass through basis” and to the extent not passed through, any such warranties are hereby assigned by the CAISO to the purchasing Business Associates. Sellers to the CAISO and Business Associates acknowledge that warranties on such products are limited to that offered by the seller to the CAISO and will exist, if at all, solely between the seller to the CAISO and the purchasing Business Associate. AS BETWEEN THE PURCHASING BUSINESS ASSOCIATE AND THE CAISO AS COUNTERPARTY, NO EXPRESS OR IMPLIED WARRANTIES ARE MADE BY THE CAISO REGARDING THE PRODUCTS AND SERVICES SOLD BY THE CAISO AS COUNTERPARTY, AND ANY SUCH PRODUCTS AND SERVICES ARE PROVIDED ON AN “AS IS” AND “AS AVAILABLE” BASIS. THE CAISO MAKES NO WARRANTY OR REPRESENTATION THAT THE PRODUCTS OR SERVICES WILL BE UNINTERRUPTED OR ERROR-FREE. PURCHASING BUSINESS ASSOCIATES HEREBY WAIVE, AND THE CAISO HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A

PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. THE CAISO DOES NOT WARRANT THAT THE PRODUCTS AND SERVICES OFFERED WILL MEET CUSTOMER'S REQUIREMENTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY THE CAISO OR ANY AUTHORIZED REPRESENTATIVE OF THE CAISO SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY PASS THROUGH OR ASSIGNED WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES IN CERTAIN CIRCUMSTANCES, SO THE ABOVE EXCLUSION APPLIES ONLY TO THE EXTENT PERMITTED BY APPLICABLE LAW.

11.1.2 Settlement Charges and Payments~~[Not Used]~~

~~The CAISO shall settle charges and payments as specified in this Section 11.~~

11.1.3 ~~[Not Used]~~Financial Transaction Conventions and Currency

~~The following conventions have been adopted in this CAISO Tariff in defining sums of money to be received by or remitted by the CAISO:~~

~~(a) — The act of receiving a sum of money in accordance with this CAISO Tariff is defined as “receiving” such sum, and each use of the word “receive” or a grammatical variation thereof in the context of receiving such sum shall have the meaning consistent with this definition. The act of providing a sum of money to another entity in accordance with this CAISO Tariff is defined as “providing” or “remitting” such sum, and each use of the word “provide” or “remit” or a grammatical variation thereof in the context of providing or remitting such sum shall have the meaning consistent with this definition.~~

~~(b) — Where the CAISO is to receive a sum of money in accordance with this CAISO Tariff, this is defined as a “charge” and shall be received by the CAISO on or before 10:00 a.m. on the relevant Payment Date as prescribed in the CAISO Tariff.~~

~~(c) — Where the CAISO is required to pay a sum of money in accordance with this CAISO Tariff, this is defined as a “payment” and shall be remitted by the CAISO on the relevant Payment Date as prescribed in the CAISO Tariff.~~

~~(d) — All financial transactions are denominated in United States dollars and cents.~~

~~(e) — All payments by the CAISO to Business Associates shall be made by Fedwire or, at the option of each Business Associate, by ACH. All payments to the CAISO by Business Associates shall be made by Fedwire or, at the option of each Business Associate, by ACH.~~

11.1.4 [Not Used]

11.1.5 [Not Used]

11.2 Settlement of Day-Ahead Market Transactions

All transactions in the IFM and RUC as specified in the Day-Ahead Schedule, AS Awards and RUC Awards, respectively, are financially binding and will be settled based on the Day-Ahead LMP, ASMP or RUC Price for the relevant Location for the specific resource or transaction identified for the Bid. The CAISO will settle the costs of Demand, capacity, Energy and Ancillary Services as separate Settlement ~~charges-debits~~ and ~~paymentcredits~~ for each Settlement Period of the Day-Ahead Schedule, Day-Ahead AS Award or RUC Award, as appropriate.

11.2.1 IFM Settlements

11.2.1.1 IFM Payments for Supply of Energy

For each Settlement Period for which the CAISO clears Energy transactions in the IFM, the CAISO shall ~~pay-credit~~ the relevant Scheduling Coordinator for the MWh quantity of Supply of Energy from all Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Distributed Energy Resource Aggregations and System Resources in an amount equal to the IFM LMP at the applicable PNode or Aggregated PNode multiplied by the MWh quantity specified in the Day-Ahead Schedule for Supply (which consists of the Day-Ahead Scheduled Energy).

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11.2.1.5 IFM Congestion Credit for ETCs, TORs, and Converted Rights

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced ETC Self-Schedule, TOR Self-Schedule or Converted Rights Self-Schedule, the CAISO shall not impose any ~~charge-debit~~ or ~~make-any-payment~~credit to the Scheduling Coordinator related to the MCC associated with such Self-Schedules. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Congestion Credit, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCC at each eligible Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC, TOR, and Converted Rights Self-Schedules.

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11.2.1.7 IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or ~~make-issue~~ any ~~payment~~credit to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable losses charges as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.2.1.7. Where the provisions of this Section 11.2.1.7 do not conflict with the provisions of the agreement, the provisions of this Section 11.2.1.7 shall apply to the subject TORs. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCL at each eligible Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules.

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11.2.2.2.1 Undispatchable RUC Capacity

If a Scheduling Coordinator has Undispatchable Capacity that it is obligated to supply to the CAISO during a Settlement Interval, the RUC Availability Payment, if applicable for any non-Resource Adequacy Capacity, for the amount of Energy that cannot be delivered from the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Settlement Interval shall be rescinded. If a Partial Resource Adequacy Resource is providing RUC Capacity from both the non-Resource Adequacy Capacity and the Resource Adequacy Capacity the ~~payment~~-rescission of the credit will occur for the non-Resource Adequacy Capacity prior to eliminating any capacity for the Resource Adequacy Capacity of the Partial Resource Adequacy Resource.

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11.2.3 IFM Energy Charges and Payments for Metered Subsystems

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11.2.3.1.2 IFM Payments for MSS Supply under Gross Energy Settlement

The CAISO shall ~~pay credit~~ Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Supply from the MSS in its Day-Ahead Schedule at the corresponding PNode and the applicable IFM LMP.

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11.2.3.2.2 IFM Payment for MSS Supply under Net Energy Settlement

The CAISO shall ~~pay credit~~ Scheduling Coordinators that submit Bids for MSS Operators that have

selected net Energy Settlement an amount equal to the product of the net MSS Supply in the Day-Ahead Schedule and the weighted average price of all IFM LMPs for all applicable PNodes within the relevant MSS. The net MSS Supply is the quantity of MSS Generation that exceeds the MSS Demand for the applicable MSS. The weights used to compute the weighted average LMPs shall be equal to MSS Generation scheduled in the Day-Ahead Schedule.

11.2.4 CRR Settlements

The CAISO will ~~pay-credit~~ or ~~charge-debit~~ CRR Holders as further specified in this Section 11.2.4 and its subsections.

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11.2.4.1.2 Calculation of Hourly CRR Congestion Fund

The CAISO calculates an Hourly CRR Congestion Fund for every Transmission Constraint that is congested in the IFM in a Settlement Period. The Hourly CRR Congestion Fund specific to a particular binding Transmission Constraint in a given Settlement Period is the sum of the: (a) portion of the IFM Congestion Fund in that Settlement Period attributable to congestion on the Transmission Constraint to which the congestion fund corresponds; (b) charges specific to the Transmission Constraint calculated pursuant to Section 11.2.4.4.1; and (c) CRR ~~revenue-credit~~ adjustments the CAISO may make pursuant to Sections 11.2.4.6 or 11.2.4.7 that are associated with the Transmission Constraint.

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11.2.4.3 ~~PaymentCredits~~ and ~~Charges-Debits~~ for Monthly and Annual Auctions

The CAISO will charge CRR Holders for the Market Clearing Price for CRRs obtained through the clearing of the CRR Auction as described in Section 36.13.6. To the extent the CRR Holder purchases a CRR through a CRR Auction that has a negative value, the CAISO will retain the CRR Auction proceeds and apply them to credit requirements of the applicable CRR Holder, in accordance with Section 12.6.3 of the CAISO Tariff. The CAISO will net all ~~revenue-received~~credits and ~~debits~~payments-made issued through this process to determine the net revenue amount. CRR Auction net revenue amounts for on-

peak and off-peak usage from each CRR Auction will be separated. The CAISO will allocate CRR Auction revenues for each season coming from the annual auction uniformly across the three months comprising each season based on time of use. The CAISO will then add these on-peak and off-peak monthly amounts from the seasonal auctions to the corresponding monthly on-peak and off-peak amounts from the monthly CRR Auction for the same month to form the monthly net CRR Auction on-peak and off-peak revenues, respectively. Furthermore, the CAISO will convert these monthly net CRR Auction revenues into daily values and add them to the daily CRR Balancing Account. In particular, the daily CRR Balancing Account contribution will be the sum of: (1) the monthly net CRR Auction on-peak amount multiplied by the ratio of daily on-peak hours to monthly on-peak hours; and (2) the monthly net CRR Auction off-peak amount multiplied by the ratio of daily off-peak hours to monthly off-peak hours.

11.2.4.4 Hourly CRR Calculations, Daily CRR Settlement, and Potential Monthly Surplus Distribution Payments

11.2.4.4.1 Calculating CRR Holders' Congestion-Supported Values

For each Settlement Period, the CAISO uses the funds in the Hourly Congestion Funds calculated in Section 11.2.4.1.2 to determine the Congestion-Supported Values ~~credited~~paid and charged to CRR Holders, by first determining all Net Modeled CRR Flow quantities. The CAISO then determines whether the Net Modeled CRR Flow results in a ~~payment~~credit or ~~charge~~debit to the CRR Holder.

For a CRR Holder whose Net Modeled CRR Flow over a binding Transmission Constraint is in the prevailing direction, the Congestion-Supported Value is a ~~payment~~credit equal to the ratio of that CRR Holder's prevailing Net Modeled CRR Flow over that Transmission Constraint (accounting for ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7), as compared to the sum of all CRR Holders' prevailing Net Modeled CRR Flow over that Transmission Constraint (accounting for ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). The CAISO will not ~~pay~~credit a CRR Holder from an Hourly CRR Congestion Fund in excess of the CRR Holder's Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint, minus any ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7 that are allocated to that Transmission Constraint.

For a CRR Holder whose Net Modeled CRR Flow over a binding Transmission Constraint is in the counter-flow direction, the Congestion-Supported Value is a charge equal to the Net Modeled CRR Flow

multiplied by the Shadow Price of that binding Transmission Constraint.

The lower bound of the sum of Congestion-Supported Values for a CRR Option across the Settlement Periods of a day is zero.

The CAISO transfers any funds in an Hourly CRR Congestion Fund associated with binding Transmission Constraints to which no CRR has a positive or negative difference between the source and sink PTDFs to the CRR Balancing Account.

Any funds remaining in an Hourly CRR Congestion Fund after all funds have been allocated to CRRs or transferred to the CRR Balancing Account for that hour are reserved for potential Daily CRR Surplus Distribution Payments or Monthly CRR Surplus Distribution Payments to CRR Holders. The funds the CAISO holds in reserve for a CRR Holder pertaining to a Transmission Constraint are held in proportion to that CRR Holder's Net Modeled CRR Flow in that Settlement Period (accounting for ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7) relative to the Net Modeled CRR Flow over that Transmission Constraint for all CRR Holders in that Settlement Period (accounting for ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7).

11.2.4.4.2 Calculating Daily CRR Surplus Payments

The CAISO allocates the funds in a Daily Congestion Fund as a Daily CRR Surplus Distribution Payment to CRR Holders that have funds reserved for them in a Daily CRR Congestion Fund pursuant to Section 11.2.4.4.1, and whose total Congestion-Supported Values pertaining to that Transmission Constraint during the day are less than the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across the day (accounting for ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). A Daily CRR Surplus Distribution Payments specific to a CRR Holder and Transmission Constraint cannot exceed the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across all Settlement Periods of the day (accounting for ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). The CAISO adds any funds remaining in a Daily CRR Congestion Fund after it has made all necessary Daily CRR Surplus Distribution Payments to that Transmission Constraint's Monthly CRR Congestion Fund.

11.2.4.4.3 Monthly Clearing of the Monthly Constraint-Specific CRR Congestion Fund

The CAISO distributes the total of the Monthly CRR Congestion Fund at the end of each month.

The CAISO first distributes the funds in a Monthly CRR Congestion Fund as Monthly CRR Surplus Distribution Payments to CRR Holders that have funds reserved for them in a Monthly CRR Congestion Fund pursuant to Section 11.2.4.4.1 and whose total Congestion-Supported Values pertaining to that Transmission Constraint during the month, plus the Daily CRR Surplus Distribution Payments, are less than the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across all Settlement Periods of the month (accounting for ~~revenue~~ adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7).

The CAISO distributes any funds remaining in a Monthly CRR Congestion Fund after it has made all required Monthly CRR Surplus Distribution Payments to Scheduling Coordinators in an amount equal to: (a) the funds in the Monthly CRR Congestion Fund, multiplied by (b) the ratio of each Scheduling Coordinator's Measured Demand for the relevant Trading Month (net of the Scheduling Coordinator's Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Month), divided by (c) the total Measured Demand for all Scheduling Coordinators for the relevant Trading Month (net of the total Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Month).

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11.2.4.6 Adjustment of CRR ~~Revenue Credits and Debits~~ Related to Virtual Awards

In accordance with this Section 11.2.4.6, the CAISO will adjust the ~~revenue credits~~ and debits from the CRRs of a CRR Holder that is also a Convergence Bidding Entity whenever either of the following creates a significant impact on the value of the CRRs held by that entity: the CRR Holder/Convergence Bidding Entity submits Virtual Bids; or the CRR Holder/Convergence Bidding Entity reduces in the RTM an import or export awarded in a Day-Ahead Schedule. As set forth in Section 11.32, the CAISO will also adjust the ~~revenue credits and debits~~ from the CRRs of a CRR Holder (regardless of whether the CRR Holder is also a Convergence Bidding Entity) where the Scheduling Coordinator representing that CRR Holder

reduces in the RTM an import or export awarded in a Day-Ahead Schedule.

- (a) For purposes of this Section 11.2.4.6 and the definition of Flow Impact, a reduction by a Scheduling Coordinator submitting Schedules on behalf of an entity that is a CRR Holder to an import or export Schedule in the RTM will be treated as a Virtual Award if the segment of Economic Bids (but not Self-Schedule) leading to the Schedule reduction is: at an Energy Bid price greater than the Day-Ahead Market LMP at the relevant intertie, in the case of an import; or at any Energy Bid price less than the Day-Ahead Market LMP at the relevant intertie, in the case of an export.

In addition, if the RTM Bid does not include the full MW quantity of the Day-Ahead Schedule through some combination of Economic Bid and Self-Schedule, then the MW range not covered by the RTM Bid that was included in the Day-Ahead Schedule will be treated as a Virtual Award.

For each CRR Holder subject to this Section 11.2.4.6, for each hour, and for each Transmission Constraint binding in the IFM or FMM the CAISO will calculate the Flow Impact of the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. For the purposes of calculating the CRR adjustments as specified in this Section 11.2.4.6, the CAISO will include nodal MW constraints that the CAISO applies to Eligible PNodes in the IFM pursuant to Section 30.10.

- (b) The CAISO will determine the peak and off-peak hours of the day where Congestion on the Transmission Constraint was significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. Congestion on the Transmission Constraint will be deemed to have been significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder if the Flow Impact passes two criteria. First, the Flow Impact must be in the direction to increase the sum of the CRR Holder's Notional CRR Values in their portfolio in that Settlement Period. Second, the Flow Impact must exceed the threshold percentage of the flow limit for the Transmission Constraint. The threshold percentage is ten (10) percent of the flow limit for each Transmission Constraint.

- (c) For each peak or off-peak hour that passes both criteria in Section 11.2.4.6(b), the CAISO will compare the Transmission Constraint's impact on the Day-Ahead Market value of the CRR Holder's CRR portfolio with the Transmission Constraint's impact on the FMM value of the CRR Holder's CRR portfolio, as applicable.
- (d) The CAISO will adjust the peak or off-peak period ~~credits and debits revenue~~ from the CRR Holder's CRRs in the event that, over the peak or off-peak period of a day, the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio, as applicable. The amount of the peak period adjustment will be the amount that the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the peak-period hours that passed both criteria in Section 11.2.4.6(b), as applicable. The amount of the off-peak period adjustment will be the amount that the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the off-peak period hours that passed both criteria in Section 11.2.4.6(b), as applicable.

The CAISO includes all adjustments of CRR ~~credits and debits revenue~~ calculated pursuant to this Section 11.2.4.6 in the Hourly CRR Congestion Fund for the applicable Transmission Constraint corresponding to the CRR ~~payment~~ credits and debits that would have been ~~made~~ issued but for the ~~revenue~~ adjustments as specified in Section 11.2.4.1.2.

11.2.4.7 Adjustment of CRR ~~Revenue~~ Credits and Debits Related to Schedules that Source and Sink in the Same Balancing Authority Area

The CAISO will adjust the ~~revenue~~ credits and debits from the CRRs of a CRR Holder where the Scheduling Coordinator representing that CRR Holder has submitted Bids (including Self-Schedules), in violation of Section 30.5.5 and the resulting Schedule(s) impacts the value of the CRRs in the DAM held by that CRR Holder. Such adjustment will occur if the following circumstances are all met:

- (a) A portion of the E-Tag that uses the CAISO Controlled Grid relates to a Schedule in the Day-Ahead Market;
- (b) The scheduled MW on the portion of the E-Tag using the CAISO Controlled Grid has a positive PTDF on a congested transmission element, where that congestion is measured in the direction of the CRR; and
- (c) The CRR Holder would receive ~~payment~~credits from CRRs on the congested transmission element.

If such circumstances occur, the CAISO adjusts the CRR ~~revenue credits and debits~~ in that Settlement Period so that the additional net CRR revenue that otherwise would be earned from the congestion created by the Schedule that results from the Bids submitted in violation of Section 30.5.5 is not ~~paid~~ credited to the CRR Holder. Instead, the CAISO will add those ~~funds amounts~~ to the Hourly CRR Congestion Fund for the applicable Transmission Constraint.

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11.3 Settlement of Virtual Awards

11.3.1 Virtual Supply Awards

The CAISO will ~~pay credit~~ each Scheduling Coordinator with Virtual Supply Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the Day-Ahead LMP at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Supply Awards. Virtual Supply Awards subject to price correction will be settled as specified in Section 11.21. The CAISO will charge each Scheduling Coordinator with Virtual Supply Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the simple average of the four FMM LMPs for the applicable Trading Hour at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Supply Awards.

11.3.2 Virtual Demand Awards

The CAISO will charge each Scheduling Coordinator with Virtual Demand Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the Day-Ahead Market LMP at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Demand Awards. Virtual Demand Awards

subject to price correction will be settled as specified in Section 11.21. The CAISO will ~~pay~~credit each Scheduling Coordinator with Virtual Demand Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the simple average of the four FMM LMPs for the applicable Trading Hour at the Eligible PNode or Eligible Aggregated PNode multiplied by the IFM MWhs of Virtual Demand Awards.

11.4 Black Start Settlements

~~PaymentCredits~~ for Black Start capability shall consist of any ~~paymentcredits~~ under any Black Start Agreement. If the Energy price and Start-Up Costs are not specified in the Black Start Agreement, the Black Start Energy will be ~~paid~~credited as an Exceptional Dispatch in accordance with Section 11.5.6.1 and the commitment costs for the resource will be eligible for Bid Cost Recovery under Section 11.8.

Black Start Energy resulting from a performance test shall also be ~~paid~~credited as an Exceptional Dispatch in accordance with Section 11.5.6.1. RMR Units providing Black Start are compensated in accordance with the RMR Contract rather than this Section 11.4.

11.4.1 Black Start Energy

The Black Start Energy ~~paymentcredit~~ user rate for any Settlement Period will be calculated based on the sum of Black Start Energy ~~paymentcredits~~ to Scheduling Coordinators in the applicable Settlement Period divided by Measured Demand, excluding exports to neighboring Balancing Authority Areas. The Black Start Energy user charge for any Settlement Period for a Scheduling Coordinator will be the Black Start Energy ~~paymentcredit~~ user rate multiplied by the quantity of Measured Demand, excluding exports to neighboring Balancing Authority Areas, for which that Scheduling Coordinator is responsible in that Settlement Period.

11.4.2 Black Start Capability

The CAISO shall allocate ~~paymentcredits~~ for Black Start capability under a Black Start Agreement as Reliability Services Costs to the Participating Transmission Owner in whose TAC Area where the Black Start Unit is located.

11.5 Real-Time Market Settlements

The CAISO shall calculate and account for imbalance energy for each Dispatch Interval and settle imbalance energy in the Real-Time Market for each Settlement Interval for each resource within the CAISO Balancing Authority Area and all System Resources dispatched in Real-Time. There are four (4)

categories of imbalance energy: FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Imbalance Energy. FMM Instructed Imbalance Energy includes all Energy associated with the FMM Schedule. FMM Instructed Imbalance Energy is settled pursuant to Section 11.5.1.1, including any Energy related with HASP Intertie Block Schedules cleared through the FMM. RTD Instructed Imbalance Energy is settled pursuant to Section 11.5.1.2, Uninstructed Imbalance Energy is settled pursuant to Section 11.5.2, and Unaccounted For Energy is settled pursuant to Section 11.5.3. To the extent that the sum of the Settlements Amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy does not equal zero, the CAISO will assess charges or ~~make-issue~~ paymentcredits for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval, as further described in Section 11.5.4. FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy due to Exceptional Dispatches, as well as the allocation of related costs, including Excess Costs Payments, are settled as described in Section 11.5.6. The CAISO shall reverse RTM Congestion Charges for valid and balanced ETC and TOR Self-Schedules as described in Section 11.5.7. The CAISO will settle Energy for emergency assistance as described in Section 11.5.8.

11.5.1 Imbalance Energy Settlements

11.5.1.1 FMM Instructed Imbalance Energy Settlements

For each Settlement Interval, FMM Instructed Imbalance Energy consists of the following types of Energy: (1) FMM Optimal Energy; (2) FMM Minimum Load Energy; (3) FMM Exceptional Dispatch Energy; (4) FMM Derate Energy; and (5) FMM Pumping Energy. PaymentCredits and charges for FMM Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's FMM IIE Settlement Amount. The FMM IIE Settlement Amounts for FMM Optimal Energy, FMM Minimum Load Energy, FMM Derate Energy, and FMM Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the FMM LMP. For MSS Operators that have elected net Settlement, the FMM IIE Settlement Amounts for Energy dispatched through the FMM optimization shall be calculated as the product of the FMM MSS Price and the sum of the following types of Energy: FMM Minimum Load Energy from System Units

dispatched in FMM, FMM Derate Energy, and FMM Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the FMM Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.1. The remaining FMM IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.1.2 RTD Instructed Imbalance Energy Settlements

For each Settlement Interval, RTD Instructed Imbalance Energy consists of the following types of Energy: (1) RTD Optimal Energy; (2) Residual Imbalance Energy; (3) RTD Minimum Load Energy; (4) RTD Exceptional Dispatch Energy; (5) Regulation Energy; (6) Standard Ramping Energy; (7) Ramping Energy Deviation; (8) RTD Derate Energy; (9) MSS Load Following Energy; (10) RTD Pumping Energy; and (11) Operational Adjustments. ~~Payment~~Credits and charges for RTD Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's RTD IIE Settlement Amount. The RTD IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The RTD IIE Settlement Amounts for RTD Optimal Energy, RTD Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, and RTD Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the RTD LMP. For MSS Operators that have elected net Settlement, the RTD IIE Settlement Amounts for Energy dispatched through the RTD optimization shall be calculated as the product of the RTD MSS Price and the sum of the following types of Energy: RTD Minimum Load Energy from System Units dispatched in Real-Time, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, MSS Load Following Energy, and RTD Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the RTD Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.2. The remaining RTD IIE Settlement Amounts are determined as follows: (1) RTD IIE Settlement Amounts for Residual Imbalance Energy are determined pursuant to Section 11.5.5; and (2) RTD IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.2 Uninstructed Imbalance Energy

Scheduling Coordinators shall be ~~paid~~credited or charged a UIE Settlement Amount for each LAP,

PNode or Scheduling Point for which the CAISO calculates an Uninstructed Imbalance Energy quantity for each Settlement Interval. Uninstructed Imbalance Energy quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the Uninstructed Imbalance Energy for such entities is settled similarly to how Uninstructed Imbalance Energy for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for Uninstructed Imbalance Energy every five minutes based on the resource's Dispatch Instruction. For all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources, Distributed Energy Resource Aggregations and all Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy MWh quantity and the applicable RTD LMP. The UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy quantity and RTD MSS Price.

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11.5.4 Imbalance Energy Pricing; Non-Zero Offset Amount Allocation

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11.5.4.2 Allocations of Non-Zero Amounts of the Sum of the FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Real-Time Virtual Awards Settlements

The CAISO will first compute (1) the Real-Time Congestion Offset and allocate it to all Scheduling

Coordinators, based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a RTM Congestion Credit was provided as specified in Section 11.5.7, and excluding Demand associated with ETC, Converted Right, or TOR Self-Schedules for which an IFM Congestion Credit was provided as specified in Section 11.2.1.5; and (2) the Real-Time Marginal Cost of Losses Offset and allocate it to all Scheduling Coordinators based on Measured Demand, excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS operators that have elected to Load follow or net settlement, or both, the Real-Time Marginal Cost of Losses Offset will be allocated based on their MSS Aggregation Net Measured Demand excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS Operators regardless of whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset, and less the Real-Time Marginal Cost of Losses Offset, does not equal zero, the CAISO will assess charges or ~~make-issue payment~~credits for the resulting differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected net Settlement, the CAISO will assess charges or ~~make-issue payment~~credits for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed

Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset, based on their MSS Aggregation Net Measured Demand. For Scheduling Coordinators for MSS Operators that have elected Load following, the CAISO will not assess any charges or ~~make-issue payment~~credits for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset.

11.5.5 Settlement Amount for Residual Imbalance Energy

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11.5.5.4 Rerated Minimum Load

When a Scheduling Coordinator increases the Minimum Load pursuant to Section 9.3.3, for the Settlement Interval(s) during which the affected resource is ramping up towards or ramping down from such a Minimum Load change, the Residual Imbalance Energy for the applicable Settlement Interval(s) will be re-classified as Derate Energy and will be ~~paid~~credited at the applicable RTD Locational Marginal Price.

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11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration or to Prevent or Relieve Imminent System Emergencies

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD

Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for System Emergency conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payment steps: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price subject to Section 39.6.1.4; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for Emergency System conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, is the minimum of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD

Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

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11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered by an RMR Resource as a result of Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of: (a) the applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payment steps: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD

Instructed Imbalance Energy for this type of Exceptional Dispatch from an RMR Resource is the minimum of: (a) the FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are settled in two payment steps: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

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11.5.6.3 Settlement for Instructed Imbalance Energy from Exceptional Dispatches for Condition 2 Legacy RMR Units

11.5.6.3.1 Pricing for Exceptional Dispatch of Legacy RMR Units

If the CAISO dispatches a Legacy RMR Unit that has selected Condition 2 of its Legacy RMR Contract to Start-Up or provide Energy other than a Start-Up or Energy pursuant to the Legacy RMR Contract, the CAISO shall pay-issue credits as follows:

- (a) if the Owner has elected Option A of Schedule G, two times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and 1.5 times the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instructions;
- (b) if the Owner has elected Option B of Schedule G, three times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instruction.

Equation 1a

$$\text{Energy Price (\$/MWh)} = \frac{(AX^3 + BX^2 + CX + D) * P * E}{X} + \text{Variable O\&M Rate}$$

Equation 1b

$$\text{Energy Price (\$/MWh)} = \frac{A * (B + CX + DeFX) * P * E}{X} + \text{Variable O\&M Rate}$$

Where:

- for Equation 1a, A, B, C, D and E are the coefficients given in Table C1-7a of the applicable Legacy RMR Contract;
- for Equation 1b, A, B, C, D, E and F are the coefficients given in Table C1-7b of the applicable Legacy RMR Contract;
- X is the Unit output level during the applicable settlement period, MWh;
- P is the Hourly Fuel Price as calculated by Equation C1-8 in Schedule C using the Commodity Prices in accordance with the applicable Legacy RMR Contract;

Variable O&M Rate (\\$/MWh): as shown on Table C1-18 of the applicable Legacy RMR Contract.

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11.5.7 Congestion Credit and Marginal Cost of Losses Credit

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11.5.7.1 RTM Congestion Credit for ETCs and TORs

The CAISO shall not apply charges or issue payment credits to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules after the Day-Ahead Market. The balanced portion for each ETC or TOR contract for each Settlement Interval will be based on the difference between: (1) the minimum of (a) the total Demand, (b) the total ETC or TOR Supply Self-Schedule submitted in RTM, including changes after twenty (20) minutes before the applicable Trading Hour if such change is permitted by the Existing Contract, or (c) the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the valid and balanced portion of the Day-Ahead Schedule. In determining the balanced portions, the CAISO evaluates the amounts based on the following variables: (a) for exports

and imports, the CAISO shall use the schedule quantity specified in the Interchange schedule used for check out between CAISO and other Balancing Authority Areas; (b) for CAISO Demand, the CAISO shall use the Gross Load associated with the applicable ETC or TOR; and (c) for all Generation the CAISO shall use the quantity specified in the Dispatch Instructions. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Congestion Credit for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the applicable weighted average MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the (a) deviation of the FMM Schedule or the CAISO Forecast of CAISO Demand used in the FMM from Day-Ahead Schedules and (b) deviation of the RTD schedule or the CAISO Forecast of CAISO Demand used in the RTD from Day-Ahead Schedules.

11.5.7.2 RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted to the RTM pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or ~~make-issue~~ any ~~payment~~credit to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable charges for losses as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.7.2. Where the provisions of this Section 11.5.7.2 do not conflict with the provisions of the agreement, the provisions of this Section 11.5.7.2 shall apply to the subject TORs. The balanced portion of the TOR Self-Schedule after the Day-Ahead Market is the same balanced quantity mentioned in this Section 11.5.7.2 for the TOR Self-Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the weighted

average MCL at each of the eligible Points of Receipt and Points of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the: (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules; and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules. For losses that the CAISO shall charge pursuant to Section 17.3.3, the specific loss charge amount shall be the product of: (a) the specific loss percentage as may be specified in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO; (b) the weighted average SMEC price from the FMM and RTD markets with weights based on the absolute values of (1) deviation of FMM schedule or CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (2) deviation of RTD schedule or CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules; and (c) the balanced contract quantity mentioned in Section 11.5.7.1.

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11.5.8 Settlement for Emergency Assistance

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11.5.8.1 Settlement for Energy Purchased by the CAISO for System Emergency Conditions, to Avoid Market Disruption, or to Prevent or Relieve Imminent System Emergencies, Other than Exceptional Dispatch Energy

The Settlement price for Energy that is delivered to the CAISO from a utility in another Balancing Authority Area as a result of a CAISO request pursuant to Section 42.1.5 or any other provision for assistance in System Emergency conditions, to avoid a Market Disruption, or to prevent or relieve an imminent System Emergency, other than Energy from an Exceptional Dispatch, shall be either (i) a negotiated price agreed upon by the CAISO and the seller or (ii) a price established by the seller for such

emergency assistance in advance, as may be applicable. In the event no Settlement price is established prior to the delivery of the emergency Energy, the default Settlement price shall be the simple average of the relevant FMM and RTD LMPs at the applicable Scheduling Point, plus all other charges applicable to imports to the CAISO Balancing Authority Area, as specified in the CAISO Tariff. If the default Settlement price is determined by the seller not to compensate the seller for the value of the emergency Energy delivered to the CAISO, then the seller shall have the opportunity to provide the CAISO with cost support information demonstrating that a higher price is justified. The cost support information must be provided in writing to the CAISO within thirty (30) days following the date of the provision of emergency assistance.

The CAISO shall have the discretion to ~~pay-credit~~ that higher price based on the seller's justification of this higher price. The CAISO will provide notice of its determination whether to ~~pay-credit~~ such a higher price within thirty (30) days after receipt of the cost support information. Any dispute regarding the CAISO's determination whether to ~~pay-credit~~ a higher price for emergency assistance based on cost support information shall be subject to the CAISO ADR Procedures. ~~PaymentCredit~~ by the CAISO for such emergency assistance will be made in accordance with the Settlement process, billing cycle, and ~~billing and~~ payment timeline set forth in the CAISO Tariff. The costs for such emergency assistance, including the ~~paymentcredit~~ of a price based on cost support information, will be settled in two ~~paymentsteps~~: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total FMM IIE Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the FMM IIE Settlement Amount and RTD IIE Settlement Amount settled in accordance with Sections 11.5.1.1 and 11.5.1.2 will be settled according to Section 11.5.4.2.

11.5.8.1.1 Settlement and Allocation of Excess Costs Payments for Emergency Energy Purchases, Other than Exceptional Dispatch Energy, to Scheduling Coordinators

The Excess Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 is calculated for each purchase for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.8.1 for the delivered purchase quantity and the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point. The Excess

Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 shall be allocated in the same manner as specified in Section 11.5.6.2.5.2 for the allocation of the Excess Cost Payments portion of ~~payment credits~~ for Exceptional Dispatches for emergency conditions.

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11.7 Additional MSS Settlements Requirements

11.7.1 MSS Load Following Deviation Penalty

For MSS Operators that have elected to follow their Load as described in Section 4.9.13.2, the Scheduling Coordinator for a Load following MSS Operator shall ~~pay-be charged amounts~~ for: (i) excess MSS Generation supplied to the CAISO Markets and (ii) excess MSS Load relying on CAISO Markets and not served by MSS generating resources. The revenue received from these ~~payment charges~~ will be used as an off-set to the CAISO's Grid Management Charge. The ~~payment charges~~ due from a Scheduling Coordinator will be calculated as follows:

11.7.1.1 If the metered Generation resources and imports into the MSS exceed: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the ~~payment credits~~ for excess Energy outside of the MSS Deviation Band shall be rescinded and CAISO will charge the Scheduling Coordinator for the MSS Operator ~~will pay the CAISO~~ an amount equal to one hundred percent (100%) of the product of the highest LMP ~~paid-credited~~ to the MSS Operator for its Generation in the Settlement Interval and the amount of the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is supplied in excess of the MSS Deviation Band.

11.7.1.2 If metered Generation resources and imports into the MSS are insufficient to meet: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the CAISO will charge the Scheduling Coordinator for the MSS Operator ~~shall pay the CAISO~~ an amount equal to the product of

the Default LAP price for the Settlement Interval and two hundred percent (200%) of the shortfall that is outside of the MSS Deviation Band. The paymentcharge in the previous sentence is in addition to the charges for the FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that serves the excess MSS Demand that may be applicable under Section 11.5.

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11.8 Bid Cost Recovery

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 Bid Cost Shortfall, RUC Bid Cost Shortfall, or RTM Bid Cost Shortfall) or negative (IFM Bid Cost Surplus, RUC Bid Cost Surplus, or RTM Bid Cost Surplus) in the IFM, RUC, and the Real-Time Market, as the algebraic difference between the respective IFM Bid Cost, RUC Bid Cost or RTM Bid Cost and the IFM Market Revenues, RUC Market Revenues, or RTM Market Revenues as further described below in this Section 11.8. The RTM Energy Bid Costs and RTM Market Revenues include the FMM Energy Bid Costs. In any Settlement Interval a resource is eligible for Bid Cost Recovery paymentcredits pursuant to the rules described in the subsections of Section 11.8 and Section 11.17. Bid Cost Recovery Eligible Resources for different MSS Operators are supply resources listed in the applicable MSS Agreement. All Bid Costs shall be based on Bids as mitigated pursuant to the requirements specified in Section 39.7. Virtual Awards are not eligible for Bid Cost Recovery. Virtual Awards are eligible for make-whole paymentcredits 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 Bid Costs, Minimum Load Bid Costs, Pumping Costs, Pump Shut-Down Costs, or Transition Bid Costs but are eligible to recover Energy Bid Costs, RUC Availability Payments and Ancillary Service Bid Costs.

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11.10 Settlements for Ancillary Services

11.10.1 Settlements for Contracted Ancillary Services

The CAISO shall operate a daily Settlement function for Ancillary Services it contracts for with Scheduling Coordinators. The Scheduling Coordinators supplying Ancillary Services will be ~~paid~~-credited based on the prices and quantities determined in accordance with this Section 11.10.

11.10.1.1 Ancillary Services in DAM

Payments to Scheduling Coordinators with AS Awards shall be equal to the ASMP calculated as provided in Section 27.1.2 for each Ancillary Service for the applicable trading hour in which the capacity is procured multiplied by the quantity of the capacity awarded for the Ancillary Service in each of the Ancillary Service Regions for the applicable trading hour in which the capacity is procured. Suppliers with Self-Provided Ancillary Services are not eligible to receive ~~payment~~credit for Ancillary Service Awards based on ASMPs; Self-Provided Ancillary Services are compensated at the user rate for the service being self-provided as described in Sections 11.10.2, 11.10.3 and 11.10.4.

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11.10.1.2.1 Congestion Charges

If a Scheduling Coordinator, including a Scheduling Coordinator for a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area, receives an Ancillary Services Award or provides a qualified Self-Provided Ancillary Service at a congested Scheduling Point, the CAISO will charge or ~~pay~~-credit the Scheduling Coordinator for Congestion. The charge or ~~payment~~credit for Congestion at such locations is equal to the simple average of the fifteen (15) minute applicable intertie constraint Shadow Price over the applicable Trading Hour at the location of the Ancillary Service Award, multiplied by the quantity of Ancillary Services Award or the capacity of the qualified Self-Provided Ancillary Service for the Settlement Period. No such charge or ~~payment~~credit for Congestion will apply when the Scheduling Coordinator

provides Ancillary Services from HASP Block Intertie Schedules at Scheduling Points pursuant to the CAISO Tariff rules that apply to Existing Rights and Transmission Ownership Rights.

11.10.1.3 Ancillary Services Provided in the FMM

Suppliers of Ancillary Services from resources awarded in FMM are ~~paid~~credited at a price equal to one-quarter of the fifteen (15) minute ASMP (in \$/MW/h) in each fifteen (15) minute interval of the applicable Trading Hour in which the capacity is procured for each Ancillary Service times the amount of the capacity awarded (MW) for the Ancillary Service in the relevant Ancillary Services Region for the applicable trading hour in which the capacity is procured. For each Ancillary Service, the ASMP is calculated as set forth in Section 27.1.2. Suppliers of Self-Provided Ancillary Services in the Real-Time Market are not eligible to receive ~~payment~~credit using the ASMP; rather to the extent the self-provision is qualified it will be valued at the user rate for the relevant service (i.e., will either reduce the Ancillary Services Obligation or receive the user rate if it exceeds the Scheduling Coordinator's Ancillary Service Obligation) as described in Sections 11.10.2, 11.10.3 and 11.10.4.

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11.10.1.4 Voltage Support

The total ~~payment~~credits for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of commitment costs, FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy Settlement as a result of Exceptional Dispatch pursuant to CAISO Tariff Section 11.5.6 and any opportunity costs, if any, due to an Exceptional Dispatch that limits Energy output to enable reactive energy production. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price. The Opportunity Cost for an RMR Resource shall be calculated based on the product of the Energy amount that would have cleared the market and the price of the FMM or RTD LMP minus the higher of the Energy Bid price adjusted to remove Opportunity Costs or the Default Energy Bid price adjusted to remove Opportunity Costs.

If applicable, Scheduling Coordinators shall also receive any ~~payment~~credits under any long-term contracts due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant to Section 34.11.2 will be ~~paid~~credited and settled in accordance with Section 11.5.6. RMR Resources and Condition 2 Legacy RMR Units providing Voltage Support are not eligible for an Opportunity Cost pursuant to this Section 11.10.1.4.

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11.10.1.7 Regulation Performance ~~Payment~~Credits and Accuracy Adjustments

Resources supplying Mileage from contracted or self-provided Regulation in the Day-Ahead Market are ~~paid~~credited a Mileage clearing price for each MW of Instructed Mileage during the Settlement Period. If a resource is awarded incremental Regulation in the Real-Time Market, the Instructed Mileage shall be divided between the Day Ahead Market and Real Time Market, in proportion to the Day-Ahead and Real-Time Regulation Capacity awards. Instructed Mileage associated with a Day-Ahead Market award will be ~~paid~~credited the Day-Ahead Mileage clearing price. Instructed Mileage associated with a Real-Time Market award will be ~~paid~~credited the Real-Time Mileage clearing price. The CAISO will adjust a resource's Mileage ~~payment~~credits based on the accuracy of the resource's response to CAISO EMS signals. To determine this accuracy adjustment, the CAISO will sum a resource's Automatic Generation Control set points for each four (4) second Regulation interval every fifteen (15) minutes and then sum the absolute value of the deviations from the Automatic Generation Control set point for each four (4) second regulation interval during that fifteen (15) minute period. The CAISO will divide the sum of the resource's Automatic Generation Control set points less the sum of the resource's total deviations by the sum of the resource's Automatic Generation Control set points. The CAISO will apply the resulting accuracy percentage to the resource's Regulation performance ~~payment~~credits. In the event of lost accuracy data, the CAISO will use the simple average of the resource's previous ten (10) accuracy percentages for the periods of missing data for settlement purposes.

11.10.2 Settlement for User Charges for Ancillary Services

The CAISO shall determine a separate hourly user rate for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve purchased for each Settlement Period. The hourly user rates for Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve include the cost incurred by the CAISO across the Day-Ahead Market and the Real-Time Market to procure this service. In computing the user rate for each service the quantity (MW) and costs of any substituting Ancillary Service will be treated as if they are costs and MW associated with the Ancillary Service need they are being used to fulfill. Each rate will be charged to Scheduling Coordinators on a volumetric basis applied to each Scheduling Coordinator's obligation for the specific Ancillary Service concerned which it has not self-provided, as adjusted by any Inter-SC Trades of Ancillary Services. Each Scheduling Coordinator's obligation for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve shall be calculated in accordance with this Section 11.10.2, notwithstanding any adjustment to the quantities of each Ancillary Service purchased by the CAISO in accordance with Section 8.2.3.5.

Ancillary Services Obligations for an individual Scheduling Coordinator (before taking into account Self-Provided Ancillary Services) or Inter-SC Trades of Ancillary Services may be negative. Credits for such negative obligations will be in accordance with the rates calculated in this Section 11.10.2, except that a Scheduling Coordinator's credit shall be reduced pro rata to the extent the sum of the negative obligations of all Scheduling Coordinators with the negative Ancillary Services Obligation (before self-provision or Inter-SC Trade) exceeds the obligation of all Scheduling Coordinators with positive obligation net of Self-Provided Ancillary Services, as specified in Section 11.10.5 in any Settlement Period, the net procurement quantity of Regulation Up, Regulation Down, Spinning Reserve, or Non-Spinning Reserve purchased by the CAISO in the Day-Ahead Market and the Real-Time Market due to the operation of Section 8.2.3.5 is zero (0), then the user rate for that Ancillary Service type will be zero (0). With respect to each Settlement Period, in addition to the user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged an additional amount equal to its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve of the amount, if any, by which (i) the total ~~payment~~credits to Scheduling Coordinators pursuant to this Section 11.10.2 for the Day-Ahead Market and the Real-Time

Market, exceed (ii) the total amounts charged to Scheduling Coordinators pursuant to this Section 11.10.2, for the Day-Ahead Market and the Real-Time Market. If total amounts charged to Scheduling Coordinators exceed the total ~~payment~~credits to Scheduling Coordinators, each Scheduling Coordinator will be refunded its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve.

With respect to each Settlement Period, in addition to Ancillary Service charges at the applicable user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged additional neutrality adjustment amounts for each Ancillary Service type pursuant to Sections 11.10.2.1.4, 11.10.2.2.3, 11.10.3.4, and 11.10.4.4 and a neutrality adjustment amount for upward Ancillary Service types pursuant to Section 11.14.

11.10.2.1 Regulation Service

Regulation Up Reserve and Regulation Down Reserve charges shall be calculated separately.

11.10.2.1.1 Regulation Down Reserve

The charges to a Scheduling Coordinator ~~must pay~~ for Regulation Down Reserve for each Settlement Period of the Trading Day are based upon the product of Scheduling Coordinator's hourly obligation for Regulation Down Reserve (MW) and the hourly user rate for Regulation Down Reserve (\$/MW).

11.10.2.1.2 Hourly User Rate for Regulation Down Reserve

The hourly user rate for Regulation Down is the total Regulation Down Reserve Cost (\$) for each Settlement Period divided by the total Net Procurement of Regulation Down by the CAISO (MW) for each Settlement Period. The CAISO's Regulation Down Reserve Cost is equal to: (i) the revenues ~~paid~~ credited to the suppliers of the total awarded Regulation Down Reserve capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the ~~payment~~credits rescinded in the Settlement Period due to the unavailability of the Regulation Down under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Down Reserves is equal to: (i) the amount (MW) of total awarded Regulation Down Reserve capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the Regulation Down Reserve capacity associated with ~~payment~~credits rescinded for the Settlement Period pursuant to any of the provisions of Section 8.10.8.

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11.10.2.1.4 Regulation Down Neutrality Adjustment

For each Settlement Period, the difference between the Regulation Down Reserve Cost determined in Section 11.10.2.1.2 and the total revenue ~~collected~~ from all Scheduling Coordinators in the Regulation Down charge pursuant to Section 11.10.2.1.3 shall be allocated to all Scheduling Coordinators in proportion to their Regulation Down obligation quantity.

11.10.2.1.5 Regulation Down Mileage Costs

The charges to a Scheduling Coordinator ~~must pay~~ for Regulation Down Mileage in any Settlement Period of the Trading Day are the product of the Scheduling Coordinator's Ancillary Services Obligation percentage in that Settlement Period and the user rate for Regulation Down Mileage (\$/MW) for that Settlement Period. The user rate for Regulation Down Mileage is the total cost for Regulation Down Mileage (\$) for each Settlement Period divided by the total Regulation Down Ancillary Service Obligation (MW) for each Settlement Period.

11.10.2.2 Regulation Up

The charges to a Scheduling Coordinator ~~must pay~~ for Regulation Up for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Regulation Up (MW) and the hourly user rate for Regulation Up (\$/MW).

11.10.2.2.1 Hourly User Rate for Regulation Up

The hourly user rate for Regulation Up is the total Regulation Up cost (\$) for each Settlement Period divided by the total Net Procurement of Regulation Up by the CAISO (MW) for each Settlement Period.

The CAISO's Regulation Up cost is equal to: (i) the revenues ~~paid~~ credited to the suppliers of the total awarded Regulation Up capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the ~~payment~~ credits rescinded in the Settlement Period due to the unavailability of the Regulation Up under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Up is equal to: (i) the amount (MWs) of total awarded Regulation Up capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the Regulation Up capacity associated with ~~payment~~ credits rescinded for the Settlement Period, pursuant to any of the provisions of Section 8.10.8.

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11.10.2.2.4 Regulation Up Mileage Costs

The charges to a Scheduling Coordinator ~~must pay~~ for Regulation Up Mileage in any Settlement Period of the Trading Day are the product of the Scheduling Coordinator's Ancillary Services Obligation percentage in that Settlement Period and the user rate for Regulation Up Mileage (\$/MW) in that Settlement Period.

The user rate for Regulation Up Mileage is the total cost for Regulation Up Mileage (\$) for each Settlement Period divided by the total Regulation Up Ancillary Service Obligation (MW) for each Settlement Period.

11.10.3 Spinning Reserves

11.10.3.1 Spinning Reserves Obligation

The charges to a Scheduling Coordinator ~~must pay~~ for Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Spinning Reserves (MW) and the hourly user rate for Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the SC may be entitled to a credit rather than a charge. In that case, the quantity of the SC's negative Operating Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAP) computed for the Trading Hour as specified in Section 11.10.5.

11.10.3.2 Hourly User Rate for Spinning Reserves

The hourly user rate for Spinning Reserves is the ratio of: (1) the sum of the portion of Spinning Reserve Cost used to meet the spin requirement and the portion of Regulation Up cost that can substitute for Spinning Reserve and (2) the Net Procurement quantity of Spinning Reserves by the CAISO (\$/MW).

The cost of Regulation Up substituting for Spinning Reserve is the user rate for Regulation Up multiplied by the quantity of Regulation Up used to satisfy the Spinning Reserve requirement.

The CAISO's Spinning Reserve Cost is equal to: (i) the revenues ~~paid~~ credited to the suppliers of the total

awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the ~~payment credits~~ rescinded due to either the failure to conform to Dispatch Instructions or the unavailability of the Spinning Reserves under Section 8.10.8. The Net Procurement of Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the Spinning Reserve capacity associated with ~~payment credits~~ rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve capacity used as Spinning Reserve under Section 8.2.3.5.

* * * * *

11.10.3.4 Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Spinning Reserve net requirement at the hourly Spinning Reserve user rate determined in Section 11.10.3.2 and the total revenue ~~collected~~ from all Scheduling Coordinators in the Spinning Reserve charge pursuant to Section 11.10.3.3 shall be allocated to all Scheduling Coordinators in proportion to their Spinning Reserve obligation quantity. The Spinning Reserve net requirement is the Real-Time Spinning Reserve requirement net of the sum of effective qualified Spinning Reserve self-provision over all resources.

11.10.4 Non-Spinning Reserves

11.10.4.1 Non-Spinning Reserves Obligation

The charges to an SC ~~must pay~~ for Non-Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of SC's hourly obligation for Non-Spinning Reserves (MWs) and the hourly user rate for Non-Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the Scheduling Coordinator may be entitled to a credit rather than a charge. In that case, the quantity of the Scheduling Coordinator's negative Non-Spinning Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAP) computed for the Trading

Hour as specified in Section 11.10.5.

11.10.4.2 Hourly User Rate Non-Spinning Reserves

The hourly user rate for Non-Spinning Reserves is calculated as the ratio of: i) the sum of the portion of the Non-Spinning Reserve Cost used to meet the Non-Spinning requirement and a portion of the Regulation Up and Spinning Reserve costs that can substitute for Non-Spinning Reserve and ii) the Net Procurement quantity of Non-Spinning Reserves by the CAISO (\$/MW). The CAISO's Non-Spinning Reserve Cost includes the costs associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

The CAISO's Non-Spinning Reserve Cost is equal to: (i) the revenues ~~paid-credited~~ to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the ~~paymentcredits~~ rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8. The Net Procurement of Non-Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the Non-Spinning Reserve capacity associated with ~~paymentcredits~~ rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Non-Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

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11.10.4.4 Non-Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Non-Spinning Reserve net requirement at the hourly Non-Spinning Reserve user rate determined in Section 11.10.4.2 and the total revenue ~~collected~~ from all Scheduling Coordinators in the Non-Spinning Reserve charge pursuant to Section 11.10.4.3 shall be allocated to all Scheduling Coordinators in proportion to their Non-Spinning Reserve Obligation quantity. The Non-Spinning Reserve net requirement is the Real-Time Non-Spinning Reserve requirement net of the sum of effective qualified Non-Spinning Reserve self-provision over all resources.

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11.10.6 Upward Ancillary Services Neutrality Adjustment

For each Settlement Period the difference between the upwards Ancillary Service cost and the sum of the total Ancillary Services obligation and neutrality adjustments will be allocated to all Scheduling Coordinators in proportion to their upward Ancillary Service Obligation (before taking into consideration the Inter-SC Trades of Ancillary Services). The CAISO shall exclude EIM Transfers between the CAISO and an EIM Entity from the calculation of the upwards Ancillary Service Obligation for this neutrality adjustment. The upwards Ancillary Service cost is the sum of the upward Ancillary Services ~~payment~~credits ~~made~~issued pursuant to Sections 11.10.1.1, 11.10.1.2, and 11.10.3.1. The total upward Ancillary Services obligation and neutrality adjustments is the sum of the requirements in Sections 11.10.2.2.2, 11.10.2.2.3, 11.10.3.1, 11.10.3.4, 11.10.4.1, and 11.10.4.4.

11.10.7 Voltage Support

The Voltage Support user rate for any Settlement Period shall be calculated based on the sum of Voltage Support ~~payment~~credits ~~made~~issued to Scheduling Coordinators in accordance with Section 11.10.1.4, divided by Gross Load, excluding metered Demand inside an MSS except as provided by Section 4.9.4.4. The Voltage Support charge for any Settlement Period payable by a Scheduling Coordinator is the Voltage Support user rate multiplied by the quantity of Gross Load, excluding Demand within an MSS except as provided by Section 4.9.4.4, for which that Scheduling Coordinator is responsible in that Settlement Period.

11.10.8 [Not Used]

11.10.9 Settlements of Rescission of ~~Payments-Credits~~ for AS Capacity

The rescission of ~~payment~~credits for Ancillary Services for Undispatchable, Unavailable, and Undelivered Capacity applies to Ancillary Services that are awarded in the Day-Ahead Market or Real-Time Market and the rescission will be the weighted average of the Ancillary Service Marginal Prices (ASMPs) and Ancillary Services Award amounts for a resource across the Day-Ahead Market and Real-Time Market. For Self-Provided Ancillary Service capacity that becomes Undispatchable Capacity, Unavailable

Capacity, or Undelivered Capacity, the rescission of Ancillary Services self-provision in the Day-Ahead Market and Real-Time Market reduces the relevant Scheduling Coordinator's effective Ancillary Services self-provision in the Ancillary Services cost allocation, effectively resulting in a charge back at the relevant Ancillary Services rate. The rescission of paymentcredits in this Section 11.10.9 shall not apply to a capacity paymentcredit for any particular Ancillary Service if the weighted average Ancillary Service Marginal Price (ASMP) is less than or equal to zero (0).

11.10.9.1 Rescission Undispatchable AS

If a Scheduling Coordinator has Undispatchable Capacity that it is obligated to supply to the CAISO during a Settlement Interval, the Ancillary Service capacity paymentcredit for the amount of Energy that cannot be delivered from the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Settlement Interval shall be rescinded; provided, however, that to the extent an Ancillary Service procured in the IFM from a Non-Dynamic System Resource to the CAISO Balancing Authority Area becomes Undispatchable Capacity due to an Intertie transmission derate before the Operating Hour for which it was procured, in rescinding the Ancillary Service capacity paymentcredit, the CAISO shall credit back to the Scheduling Coordinator any charge for Congestion assessed pursuant to Section 11.10.1.1.1, but at the lower of the Day-Ahead and simple average of the fifteen (15) minute Real-Time Shadow Price over the applicable Trading Hour on the corresponding Intertie.

11.10.9.2 Rescission of PaymentCredits for Unavailable Ancillary Service Capacity

PaymentCredits to the Scheduling Coordinator representing the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall not be eliminated to the extent of the deficiency if: (i) the deficiency in the availability of Ancillary Service capacity from the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource is attributable to control exercised by the CAISO in that Settlement Interval through AGC operation, an RMR Dispatch Notice, or an Exceptional Dispatch; or (ii) a penalty is imposed under Section 8.10.7 with respect to the deficiency.

In calculating the amount of the paymentcredit to be rescinded under Section 8.10.8.2, the CAISO shall reduce the paymentcredit for Ancillary Service capacity otherwise payable for the Settlement Interval by the product of the applicable prices and the amount of Ancillary Service capacity from which the

Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource has supplied Uninstructed Imbalance Energy in that Settlement Interval.

11.10.9.3 Rescission of ~~PaymentCredits~~ for Undelivered Ancillary Service Capacity

If the total metered output of a Generating Unit, Participating Load, System Unit or System Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Spinning Reserves or awarded or self-provided Non-Spinning Reserves in any Settlement Interval, then the capacity ~~paymentcredit~~ associated with the difference between the scheduled amount of each Ancillary Service for which insufficient Energy was delivered and the actual output attributed to the response to the Dispatch Instruction shall be rescinded. If, after the issuance of a Dispatch Instruction associated with Non-Spinning Reserves, the actual response of a Proxy Demand Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Non-Spinning Reserves, then the capacity ~~paymentcredit~~ associated with the difference between the scheduled amount and the actual amount attributed to the response to the Dispatch Instruction (as established pursuant to the applicable Business Practice Manual) shall be rescinded. However, no capacity ~~paymentcredit~~ shall be rescinded if the shortfall in the metered output of the Generating Unit, Participating Load, Proxy Demand Resource, System Unit, or System Resource is less than a deadband amount published by the CAISO on the CAISO Website at least twenty-four hours prior to the Settlement Interval. For any Settlement Interval with respect to which no deadband amount has been published by the CAISO, the deadband amount shall be zero MWh. For purposes of these calculations, total metered output will not include Energy provided or reduced as a result of AGC signals.

11.10.9.4 Allocation of Rescinded Ancillary Services Capacity ~~PaymentCredits~~

~~PaymentCredits~~ rescinded pursuant to Sections 8.10.8 and 11.10.9 shall be allocated to Scheduling Coordinators in proportion to their Ancillary Services Obligation for the same Trading Day.

11.11 RACs and Wheeling Transactions

11.11.1 Regional Access Charge

Regional Access Charges will be levied in accordance with Section 26.1 and Appendix F, Schedule 3.

11.11.2 Wheeling Through and Wheeling Out Transactions

The CAISO shall calculate, account for and settle charges and ~~payment~~credits for Wheeling Through and Wheeling Out transactions in accordance with Section 26.1.4 and Appendix F, Schedule 3, Section 14.

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11.12.3 ~~Payment of~~ Participating Intermittent Resource Fees

11.12.3.1 Forecasting Fee

A fee to defray the costs of the implementation of the forecasting service for Eligible Intermittent Resources shall be assessed to Scheduling Coordinators for Eligible Intermittent Resources as specified in Schedule 4 of Appendix F.

11.12.3.2 [Not Used]

11.12.3.3 [Not Used]

11.12.4 [Not Used]

11.13 Settlements of RMR Charges and ~~Payment~~Credits

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

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11.13.5 Daily RMR Excess Revenues

For each Trading Day, the CAISO will calculate the Daily RMR Excess Revenues as the total CAISO daily sum of IFM excess ~~payment~~credit, RC excess ~~payment~~credit, and RTM excess ~~payment~~credit. The RMR Resource will have its RMR Capacity Payment reduced by the IFM excess ~~payment~~credit, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RUC excess ~~payment~~credit, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3 over a Trading Day is negative. The RMR Resource will have its RMR Capacity

Payment reduced by the RTM excess ~~payment~~credit, if the net of all RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 over a Trading Day is negative.

11.13.6 Daily RMR Exceptional Dispatch Excess Revenues

Daily Exceptional Dispatch excess ~~payment~~credit is the total CAISO daily sum of Settlement Interval Exceptional Dispatch surplus ~~payment~~credits. For each Settlement Interval, the Exceptional Dispatch surplus ~~payment~~credit is the net of Settlement Bid Cost Amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch and FMM IIE Settlement Amounts and RTD Instructed Imbalance Energy from Exceptional Dispatch pursuant to Section 11.5.6, where Exceptional Dispatch Settlement amounts for exceeds Exceptional Dispatch Bid Cost Settlement amounts. Bid Cost Settlement amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch is calculated as the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant Bid Cost Settlement price. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs.

11.13.7 Daily RMR Cost Allocation

The CAISO shall allocate amounts ~~paid~~credited to RMR Resources through the Daily RMR Settlement to Scheduling Coordinators representing Load-Serving Entities that serve load in the TAC Area(s) in which the need for the RMR Contract arose. These amounts ~~paid~~will be allocated to each such Scheduling Coordinator based on the pro-rated share of each Load-Serving Entity's TAC Area Metered Demand to the total TAC Area metered Demand recorded in the CAISO settlement system for actual days of any settlement month period for which the RMR Contract was in effect.

11.13.8 [Not Used]

11.13.9 [Not Used]

11.13.10 [Not Used]

11.14 Neutrality

The CAISO shall be authorized to ~~levy additional~~issue charges or ~~make additional payment~~credits as special adjustments in regard to:

- (a) amounts required to reach an accounting trial balance of zero in the course of the Settlement process in the event that the charges calculated as due from CAISO Debtors are lower than ~~payment~~credits calculated as due to the CAISO Creditors for the same Trading Day, which includes any amounts required to round up any invoice amount expressed in dollars and cents to the nearest whole dollar amount. These charges will be allocated amongst the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day ~~on a monthly basis~~. In the event that the charges due from CAISO Debtors are higher than the ~~payment~~credits due to CAISO Creditors, the CAISO shall allocate a ~~payment~~credit to the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day ~~on a monthly basis~~; and
- (b) awards payable by or to the CAISO pursuant to good faith negotiations or CAISO ADR Procedures that the CAISO is not able to allocate to or to collect from a Market Participant or Market Participants in accordance with Section 13.5.3. These charges will be allocated among Scheduling Coordinators over an interval determined by the CAISO and pro rata based on EIM Measured Demand during that interval, if the dispute concerned the Real-Time Market, or otherwise Measured Demand during that interval.

11.15 ~~Payments Under~~ Section 42.1 Contracts

The CAISO shall calculate and levy charges for the recovery of costs incurred under contracts entered into by the CAISO under the authority granted in Section 42.1 in accordance with Section 42.1.8 or any other contract approved by FERC.

11.16 Additional AS and RUC ~~Payment~~Credit Rescission Requirements

The following provisions apply to the Settlement of rescission of ~~payment~~credits for Ancillary Services and RUC Capacity in addition to the provisions of Sections 8.10.8 and 11.10.9 for Ancillary Services and

Sections 31.5.7 and 11.2.2.2 for RUC Capacity.

11.16.1 Resources with More Than One Capacity Obligation

If the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource is scheduled to provide more than one capacity obligation in a Settlement Interval, the order in which the non-compliant Ancillary Service and RUC Capacity will be apportioned to the various services under Section 8.10.8 is as follows. For Undispatchable Capacity the non-compliant capacity is first apportioned to RUC Capacity and then to any Non-Spinning Reserves. If the amount of Undispatchable Capacity exceeds the amount of Non-Spinning Reserves, then the ~~paymentcredit~~ shall be eliminated for Spinning Reserves. For Unavailable Capacity or Undelivered Capacity the non-compliant capacity is first apportioned to any Non-Spinning Reserves. If the amount of non-compliant Ancillary Service capacity exceeds the amount of Non-Spinning Reserves, then the ~~paymentcredit~~ shall be eliminated for Spinning Reserves. If the same Ancillary Service is scheduled in the Day-Ahead Market or Real-Time Market, then the ~~paymentcredits~~ shall be rescinded in proportion to the amount of each Ancillary Service scheduled in each market. If the same Ancillary Service is self-provided and Bid, the order of rescission will be first the amount of Ancillary Service amounts submitted in Bids and then the Self-Provided Ancillary Service.

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11.17 Application of the Persistent Deviation Metric

The CAISO will modify the Bid Cost Recovery calculations described in Section 11.8 and Residual Imbalance Energy ~~paymentcredits~~ in Section 11.5.5 as described below to address persistent deviations that expand Bid Cost Recovery ~~paymentcredits~~ beyond what is necessary for purposes of ensuring Bid Cost Recovery.

11.17.1 Persistent Deviation Threshold and Mitigation

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11.17.1.2 Persistent Deviation Adjustments

The CAISO will apply the following rules to evaluate the resource's performance relative to the Persistent Deviation Metric Threshold and will apply the Persistent Deviation Metric as specified below.

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11.18 Emissions Costs

11.18.1 ~~Obligation to Pay~~ Emissions Costs Charges

The CAISO shall charge ~~Each~~ Scheduling Coordinator ~~shall be obligated to pay a charge~~ in accordance with this Section 11.18, which will be used to pay fund the verified Emissions Costs incurred by an Emissions Eligible Generator during a CAISO Commitment Period. The CAISO shall levy this administrative charge (the Emissions Cost charge) each month, against all Scheduling Coordinators based upon each Scheduling Coordinator's (1) Balancing Authority Area Gross Load, and (2) Demand within California outside of the CAISO Balancing Authority Area that is served by exports from the CAISO Balancing Authority Area. ~~Scheduling Coordinators shall make payment for all Emissions Cost charges in accordance with the CAISO Payments Calendar.~~

11.18.2 CAISO Emissions Costs Trust Account

All sums representing Emissions Cost charges received by the CAISO shall be deposited in the CAISO Emissions Cost Trust Account. The CAISO Emissions Cost Trust Account shall be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time.

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11.18.7 ~~Payment of~~ Emissions Cost Invoices

The CAISO shall pay credit Scheduling Coordinators for all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period. If the Emissions Costs indicated in the applicable air quality districts' final invoice statements include emissions produced by operation not during a CAISO Commitment Period, the CAISO shall pay credit an amount equal to

Emissions Costs multiplied by the ratio of the MWh associated with the CAISO Commitment Period to the total MWh associated with such Emissions Costs. The CAISO shall ~~pay~~credit Emissions Cost Invoices each month in accordance with the CAISO Payments Calendar from the funds available in the CAISO Emissions Cost Trust Account. To the extent there are insufficient funds available in the CAISO Emissions Cost Trust Account in any month to ~~pay~~credit all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period, the CAISO shall make pro rata ~~payment~~credit of such Emissions Costs and shall adjust the rate at which the CAISO will assess the Emissions Cost charge in accordance with Section 11.18.4. Any outstanding Emissions Costs owed from previous months will be paid in the order of the month in which such costs were invoiced to the CAISO. The CAISO's obligation to ~~pay~~credit Emissions Costs is limited to the obligation to ~~pay~~credit Emissions Cost charges received. All disputes concerning ~~payment~~credit of Emissions Cost Invoices shall be subject to CAISO ADR Procedures, in accordance with Section 13.

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11.23 Penalties for Uninstructed Imbalance Energy

Effective December 1, 2004, the CAISO shall not charge any Uninstructed Deviation Penalties pursuant to this Section 11.23 until FERC issues an order authorizing the CAISO to charge Uninstructed Deviation Penalties pursuant to this section. Beginning with Settlement Statements for the first Trading Day for which FERC authorizes the CAISO to charge Uninstructed Deviation Penalties pursuant to this section, the CAISO shall charge Scheduling Coordinators Uninstructed Deviation Penalties for Uninstructed Imbalance Energy resulting from resource deviations outside a Tolerance Band from their Dispatch Operating Point, for dispatched resources, or their Day-Ahead Schedule otherwise. The Uninstructed Deviation Penalty will be applied as follows:

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- (l) The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be

the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to one hundred (100) percent of the corresponding LMP. The relevant LMP will be calculated for each UDP Location as the ten-minute weighted average price of two five-minute Dispatch Interval LMPs and the two five-minute optimal Instructed Imbalance Energy quantities. The net effect of the Uninstructed Deviation Penalty and the Settlement for positive Uninstructed Imbalance Energy beyond the Tolerance Band will be that the CAISO will not issue a pay-credit for such Energy.

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11.25 Settlement of Flexible Ramping Product

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11.25.2 Settlement of Uncertainty Requirement

11.25.2.1 PaymentCredit to Resources.

On a daily basis, the CAISO will settle Uncertainty Awards to resources for providing the Uncertainty Requirement at the applicable Flexible Ramp Up Price or Flexible Ramp Down Price less any paymentcredit rescission for each interval pursuant to Section 11.25.3.

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11.27 Voltage Support Charges

The CAISO shall calculate, account for and settle charges and paymentcredits for Voltage Support as set out in Sections 11.10.1.4, 11.10.7, and the applicable Business Practice Manual.

11.28 Calculating, Charging and Disbursing Default Interest

The CAISO shall calculate, charge and disburse all collected default Interest in accordance with the CAISO Tariff.

11.29 CAISO as Counterparty; Accounting, Billing, and Payment

~~(a) — The CAISO shall be the contracting counterparty, in its own name and right, to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for any purchase or sale of any product or service, or for any other transaction, that is financially settled by the CAISO under the CAISO Tariff, except under the following circumstances:~~

~~(i) — The CAISO shall not be the contracting counterparty for transactions that procure Station Power for a Generating Unit located in Mexico or for transactions that procure Energy or Ancillary Services within Mexico; for such transactions, the CAISO will not act as principal but instead as agent for and on behalf of the relevant Scheduling Coordinators.~~

~~(ii) — The provisions of this Section 11.29 will not apply to the billing and payment of transactions associated with Trading Days that occurred prior to September 1, 2012. Billing and payment of such transactions shall be governed by the terms of the tariff effective on the Trading Days.~~

~~(iii) — The CAISO's status as contracting counterparty is not intended to affect the tax exempt status of transmission facilities or entitlements subject to the CAISO's operational control.~~

~~Bids for Supply submitted by a Scheduling Coordinator for any resource funded by Municipal Tax Exempt Debt are not, and shall not be construed or deemed to be, a sale to the CAISO or other transaction that is financially settled by the CAISO to the extent that the load serving entity that holds entitlements to the resource for which such Bids for Supply are submitted is using its entitlements to serve native load during that interval. For purposes of this subsection only, a load serving entity is using its entitlements to a resource to serve native load under the following conditions: A) For a Load Serving Entity that is serving demand inside the ISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the metered CAISO Demand for that settlement interval for the Load Serving Entity that holds entitlements to the resources for which such Bids for Supply are submitted, or B) for load serving entities that serve demand outside of the CAISO Balancing Authority Area by wheeling through or exporting from the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the total of wheel throughs or exports that are used to serve the native load for the load serving entity that holds~~

~~entitlements to the resources for which such Bids for Supply are submitted during that settlement interval. Nothing in the two preceding sentences shall affect credit requirements under Section 12 of the CAISO Tariff or settlements charges or credits issued pursuant to any section of the CAISO tariff. The details of such Bids for Supply may be included in Settlement Statements by the CAISO for purposes of calculating settlement charges and credits other than for Supply.~~

~~(b) The purchase or sale of any products or service, or any other transaction, which is financially settled by CAISO under this CAISO Tariff shall be deemed to occur within the State of California. To the extent permitted by applicable law, any warranties provided by the sellers to the CAISO of such products or services, whether express, implied or statutory, are hereby passed to the Business Associates who purchase such products or services from the CAISO on a "pass through basis" and to the extent not passed through, any such warranties are hereby assigned by the CAISO to the purchasing Business Associates. Sellers to the CAISO and Business Associates acknowledge that warranties on such products are limited to that offered by the seller to CAISO and will exist, if at all, solely between the seller to the CAISO and the purchasing Business Associate. AS BETWEEN THE PURCHASING BUSINESS ASSOCIATE AND THE CAISO AS COUNTERPARTY, NO EXPRESS OR IMPLIED WARRANTIES ARE MADE BY THE CAISO REGARDING THE PRODUCTS AND SERVICES SOLD BY THE CAISO AS COUNTERPARTY, AND ANY SUCH PRODUCTS AND SERVICES ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. THE CAISO MAKES NO WARRANTY OR REPRESENTATION THAT THE PRODUCTS OR SERVICES WILL BE UNINTERRUPTED OR ERROR FREE. PURCHASING BUSINESS ASSOCIATES HEREBY WAIVE, AND THE CAISO HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. THE CAISO DOES NOT WARRANT THAT THE PRODUCTS AND SERVICES OFFERED WILL MEET CUSTOMER'S REQUIREMENTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY THE CAISO OR ANY AUTHORIZED REPRESENTATIVE OF THE CAISO SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY PASS THROUGH OR ASSIGNED WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES IN CERTAIN CIRCUMSTANCES, SO THE ABOVE EXCLUSION APPLIES ONLY TO~~

~~THE EXTENT PERMITTED BY APPLICABLE LAW.~~

~~(c) — The CAISO will calculate for each charge the amounts payable by the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each Settlement Period of the Trading Day, and the amounts payable to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for each Settlement Period of that Trading Day and shall arrive at a net amount payable for each charge by or to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for that Trading Day. Each of these net amounts will appear in the Settlement Statements that the CAISO will provide to the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO.~~

~~(d) — The components of the Grid Management Charge will be included in an Initial Settlement Statement T+3B, and any Recalculation Settlement Statement with the other types of charges referred to in Section 11.~~

11.29.1 Billing and Payment Process Based on Settlement Statements

~~The billing and payment process shall be based on the issuance of Initial Settlement Statement T+9B and Recalculation Settlement Statements. The Initial Settlement Statement T+9B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+9B will constitute the basis for billing in the first instance. The Recalculation Settlement Statements will constitute the basis for billing for adjustments to the Initial Settlement Statement T+9B.~~

11.29.2 One Agreement Will Govern All Settlement, Billing, and Payment~~[Not Used]~~

~~This Section applies to every Business Associate that is a party to more than one agreement with the CAISO that governs settlement, billing and payment. These agreements are: Scheduling Coordinator Agreements, EIM Entity Scheduling Coordinator Agreements (regardless whether the addendum for EDAM is effective), CRR Entity Agreements, the Transmission Control Agreement (for Participating Transmission Owners) and Black Start Agreements. Collectively, these agreements, including any successors to these agreements, are referred to in this Section as “Billing and Payment Agreements.”~~

One of the Billing and Payment Agreements between the Business Associate and the CAISO will be designated to govern all CAISO settlements, whether those settlements are under this Section 11, Section 29.11 or Section 33.11, and all billing and payment arising from those settlements, including but not limited to payment and collection of all amounts due from the Business Associate to the CAISO and all amounts due from the CAISO to the Business Associate under all Billing and Payment Agreements between the Business Associate and the CAISO. For avoidance of doubt, Scheduling Coordinators, Candidate CRR Holders, CRR Holders, CRR Entities, Participating Transmission Owners and Black Start Generators that are party to Black Start Agreements are obligated to pay all Invoices and entitled to receive payment on Payment Advices issued to the Business Associate pursuant to Section 11, Section 29.11 or Section 33.11. The designated agreement will be the agreement that appears first on this list:

- a) Transmission Control Agreement;
- b) Scheduling Coordinator Agreement;
- c) EIM Scheduling Coordinator Agreement;
- d) CRR Entity Agreement;
- e) Black Start Agreement.

If the Business Associate is party to more than one agreement of the same type, such as two or more Scheduling Coordinator Agreements, then the first-executed agreement of that type is designated. Nothing in this Section shall limit or otherwise affect the obligation of the Business Associate to comply with the terms of every Billing and Payment Agreement to which it is a party.

11.29.3 ~~Prepayments~~[Not Used]

- ~~(a) — A Scheduling Coordinator or CRR Holder may choose to pay at an earlier date than the Payment Date specified in the CAISO Payments Calendar by way of prepayment, provided it notifies the CAISO by electronic means before submitting its prepayment.~~
- ~~(b) — Prepayment notifications must specify the dollar amount prepaid.~~
- ~~(c) — Prepayments must be made by Scheduling Coordinators or CRR Holders via Fedwire or ACH into their CAISO prepayment accounts designated by the CAISO. The relevant Scheduling Coordinator or CRR Holder shall grant the CAISO a security interest on all funds in its CAISO prepayment account.~~

~~(d) — On any Payment Date the CAISO shall be entitled to cause funds from the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account to be transferred to the CAISO Clearing Account in such amounts as may be necessary to discharge in full that Scheduling Coordinator's or CRR Holder's payment obligation arising in relation to that Payment Date by way of set-off or recoupment.~~

~~(e) — Any funds held in the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall be treated as part of that Scheduling Coordinator's or CRR Holder's Financial Security.~~

~~(f) — Interest (or other income) accruing on the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall inure to the benefit of that Scheduling Coordinator or CRR Holder and shall be added to the balance of its CAISO prepayment account on a monthly basis.~~

~~(g) — Funds held in a CAISO prepayment account by a Scheduling Coordinator or CRR Holder may be recouped, offset or applied by the CAISO to any outstanding financial obligations of that Scheduling Coordinator or CRR Holder to the CAISO.~~

11.29.4 System Failure~~[Not Used]~~

11.29.4.1 — At CAISO Debtor's Bank

~~If any CAISO Debtor becomes aware that a payment will not, or is unlikely to be, received by the CAISO Bank by 10:00 am on the relevant Payment Date for any reason (including failure of the Fedwire or any computer system), it shall immediately notify the CAISO, giving full details of the payment delay (including the reasons for the payment delay). The CAISO Debtor shall make all reasonable efforts to remit payment as soon as possible, by an alternative method if necessary, to ensure that funds are received for value no later than 10:00 am on the Payment Date, or as soon as possible thereafter.~~

11.29.4.2 — At the CAISO's Bank

~~In the event of failure of any electronic transfer system affecting the CAISO Bank, the CAISO shall use reasonable efforts to establish alternative methods of remitting funds to the CAISO Creditors' Settlement Accounts by close of banking business on that Payment Date, or as soon as possible thereafter. The CAISO shall notify the CAISO Debtors and the CAISO Creditors of occurrence of the system failure and the alternative methods and anticipated time of payment. In the event that a payment is received late by the CAISO Bank due to either a system failure affecting the CAISO Bank or untimely performance of an ACH draft debit for which the CAISO is responsible, the enforcement actions set forth in Section 11.29.14~~

~~shall not apply to such late payment.~~

11.29.5 General Principles for Production of Settlement Statements

11.29.5.1 Basis of Settlement

The basis of each Settlement Statement will be the debiting or crediting of an account in the name of the relevant ~~Business Associate Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO.~~

11.29.5.2 Settlement Statements~~[Not Used]~~

- (a) ~~For each Settlement Period of the Trading Day, the CAISO will calculate for each charge the amounts debited and the amounts credited and shall arrive at a net amount debited or credited. Each of these net amounts will appear in the Settlement Statements that the CAISO will provide to the relevant Business Associate.~~
- (b) ~~The components of the Grid Management Charge will be included in an Initial Settlement Statement T+9B, and any Recalculation Settlement Statement with the other types of charges referred to in Section 11.~~

11.29.5.3 Data Files

Settlement Statements ~~relating to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO~~ will be accompanied by data files of supporting information for the relevant Business Associate that includes the following for each Settlement Period of the Trading Day:

- (a) the aggregate quantity (in MWh) of Energy supplied or withdrawn by the Scheduling Coordinator Metered Entities represented by the Scheduling Coordinator;
- (b) the aggregate quantity (in MW) and type of Ancillary Services capacity provided or purchased;
- (c) the relevant prices that the CAISO has applied in its calculations;
- (d) details of the scheduled quantities of Energy and Ancillary Services accepted by the CAISO in the Day-Ahead Market and the RTM;
- (e) details of FMM Instructed Imbalance Energy or RTD Imbalance Energy and penalty ~~ey~~ payments;

- (f) details of any ~~payment~~credits or charges associated with the CRR Auctions; and
- (g) detailed calculations of all fees, charges and ~~payment~~credits allocated among Scheduling Coordinators and each Scheduling Coordinator's share.

11.29.5.4 Settlement Software

The CAISO Settlement software will be audited by an independent firm of auditors competent to carry out audits of such software to determine its consistency with the CAISO Tariff. In any dispute regarding Settlement calculations, a certificate from the firm of auditors that the CAISO software is consistent with the CAISO Tariff will be prima facie proof that the charges shown in a Settlement Statement have been calculated in a method consistent with the CAISO Tariff. Nothing in this section will be deemed to establish the burden of proof with respect to Settlement calculations in any proceeding.

11.29.6 ~~Balancing of Market Accounts in Absence of Meter Data~~ [Not Used]

~~Settlements shall not be cleared for final processing until the accounting trial balance is zero. In order to publish a Settlement Statement, the CAISO may use estimated, disputed or calculated Meter Data. When actual verified Meter Data is available and all of the disputes raised by Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs during the validation process described in Section 11.29.8 have been determined, the CAISO shall recalculate the amounts payable and receivable by the affected Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs or by all Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs, if applicable, as soon as reasonably practical and shall show any required adjustments as a debit or credit in the next Settlement Statement.~~

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11.29.7 Settlements Cycle

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11.29.7.2 ~~Basis for Billing and Payment~~

~~The Initial Settlement Statement T+9B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+9B will constitute the basis for billing for all charges in the first instance. The Recalculation Settlement Statements will~~

~~constitute the basis for billing for adjustments to charges set forth in the Initial Settlement Statement T+9B.~~

Interest

~~Interest will be applied to any incremental changes between Initial Settlement Statement T+9B and Recalculation Settlement Statement T+70B, and thereafter to any incremental changes between each subsequent Recalculation Settlement Statement through Recalculation Settlement Statement T+24M.~~

~~Interest will be calculated on a daily basis and will apply from the Payment Date for the Invoice of Payment Advice to the Payment Date for the next Recalculation Settlement Statement. The rate of interest will be the interest rate calculated in accordance with 18 C.F.R. Section 35.19a.~~

11.29.7.2.1 [Not Used] ~~Elimination of Invoices under \$10.00~~

~~Invoices and Payment Advices due to or from any Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for amounts less than \$10.00 will be adjusted to \$0.00 and no amount will be due to or from that Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for that Invoice or Payment Advice.~~

11.29.7.3 Unscheduled Recalculation Settlement Statements

11.29.7.3.1 Unscheduled Reissue Recalculation Settlement Statement

The CAISO will issue an Unscheduled Reissue Recalculation Settlement Statement to correct a miscalculation that occurred on a Recalculation Settlement Statement T+11M if the following criteria are met:

- The miscalculation occurred as a result of a CAISO data transfer error or other similar data processing error;
- The miscalculation was identified by the CAISO, Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO on a timely basis within the dispute timeline applicable to the Recalculation Settlement Statement; and
- The financial impact of the miscalculation on the market as a whole was greater than \$1,000,000 for the Trading Day. For purposes of determining whether the \$1,000,000 threshold for issuing the unscheduled recalculation settlement statement has been met,

the CAISO will calculate the financial impact resulting from an error based on the dollar value of the charges that were mistakenly assessed due to the error.

The CAISO will issue a Market Notice to advise the Market Participants that a miscalculation occurred and that it will be corrected in an Unscheduled Reissue Recalculation Settlement Statement. The CAISO will issue the Unscheduled Reissue Recalculation Settlement Statement no less than thirty (30) days after the date that the Market Notice was issued and will include the net adjustment amounts in the next available regularly scheduled invoice. Any miscalculation due to a CAISO data transfer error or other similar data processing error that does not meet the criteria set forth in this section will be corrected on the next Recalculation Settlement Statement T+21M or Recalculation Settlement Statement T+24M as appropriate.

11.29.7.3.2 Unscheduled Directed Recalculation Settlement Statement

Except as provided in 11.29.7.4, the CAISO will not issue Recalculation Settlement Statements other than Recalculation Settlement Statements T+70B; Recalculation Settlement Statements T+11M, Recalculation Settlement Statements T+21M, Recalculation Settlement Statements T+24M, and Unscheduled Reissue Recalculation Settlement Statements unless directed by the CAISO Governing Board or pursuant to a FERC order.

11.29.7.3.3 If an Unscheduled Directed Recalculation Settlement Statement is ordered by the CAISO Governing Board, the CAISO will arrange to have the Recalculation Settlement Statement carried out as soon as is reasonably practicable following the CAISO Governing Board's order, subject to the availability of staff and computer time, compatible software, appropriate data, and other resources.

11.29.7.3.4 The cost of an Unscheduled Directed Recalculation Settlement Statement will be borne by the Business Associate ~~Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO~~ requesting it, unless an additional Recalculation Settlement Statement was needed due to a clerical oversight or error on the part of the CAISO staff.

11.29.7.3.5 Where an Unscheduled Directed Recalculation Settlement Statement indicates that the accounts of ~~Scheduling Coordinators, CRR Holders, Black Start Generators, or Participating TOs~~ Business Associates should be debited or credited to reflect alterations to Settlements previously made under the CAISO Tariff, for those ~~Scheduling Coordinators, CRR Holders, Black Start Generators,~~

~~or Participating TOs~~Business Associates affected by the additional Recalculation Settlement Statement, the CAISO will reflect the amounts to be debited or credited in the next scheduled weekly Invoice or Payment Advice ~~for the end of the month.~~

11.29.7.3.6 Unscheduled Directed Recalculation Settlement Statements may be invoiced separately from market activities in accordance with Section 11.29.10.3.

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11.29.7.4.3 CAISO Estimates for Initial Settlement Statement T+3B

Notwithstanding any other provisions of the CAISO Tariff, Initial Settlement Statement T+3B shall be solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand, metered Generation, and Demand Response. CAISO Estimated Settlement Quality Meter Data shall be calculated as follows:

- (a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on total Expected Energy.
- (b) CAISO Estimated Settlement Quality Meter Data for metered Demand, including Non-Participating TO demand, will be based on Scheduled Demand by the appropriate LAP. This value will be increased by fifteen (15) percent if the total actual system Demand in Real Time, as determined by the CAISO each hour, is greater than the total Scheduled Demand by more than fifteen (15) percent. CAISO Estimated Settlement Quality Meter Demand for Participating Load will not be increased by fifteen (15) percent.
- (c) CAISO Estimated Settlement Quality Meter Data for Demand Response will be calculated using the same method as set forth in Section 11.1.4(a) for metered Generation. The Proxy Demand Response Default Load Adjustment will not be estimated or applied for purposes of calculating Initial Settlement Statement T+3B.
- (d) To estimate net load for a Metered Subsystem, the CAISO will apply a monthly historical based net/gross ratio to the MSS's estimated gross load. The historical monthly ratio shall be specific to each MSS Operator and shall be calculated as the sum of each

entity's monthly actual net load divided by the sum of each entity's monthly actual gross load of the previous year.

- (e) The CAISO will estimate E-Tag for Interchange Schedules for System Resources based on total Expected Energy, and for EIM Transfer system resources based on Dispatch Instructions.
- (f) The CAISO will not estimate Unaccounted For Energy under Section 11.5.3, Real-Time Imbalance Energy Offset adjustment under Section 11.5.4.1(c), allocation of RTM Bid Cost Up-lift adjustment under Section 11.8.6.3.2(iv), or MSS deviation ~~payment~~charges under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.

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11.29.7.4.5 Basis for Billing and Payment

Instead of Section 11.29.~~10.27.2~~, the following will apply: The Initial Settlement Statement T+3B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+3B will constitute the basis for billing for all charges in the first instance. The Recalculation Settlement Statements will constitute the basis for billing for adjustments to charges set forth in the Initial Settlement Statement T+3B.

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11.29.8 Confirmation and Validation

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11.29.8.5 CAISO Timeline for Determining Settlement Statement Disputes

The timeline for the CAISO to reach a determination on a settlement statement dispute will be as follows:

- (a) The CAISO will reach a determination to approve or deny a dispute, and provide

electronic notice of the outcome to the Scheduling Coordinator that submitted the dispute, no later than thirty-one (31) business days after the end of the dispute period for that settlement statement; with the exception of complex disputes or unless otherwise agreed to by the disputing Scheduling Coordinator. In the event that the CAISO's determination results in an adjustment to ~~payment~~credits and/or charges, the CAISO in its notice to the disputing Scheduling Coordinator will identify the subsequent recalculation settlement statement expected to include the adjustment.

- (b) Complex settlement statement disputes involve policy considerations, entail extensive research, require granular review of previous market runs, include complicated data or calculations, or depend on additional information to be provided by the disputing Scheduling Coordinator or a third party. The CAISO in its sole discretion may designate a settlement statement dispute to be a complex dispute. The CAISO will advise the disputing Scheduling Coordinator within thirty-one (31) business days after the end of the dispute period for that settlement statement if a dispute is a complex dispute. The CAISO will make reasonable efforts to reach a determination to approve or deny a complex dispute resulting from: (i) an Initial Settlement Statement T+9B no later than nine (9) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+11M; and (ii) Recalculation Settlement Statement T+70B or a Recalculation Settlement Statement T+11M and an Unscheduled Recalculation Settlement Statement, no later than nineteen (19) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+21M.

11.29.8.6 Payment Pending Dispute

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that receives an Invoice or Payment Advice must pay any net debit and, subject to the limitations in Section 11.29.17.1, will be entitled to receive any net credit shown in the Invoice or Payment Advice on the Payment Date, whether or not there is any dispute regarding the amount of the debit or credit. The settlement dispute process in Section 11.29.8.2 (or 11.29.7.4.8) will apply to the disputed amount, and any claims related to

the outcome of the settlement dispute process will be governed by Section 13.

11.29.8.7 CAISO Determination of Disputes and Further Dispute Resolution

Valid disputes regarding data appearing on a Settlement Statement will be reflected in a later Recalculation Settlement Statement for that Trading Day. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the CAISO's resolution of a dispute, it may initiate dispute resolution under Section 13 of the CAISO Tariff pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate dispute resolution under Section 13 of the CAISO Tariff within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated the Settlement Statement. Once validated, a Settlement Statement will be binding, meaning that the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to waives any and all right to bring any form of legal or equitable challenge in any forum to any of the charges or credits on the Settlement Statement.

11.29.9 Payment Procedures

11.29.9.1 Payments by and to the CAISO

- (a) All Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs shall discharge their obligations to pay the amounts owed by them and shall receive payments of all amounts owed to them solely in accordance with this CAISO Tariff.
- (b) All financial transactions are denominated in United States dollars and cents.
- (c) All payments by the CAISO to Business Associates or to the CAISO by Business Associates shall be made by electronic means authorized in the Business Practice Manual.

11.29.9.2 CAISO Accounts to be Established

The CAISO is authorized to establish and maintain bank accounts and obtain lines of credit and other banking facilities (not exceeding an aggregate amount set by the CAISO Governing Board) necessary for the operation of its Settlement and billing procedures. Each such account shall be maintained at a bank or other financial institution in California. Unless otherwise specified in this CAISO Tariff the CAISO will recover all costs incurred in connection with these CAISO banking facilities through the appropriate

component of the Grid Management Charge. The CAISO shall establish and operate the following accounts:

11.29.9.2.1 A CAISO Clearing Account to and from which all payments under this Section 11.29 are made;

11.29.9.2.2 A CAISO Reserve Account from which any debit balances on the CAISO Clearing Account at the close of banking business on each Business Day shall be settled or reduced in accordance with this CAISO Tariff. The CAISO shall use the Financial Security provided by a Scheduling Coordinator, CRR Holder, or Candidate CRR Holder pursuant to Section 12, if necessary, to clear any debit balances on the CAISO Reserve Account that may arise as a result of that Scheduling Coordinator's or CRR Holder's failure to pay an amount due under this CAISO Tariff;

11.29.9.2.3 A CAISO Surplus Account;

11.29.9.2.4 A CAISO Penalty Reserve Account; and

11.29.9.2.5 Such other accounts as the CAISO deems necessary or convenient for the purpose of efficiently implementing the funds transfer system under this CAISO Tariff. The CAISO shall notify Market Participants of the establishment of such accounts through the CAISO Website and by issuance of a Market Notice.

11.29.9.3 Accounts of Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs

Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via electronic means as specified in the Business Practice Manual~~Fedwire and, at its option, may also maintain an account capable of ACH transfers~~ where payments to and from the CAISO Clearing Account shall be made in accordance with this CAISO Tariff. Scheduling Coordinators, CRR Holders, and Black Start Generators may, but will not be required to, maintain separate accounts for receipts and payments. Each Scheduling Coordinator, CRR Holder, and Black Start Generator shall notify the CAISO of its account details and of any changes to those details in accordance with the provisions of its Scheduling Coordinator Agreement, CRR Entity Agreement, or Black Start Agreement. Participating TOs will notify the CAISO of their Settlement Account

details in accordance with Section 2.2.1 of their Transmission Control Agreement and may notify the CAISO from time to time of any changes by giving at least seven (7) days written notice before the new account becomes operational.

11.29.9.4 [Not Used]

11.29.9.5 No Co-Mingling

The CAISO shall not co-mingle any funds standing to the credit of a CAISO Account with its other funds and shall promptly withdraw any amounts paid into a CAISO Account representing amounts paid for the account of the CAISO.

11.29.9.6 Use of Accounts

11.29.9.6.1 Clearing Account

- (a) Subject to Section 11.29.~~11.23~~, and unless the CAISO instructs otherwise pursuant to Section 11.29.11, each CAISO Debtor shall ensure that the amount shown on the Invoice as payable by that CAISO Debtor shall be received into the CAISO Clearing Account for value not later than 10:00 a.m. on the Payment Date.
- (b) On the Payment Date, the CAISO shall be entitled to cause the transfer of such amounts held in a Scheduling Coordinator's or CRR Holder's CAISO prepayment account to the CAISO Clearing Account as provided in Section 11.29.~~311.2~~.

The CAISO shall calculate the amounts available for distribution to CAISO Creditors on the Payment Date and shall give irrevocable instructions to the CAISO Bank to remit from the CAISO Clearing Account to the relevant Settlement Accounts maintained by the CAISO Creditors, the aggregate amounts determined by the CAISO to be available for payment to CAISO Creditors for value by close of business on the Payment Date if no CAISO Debtors are in default. If a CAISO Debtor is in default and until all defaulting amounts have been collected, the CAISO shall remit payments as soon as practical within five (5) Business Days of the collection date posted in the CAISO Payments Calendar. If required, the CAISO shall instruct the CAISO Bank to transfer amounts from the CAISO Reserve Account to enable the CAISO Clearing Account to clear.

The CAISO is authorized to instruct the CAISO Bank to debit the CAISO Clearing Account and transfer to the relevant CAISO Account sufficient funds to pay in full the Grid Management Charge and FERC

Annual Charges falling due on any Payment Date with priority over any other payments to be remitted on that or on subsequent days out of the CAISO Clearing Account.

11.29.9.6.2 Reserve Account

The CAISO Reserve Account shall be available to the CAISO for the purpose of providing funds to clear the CAISO Clearing Account in the event that there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors. If there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors and clear the account on any Payment Date, due to either payment default by one or more CAISO Debtors or to application of Section 11.29.10.2, the CAISO shall transfer funds from the CAISO Reserve Account to the CAISO Clearing Account to clear it by close of banking business on that Payment Date pursuant to Section 11.29.13.4. If there are excess funds in the CAISO Clearing Account on any Payment Date due to application of Section 11.29.10.2, the CAISO shall transfer the excess funds from the CAISO Clearing Account to the CAISO Reserve Account.

If the CAISO Reserve Account is drawn upon, the CAISO shall as soon as possible begin collection efforts consistent with Section 11.29.20 ~~thereafter take any necessary steps~~ against the defaulting Scheduling Coordinator or CRR Holder, including making any calculations or taking any other appropriate action; in order to replenish the CAISO Reserve Account including drawing on any credit support or other Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder pursuant to Section 12 or serving demands on any defaulting Scheduling Coordinator or CRR Holder if Financial Security has been exhausted or if no Financial Security is available due to establishment of an Unsecured Credit Limit.

11.29.9.6.2.1 Replenishing the CAISO Reserve Account Following Payment Default

If the CAISO has debited the CAISO Reserve Account then:

- (a) If, after the CAISO has debited the CAISO Reserve Account on a Payment Date, the CAISO Bank receives a payment from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Reserve Account, such payment shall be credited to the CAISO Reserve Account.
- (b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Reserve Account in accordance with the

priorities specified in Section 11.29.17.3.

- (c) If, after taking reasonable action, the CAISO determines that the default amount (or any part) and/or Interest cannot be recovered ~~on the next practicable Invoices~~, the CAISO shall notify Market Participants of the identity of the defaulting Business Associate together with the unrecoverable amounts and such amounts shall be allocated in accordance with Section 11.29.17 of the CAISO Tariff with corresponding credits to the CAISO Reserve Account. Provided, however, that if the default amount is for an invoice or invoices that were issued after the invoices containing the T+24M Recalculation Settlement Statements for the relevant Trading Days, then CAISO has the option of not allocating in accordance with Section 11.29.17 up to \$2,000 of the default amount, and instead using the funds from the CAISO Reserve Account to cover the default amount on a permanent basis.

11.29.9.6.3 Surplus Account

The CAISO shall establish and maintain a bank account denominated the CAISO Surplus Account. The CAISO Surplus Account shall include the following:

- (a) Any amounts paid to the CAISO in respect of penalties or Sanctions referred to in Section 11.14 shall be credited to the CAISO Surplus Account, subject, however, to Section 11.29.9.6.1(b).
- (b) The funds referred to in Section 11.29.9.6.1(a) pertaining to penalties or Sanctions as provided in Section 11.14 shall first be applied towards any expenses, loss or costs incurred by the CAISO except for that portion of those amounts collected pursuant to 37.9.4. Any excess after such application will be credited to the CAISO Surplus Account pursuant to 11.29.9.6.1(a).
- (c) The funds referred to in Section 11.29.9.6.1(a) pertaining to default Interest referred to in Section 11.29.13.1 shall first be applied towards any unpaid CAISO Creditor balances for the Trading Month in which the default Interest was assessed and second to any other unpaid CAISO Creditor balances. Only after all unpaid CAISO Creditor balances are satisfied in full will any excess funds pertaining to default Interest be credited to the CAISO Surplus Account pursuant to Section 11.29.9.6.1(a).

In the event that there are funds in the CAISO Surplus Account in excess of an amount to be determined by the CAISO Governing Board and identified in a Market Notice by the CAISO to Market Participants,

the amount of such excess will be distributed to Scheduling Coordinators using the same method of apportioning the refund as the method employed in apportioning the liability for the Grid Management Charge.

11.29.9.6.4 CAISO Penalty Reserve Account

- (a) The CAISO Penalty Reserve Account will be available to the CAISO for the purpose of using funds collected for late payments of amounts set forth in Invoices pursuant to Section 11.29.14(c) and for late postings of Financial Security pursuant to Section 12.5.2(c) to clear the CAISO Clearing Account in the event that there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors according to the rules in Section 11.29.13.4. ~~If there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors and to clear the account on any Payment Date occurring on or after April 7, 2010, due to payment default by one or more CAISO Debtors, the CAISO shall transfer funds from the CAISO Penalty Reserve Account to the CAISO Clearing Account to clear it by close of banking business on that Payment Date pursuant to Section 11.29.13.4. If available funds in the CAISO Penalty Reserve Account are insufficient to clear the CAISO Clearing Account and the payment default is not cured, the payment default will be allocated in accordance with the CAISO Tariff. After the payment default is allocated in accordance with the CAISO Tariff, any funds that are subsequently added to the CAISO Penalty Reserve Account can only be used to clear the CAISO Clearing Account pursuant to this Section 11.29.9.6.4 for payment defaults that occur after the funds were added to the CAISO Penalty Reserve Account.~~ The CAISO Penalty Reserve Account will be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds will be commingled in it at any time.
- (b) On December 31 of each year, the CAISO will draw any funds then available in the CAISO Penalty Reserve Account in excess of five (5) million dollars and will apply that excess to offset the following year's Grid Management Charge revenue requirement pursuant to Schedule 1 of Appendix F.
- (c) If the CAISO Penalty Reserve Account is drawn upon, the CAISO will as soon as

possible thereafter begin collection efforts consistent with Section 11.29.20~~take any necessary steps~~ against the defaulting Scheduling Coordinator or CRR Holder, including making any calculations or taking any other appropriate action; in order to replenish the CAISO Penalty Reserve Account, including drawing on any credit support or other Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder pursuant to Section 12 or serving demands on any defaulting Scheduling Coordinator if Financial Security has been exhausted or if no Financial Security is available due to establishment of an Unsecured Credit Limit.

11.29.9.6.4.1 Replenishment Following Payment Default

If the CAISO has debited the CAISO Penalty Reserve Account, then:

(a) If, after the CAISO has debited the CAISO Penalty Reserve Account on a Payment Date, the CAISO Bank receives a payment from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Penalty Reserve Account, such payment shall be credited to the CAISO Penalty Reserve Account, less any amounts due to Market Participants.

(b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Penalty Reserve Account in accordance with the priorities specified in Section 11.29.17.3.

~~(c) If, after taking reasonable action, the CAISO determines that the default amount (or any part) and/or Interest cannot be recovered, the CAISO shall notify Market Participants of the identity of the defaulting Business Associate together with the unrecoverable amounts and such amounts shall be allocated in accordance with Section 11.29.17 of the CAISO Tariff with corresponding credits to the CAISO Penalty Reserve Account.~~

11.29.10 Billing and Payment

The CAISO shall prepare and issue to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO an Invoice or Payment Advice on Wednesday of each week, which will be deemed to have been issued on Wednesday if it is issued by 5:00 a.m. the next calendar day. If Wednesday falls on

a federal holiday, the CAISO will issue the Invoice or Payment Advice on the next business day. Each Invoice or Payment Advice shall show the amount that is payable by or to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO, which amount shall equal the positive or negative total of all net charges reflected on the relevant Settlement Statements, the Payment Date, being the date on which such amounts is to be paid or received, and details of the CAISO Clearing Account to which any amounts owed by or to Scheduling Coordinators, CRR Holder, Black Start Generator, or Participating TO is to be paid. ~~Amounts~~~~Revenues~~ owed from a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that is a CAISO Debtor are expressed as a positive amount on an Invoice. ~~Revenues~~~~Amounts~~ owed to a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that is a CAISO Creditor are expressed as a negative amount on a Payment Advice. Payments ~~or charges~~ for the items referred to in an Invoice shall be made four (4) business days after the date on which the weekly Invoice or Payment Advice is issued. If the fourth (4) business day after an Invoice or Payment Advice is issued falls on a federal holiday, then the Payment Date for the Invoice or Payment Advice shall be the next business day.

For Section 11.29.10, the use of the uncapitalized term “business day” refers to a day that the CAISO is open for business. This deviates from the formal definition in Appendix A of the capitalized term “Business Day” because it includes certain holidays that are federally recognized but remain regular operation days for the CAISO. Please see the Business Practice Manual for the most current list of affected holidays.

11.29.10.1 Billing Periods

Each Invoice or Payment Advice will include Settlement Statements as provided in the CAISO Payments Calendar. Each billing period will be shown and totaled separately on the Invoice or Payment Advice but the net Invoice or Payment Advice will reflect the entity’s net financial obligations in all billing periods included on the Invoice or Payment Advice.

11.29.10.2 Elimination of Invoices and Payment Advices Under \$10.00

Invoices and Payment Advices due to or from any Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for amounts less than \$10.00 will be adjusted to \$0.00 and no amount will be due to or from that Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for

that Invoice or Payment Advice.

Interest

~~Interest will be applied to any Incremental Changes between Initial Settlement Statement T+9B and Recalculation Settlement Statement T+70B, and thereafter to any Incremental Changes between each subsequent Recalculation Settlement Statement through Recalculation Settlement Statement T+24M. Interest will be calculated on a daily basis and will apply from the Payment Date for the Invoice of Payment Advice to the Payment Date for the next Recalculation Settlement Statement. The rate of interest will be the interest rate calculated in accordance with 18 C.F.R. 35.19a of FERC's regulations.~~

11.29.10.3 Other Invoicing Provisions

The Invoices or Payment Advices will also include any disbursements associated with a shortfall receipt distribution.

A separate Invoice for the FERC Annual Charges due annually will be issued by the CAISO to the Scheduling Coordinator in accordance with Section 11.19.1.2. The CAISO will issue separate Invoices for NERC/WECC Charges as described in Section 11.20.

A shortfall invoice showing the adjustments to payments resulting from any shortfall allocation will be issued by the CAISO to Scheduling Coordinators in the event of a payment default in accordance with Section 11.29.17.1.

In the event of an allocation of a payment default in accordance with Section 11.29.17.2, the CAISO may issue a shortfall invoice to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1.

Unscheduled Directed Recalculation Settlement Statements, ~~and~~ the financial outcomes of CAISO ADR Procedures and any other dispute resolution, amounts due under Black Start Agreements and penalties for paying Invoices or posting Financial Security late may be invoiced separately from market activities.

The CAISO shall provide a Market Notice at least five (5) business days prior to such invoicing identifying the components of such Invoice or Payment Advice.

11.29.10.4 ~~[Not Used]~~ Balancing of Market Accounts in Absence of Meter Data

Settlements shall not be cleared for final processing until the accounting trial balance is zero. In order to publish a Settlement Statement, the CAISO may use estimated, disputed, or calculated Meter Data. When actual verified Meter Data is available and all of the disputes raised by Scheduling Coordinators,

CRR Holders, Black Start Generators, and Participating TOs during the validation process described in Section 11.29.8 have been determined, the CAISO shall recalculate the amounts payable and receivable by the affected Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs or by all Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs, if applicable, as soon as reasonably practical and shall show any required adjustments as a debit or credit in the next Settlement Statement.

11.29.10.5 Use of Estimated Data

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may use estimated Settlement Statements and Invoices and Payment Advices and may implement any temporary variation of the timing requirements relating to the Settlement Statements and Invoices and Payment Advices. Details of the variation and the method chosen to produce estimated data, Settlement Statements and Invoices and Payment Advices will be published on the CAISO Website.

11.29.10.6 Payment of Estimated Statements and Invoices

When estimated Settlement Statements and Invoices or Payment Advices are issued by the CAISO, payments between the CAISO and Market Participants shall be made on an estimated basis and the necessary corrections shall be made by the CAISO as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO unless the CAISO has authorized the adjustment pursuant to Section 11.29.11. Failure to make such estimated payments shall result in the same consequences as a failure to make actual payments.

11.29.10.7 Validation of Estimated Statements and Invoices

The CAISO shall use its best efforts to verify the estimated data and to make the necessary corrections as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO.

11.29.10.8 Estimated Statements to be Final

In the event that the CAISO is of the opinion that, despite its best efforts, it is not possible for it to verify the estimated data because actual data is not reasonably expected to become available to the CAISO in the foreseeable future, the CAISO shall consult with the Market Participants in order to develop the most

appropriate substitute data including using data provided by Market Participants. Following such determination of substitute data, the CAISO shall send to the relevant Market Participants revised Settlement Statements and Invoices and Payment Advices. The provisions of Section 11.29.8.6 shall apply to payment of revised Invoices issued in accordance with these emergency procedures. Failure to make payments of such revised Invoices shall result in the same consequences as a failure to make actual payments.

11.29.11 Instructions for Payment

Unless the CAISO instructs otherwise, each Scheduling Coordinator or CRR Holder shall ensure that the amount shown on the Invoice as payable by that Scheduling Coordinator or CRR Holder is received into the CAISO Clearing Account for value no later than 10:00 a.m. on the Payment Date.

11.29.11.1 Payment in Event of Verifiable Error

In the event of a verifiable error that would be reversed on a future Invoice or Payment Advice, the CAISO may instruct a CAISO Debtor to reduce its payment in the amount of a specific charge reflected on an Invoice. Any such occurrence will not constitute a payment default under the CAISO Tariff. If the CAISO directs such a reduction in payment, it shall make offsetting adjustments on future Invoices or Payment Advices of the Business Associates that received settlement credits corresponding to the verifiably erroneous charge. The CAISO will inform those entities of the adjustments to their Invoices or Payment Advices.

11.29.11.2 Prepayments

- (a) A Scheduling Coordinator or CRR Holder may choose to pay at an earlier date than the Payment Date specified in the CAISO Payments Calendar by way of prepayment, provided it notifies the CAISO by electronic means before submitting its prepayment.
- (b) Prepayment notifications must specify the dollar amount prepaid.
- (c) Prepayments must be made by Scheduling Coordinators or CRR Holders via electronic means authorized in the Business Practice Manual into their CAISO prepayment accounts designated by the CAISO. The relevant Scheduling Coordinator or CRR Holder shall grant the CAISO a security interest on all funds in its CAISO prepayment account.
- (d) On any Payment Date the CAISO shall be entitled to cause funds from the relevant

Scheduling Coordinator's or CRR Holder's CAISO prepayment account to be transferred to the CAISO Clearing Account in such amounts as may be necessary to discharge in full that Scheduling Coordinator's or CRR Holder's payment obligation arising in relation to that Payment Date by way of set-off or recoupment.

(e) Any funds held in the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall be treated as part of that Scheduling Coordinator's or CRR Holder's Financial Security.

(f) Interest (or other income) accruing on the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall inure to the benefit of that Scheduling Coordinator or CRR Holder and shall be added to the balance of its CAISO prepayment account on a monthly basis.

(g) Funds held in a CAISO prepayment account by a Scheduling Coordinator or CRR Holder may be recouped, offset or applied by the CAISO to any outstanding financial obligations of that Scheduling Coordinator or CRR Holder to the CAISO.

11.29.11.3 System Failure

11.29.11.3.1 At CAISO Debtor's Bank

If any CAISO Debtor becomes aware that a payment will not, or is unlikely to be, received by the CAISO Bank by 10:00 am on the relevant Payment Date for any reason (including failure of the Fedwire or any computer system), it shall immediately notify the CAISO, giving full details of the payment delay (including the reasons for the payment delay). The CAISO Debtor shall make all reasonable efforts to remit payment as soon as possible, by an alternative method if necessary, to ensure that funds are received for value no later than 10:00 am on the Payment Date, or as soon as possible thereafter.

11.29.11.3.2 At the CAISO's Bank

In the event of failure of any electronic transfer system affecting the CAISO Bank, the CAISO shall use reasonable efforts to establish alternative methods of remitting funds to the CAISO Creditors' Settlement Accounts by close of banking business on that Payment Date, or as soon as possible thereafter. The CAISO shall notify the CAISO Debtors and the CAISO Creditors of occurrence of the system failure and the alternative methods and anticipated time of payment. In the event that a payment is received late by

the CAISO Bank due to either a system failure affecting the CAISO Bank or untimely performance of an ACH draft debit for which the CAISO is responsible, the enforcement actions set forth in Section 11.29.14 shall not apply to such late payment.

11.29.12 CAISO's Responsibilities

On the due date for payment of amounts shown in an Invoice, the CAISO shall ascertain whether all amounts required to be received into the CAISO Clearing Account have been credited to it. If any such amount has not been so credited, it shall ascertain which CAISO Debtors have failed to pay the amount owed by them and it may, subject to any notice or cure provisions in this Section 11.29, exercise any rights available under the CAISO Tariff or under applicable law to recover any overdue amount. The obligation of the CAISO to pay CAISO Creditors monies owed for a given billing period shall be limited so that the aggregate liability of the CAISO for such payments does not exceed the sum of

- a) the amounts paid to the CAISO Clearing Account for that billing period,
- b) additional amounts recovered by the CAISO by enforcing any Financial Security provided by a defaulting CAISO Creditor to cover any shortfall for that billing period, and
- c) amounts transferred to the CAISO Clearing Account from the CAISO Reserve Account and the CAISO Penalty Reserve Account pursuant to Section 11.29.9.6.1 to cover any shortfall for that billing period

less GMC due to the CAISO and FERC Annual Charges for the same billing period and amounts shown as due to other internal accounts ~~rather than to CAISO creditors~~, such as the balancing accounts for CRRs, RAAIM or penalties issues under Section 37, and adjusted to account for the application of Section 11.29.10.2 to Payment Advices.

11.29.13 Non-Payment by a Scheduling Coordinator or CRR Holder

11.29.13.1 Notification and Interest

If a CAISO Debtor becomes aware that a payment for which it is responsible will not be received into the CAISO Clearing Account on time, it shall immediately notify the CAISO of the fact and the reason for the non-payment. If the CAISO Debtor fails to pay any sum to the CAISO when due and after the CAISO draws upon any available Financial Security provided by the defaulting Scheduling Coordinator or CRR

Holder, the CAISO Debtor shall ~~pay-owe~~ Interest on the overdue amount for the period from the Payment Date to the date on which the payment is received into the CAISO Clearing Account, together with any related transaction costs incurred by the CAISO. The CAISO shall apply all ~~such~~ Interest ~~payments~~ revenue on the default amount ~~either according to the accounts or Market Participants that were affected by the default, whether that was CAISO Reserve Account, the Penalty Reserve Account, any other internal accounts, losses allocated~~ on a *pro rata* basis to CAISO Creditors in relation to amounts past due ~~in the order of the creation of such debts~~, or, if the default amount was allocated pursuant to Section 11.29.17.2, to Default-Invoiced SCIDs ~~in proportion to their allocated shares of the default amount as calculated pursuant to Section 11.29.17.2.1.~~ Interest revenue shall be distributed to accounts in the same order as payment of defaulted receivables set forth in Section 11.29.17.3, in relation to amounts past due in the order of the creation of such debts.

11.29.13.2 Payment Default

Subject to Section 11.29.13.6, if by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes that all or any part of any amount due to be received into the CAISO Clearing Account from any CAISO Debtor has not been received and there are insufficient funds in the relevant CAISO Debtor's CAISO prepayment account (the amount of insufficiency being referred to as the "default amount"), the CAISO shall take the following actions to enable the CAISO Clearing Account to clear not later than the close of banking business on the relevant Payment Date.

11.29.13.3 Enforcing the Financial Security of a Defaulting Scheduling Coordinator or CRR Holder

Subject to Section 11.29.13.6, the CAISO shall make reasonable endeavors to enforce the defaulting CAISO Debtor's Financial Security (if any) to the extent necessary to pay the default amount. If it is not practicable to obtain clear funds in time to effect payment to CAISO Creditors on the same day the CAISO shall proceed in accordance with Sections 11.29.13.4 or 11.29.17.1 as applicable.

11.29.13.4 Use of CAISO Reserve Account and CAISO Penalty Reserve Account

If there are funds standing to the credit of the CAISO Reserve Account or the CAISO Penalty Reserve Account (including the proceeds of drawings under banking facilities described in Sections 11.29.9.6.2 and 11.29.9.6.4), the CAISO shall, assuming sufficient funds are available from the one or both accounts

to clear the CAISO Market, debit the CAISO Reserve Account, ~~or~~ the CAISO Penalty Reserve Account ~~or~~ a combination of the two with the default amount ~~in order~~ to clear the CAISO Clearing Account and effect payment to the CAISO Creditors. Provided, however, that the CAISO shall not draw funds from the CAISO Reserve Account for the purpose of covering a payment default that would leave a balance in the CAISO Reserve Account below \$1,000.

If funds available from the two accounts combined are not sufficient to clear the market, the CAISO may in its discretion use the funds nevertheless to mitigate the default. In exercising discretion under this rule, the CAISO shall use reasonable diligence to determine what use or expected use of the funds in the reserve accounts would provide the greatest expected benefit to Market Participants overall.

11.29.13.5 Action against a Defaulting CAISO Debtor

The CAISO shall as soon as possible after taking action under 11.29.13.4 take any steps it deems appropriate against the defaulting CAISO Debtor to recover the default amount (and any Interest as set out in Section 11.29.13.3 including enforcing any Financial Security, exercising its rights of recoupment or set-off and/or bringing proceedings against the defaulting CAISO Debtor pursuant to Section 11.29.21.1.

11.29.13.6 Default to be Remedied Promptly

In the event that the CAISO reasonably believes that an outstanding amount which has not been paid by 10:00 am on the relevant Payment Date, is likely to be paid no later than close of banking business on the next Business Day then the CAISO may, but shall not be obliged to, delay enforcing that CAISO Debtor's Financial Security or taking other measures to recover payment until after the close of banking business on the next Business Day but Interest shall nonetheless accrue pursuant to Section 11.29.13.1.

11.29.13.7 Set-Off and Recoupment

The CAISO is authorized to recoup, set off and apply any amount owed on any Payment Advice to which any defaulting CAISO Debtor is or will be entitled, in or towards the satisfaction of any of that CAISO Debtor's debts on any Invoice arising under the CAISO Settlement and billing process. ~~Each CAISO Creditor and each CAISO Debtor expressly acknowledges the following application of funds: first to the current month's Grid Management Charge, and then as described in 11.29.13.8 except as limited by Section 11.29.17. Nothing in this Section 11.29.13.7 shall be construed as affecting the methodology by which the CAISO determines the amounts of Invoices or Payment Advices.~~

11.29.13.8 ~~Order of Payments~~Application of Funds Received

~~Unless otherwise specified in accordance with Section 11.29.17, t~~The CAISO shall apply payments received ~~or other amounts collected in connection with default amounts in respect of amounts owing to CAISO Creditors to repay the relevant debts in the order of the creation of such debts~~in accordance with Section 11.29.17.3 and, for Interest amounts, Section 11.29.13.1.

11.29.13.9 Interest Accruing while Enforcing the Financial Security

If the CAISO has debited the CAISO Reserve Account or the Penalty Reserve Account and it subsequently succeeds in enforcing the Financial Security provided by the defaulting CAISO Debtor, the CAISO shall be entitled to withdraw from such Financial Security in addition to the default amount, all costs incurred and Interest accrued to the CAISO as a result of debiting the CAISO Reserve Account or the Penalty Reserve Account from the date of such debit to the date of enforcement of the said Financial Security.

11.29.13.10 ~~[Not Used]~~Application of Funds Received

~~Amounts credited to the CAISO Clearing Account in payment of a default amount (as set out in Section 11.29.9.6.2.1 and 11.29.9.6.4.1) or as a result of enforcing the defaulting CAISO Debtor's Financial Security shall be applied to the CAISO Reserve Account pursuant to Section 11.29.9.6.2.1 or to the CAISO Penalty Reserve Account pursuant to Section 11.29.9.6.4.1 to reduce amounts outstanding under any CAISO banking facilities used to fund the CAISO Reserve Account or the CAISO Penalty Reserve Account on the relevant Payment Date less any amounts that first shall be applied either to reimburse pro rata any CAISO Creditors whose payments were reduced pursuant to Section 11.29.17.1, or, if the default amount was allocated pursuant to Section 11.29.17.2, to reimburse Default-Invoiced SCIDs in proportion to their allocated shares of the default amount as calculated pursuant to Section 11.29.17.2.1. Payments to CAISO Creditors and Default-Invoiced SCIDs will be made according to Section 11.29.17.3.~~

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11.29.17 Alternative Payment Procedures

11.29.17.1 Pro Rata Reduction to Payments

If it is not possible to clear the CAISO Clearing Account on a Payment Date because of nonpayment by a CAISO Debtor, which cannot be covered using funds available in the CAISO Reserve Account or the CAISO Penalty Reserve Account, or by enforcing any Financial Security provided by a defaulting CAISO Debtor, the CAISO shall, after deducting Grid Management Charge and FERC Annual Charges in accordance with Section 11.29.9.6.1 and paying amounts shown as due to internal accounts rather than to CAISO Creditors, such as the balancing accounts for CRRs, RAAIM or penalties issued under Section 37, (1) first pay in full every CAISO Creditor whose net amounts receivable on the relevant Payment Date is less than \$5,000; and (2) second, reduce payments to all remaining CAISO Creditors proportionately to the net amounts payable to them on the relevant Payment Date to the extent necessary to clear the CAISO Clearing Account through a shortfall allocation. Except to the extent a payment default is on an Invoice that was separate from other market activity under Section 11.29.10.3, each payment default amount allocated to CAISO Creditors through a shortfall allocation under this Section 11.29.17.1 that remains unpaid by the defaulting CAISO Debtor will be allocated as set forth in Section 11.29.17.2. The provisions of this Section 11.29.17.1 shall not apply to the extent the CAISO invokes Section 11.29.11 to direct a CAISO Debtor to not pay charges that are verifiably erroneous, or to non-payment of any penalty amount that a Scheduling Coordinator or CRR Holder has disputed and FERC has specifically authorized the Scheduling Coordinator or CRR Holder to net its payment to the CAISO by the amount of the penalty in question in accordance with Section 37.9.3.

11.29.17.2 Payment Default Allocation

11.29.17.2.1 Methodology for Allocating Payment Default Amounts

Each payment default amount allocated to CAISO Creditors through a shortfall allocation pursuant to Section 11.29.17.1 and that remains unpaid by the defaulting CAISO Debtor will be allocated on the next practicable Invoices to the Default-Invoiced SCIDs ~~to which identified in~~ the percentage shares calculated pursuant to Section 11.29.17.2.7 for the ~~current~~relevant calendar quarter~~-apply~~, excluding the CAISO Debtor that has not paid the payment default amount. The relevant calendar quarter will be the calendar quarter that included the last full Trading Day before the bankruptcy filing, if the defaulting Market Participant filed for bankruptcy or, if the defaulting Market Participant did not file for bankruptcy, the date of its initial payment default.

Percentage shares for a calendar quarter will be calculated; pursuant to the following methodology:

- (a) Twenty (20) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the net amounts that were payable in each applicable calendar quarter (and averaged within such calendar quarter) to the Default-Invoiced SCIDs over the applicable Default Look-Back Periods. For Market Participants subject to Default Election option 1, these net amounts will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, these net amounts will be calculated by consolidating all of the data for the applicable SCIDs, recognizing any offsetting effect of an individual SCID's positive or negative dollar amount in the consolidated total.
- (b) Thirty (30) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the sum of the absolute values of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter (and averaged within such calendar quarter) over the applicable Default Look-Back Periods, after excluding dollar amounts shown on the Invoices for payments and charges for GMC, RMR, and Wheeling Access Charge costs, and after excluding the billing of Access Charges and the payment of Transmission Revenue Requirements to Participating Transmission Owners. For Market Participants subject to Default Election option 1, the sum of the absolute values of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, the absolute values of the net sum of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter will be calculated by consolidating all of the data for the applicable SCIDs, recognizing any offsetting effect of an individual SCID's positive or negative dollar amount in the consolidated total.
- (c) Fifty (50) percent of the payment default amount will be allocated to the Default-

Invoiced SCIDs in proportion to the largest of the following five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar quarter) for each Default-Invoiced SCID over the applicable Default Look-Back Periods using data from T+70B Recalculation Settlement Statements or, when it is not yet available, data from T+9B Recalculation Settlement Statements:

- (1) Cleared Day-Ahead Schedules to supply Energy, plus Day-Ahead Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus scheduled supply obligation for Ancillary Services (including imports but excluding RUC Schedules), plus Virtual Supply Awards;
- (2) Metered Generation, plus Real-Time Interchange Import Schedules, plus Real-Time Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus FMM Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus Real-Time supply obligation for Ancillary Services;
- (3) Cleared Day-Ahead Schedules for Demand (including Demand served by Pumped-Storage Hydro Units and exports) multiplied by one-hundred three (103) percent to reflect Transmission Losses, plus scheduled demand obligation for Ancillary Services, plus Virtual Demand Awards;
- (4) Metered Load multiplied by one-hundred three (103) percent to reflect Transmission Losses, plus Real-Time Interchange Export Schedules, plus Real-Time demand obligation for Ancillary Services; or
- (5) The greater of (A) the quantity of CRRs acquired in CRR Auctions or transferred through the Secondary Registration System (excluding CRRs acquired in CRR Allocations) or (B) Inter-SC Trades of Energy.

For Market Participants subject to Default Election option 1, each of the five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar quarter) will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, each of the five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar

quarter) will be calculated by consolidating all of the data for the applicable SCIDs.

11.29.17.2.2 [Not Used]

11.29.17.2.3 Interest on Allocated Payment Default Amounts

In accordance with Section 11.29.17.2, Interest will be charged to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1 or to SCIDs pursuant to Section 11.29.17.2.2 to the extent the payment default amounts allocated to those Default-Invoiced SCIDs or SCIDs exceed the payment default amounts allocated to them through a shortfall allocation pursuant to Section 11.29.17.1, and Interest will be paid to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1 or to SCIDs pursuant to Section 11.29.17.2.2 to the extent the payment default amounts allocated to those Default-Invoiced SCIDs or SCIDs are exceeded by the payment default amounts allocated to them through a shortfall allocation pursuant to Section 11.29.17.1, for the period between the date of the shortfall allocation and the date payments are due for the Invoices on which the allocation of the payment default amounts appear. The Interest payable pursuant to this Section 11.29.17.2.3 will be included on the Invoices on which the allocation of the payment default amounts appear.

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11.29.17.2.6 Default Look-Back Period

- (a) The following provisions will apply to each Default-Invoiced SCID for an entity that is a new Market Participant that begins to participate in the CAISO Markets following the effective date of this Section 11.29.17.2.6:
 - (i) The Default-Invoiced SCID for that Market Participant will first be subject to allocation of payment default amounts under Section 11.29.17.2.1 in the second calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets and the applicable Default Look-Back Period will be the calendar quarter in which the Market Participant began to participate in the CAISO Markets.
 - (ii) For ~~each payment default that occurs in~~ the third calendar quarter following the

calendar quarter in which the Market Participant begins to participate in the CAISO Markets, the applicable Default Look-Back Period will be the Market Participant's first two (2) calendar quarters of participation in the CAISO Markets.

(iii) For ~~each payment default that occurs in~~ the fourth calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets, the applicable Default Look-Back Period will be the Market Participant's first three (3) calendar quarters of participation in the CAISO Markets.

(iv) For ~~each payment default that occurs in~~ any subsequent calendar quarter in which Section 11.29.17.2.1 is in effect, the applicable Default Look-Back Period will be ~~the most recent~~ total of four (4) full calendar quarters ~~for which T+70B data are available.~~

11.29.17.2.7 Provision of Information on Percentage Shares

Beginning with the second calendar quarter of 2011, the CAISO will provide to each Default-Invoiced SCID on or about the first Business Day of the applicable calendar quarter its own percentage share of any payment default amount ~~that may be allocated in for~~ the calendar quarter ~~to which the percentage share applies~~ that is beginning, subject to adjustment to account for any non-paying CAISO Debtor, based on application of the methodology for allocating payment default amounts set forth in Section 11.29.17.2.1 to the applicable Default Look-Back Period. In calculating the percentage share for each Default-Invoiced SCID pursuant to this Section 11.29.17.2.7, the CAISO will determine the percentage share for each full calendar quarter and will average those quarterly percentage shares.

11.29.17.2.8 Scope of Payment Default Allocation Provisions

The provisions of Section 11.29.17.2 will not apply to the allocation of payment default amounts and interest accrued thereon that are associated with Trading Days that occurred prior to April 1, 2009.

11.29.17.3 Payment of Defaulted Receivables

Collections or any other receipt of defaulted receivables (other than Interest) will be distributed according to the following priorities: First, to any GMC that the CAISO did not receive as a result of any debtor's defaults. Second, to any FERC Annual Charges that were not received as a result of any debtor's

defaults. Third, to any internal accounts, for example balancing accounts for CRRs or RAAIM, that were not paid in full as a result of the debtor's defaults. Fourth, to the CAISO Reserve Account to the extent funds were used to cover the debtor's payment default.

Fifth, either ~~be distributed~~ *pro rata* to CAISO Creditors for the Payment Advices that were subject to default or, if the defaulted receivables ~~awere~~ allocated pursuant to Section 11.29.17.2, ~~collections of the defaulted receivables will be distributed~~ to Default-Invoiced SCIDs in proportion to their allocated shares of the defaulted receivables as calculated pursuant to Section 11.29.17.2.1 for the Payment Advice on which the payment default occurred. In either case, distributions will begin with the oldest Payment Advice that has unpaid amounts as a result of the debtor's default. These distributions to unpaid market creditors may be timed in order to reduce the associated administrative burden according to the following rules:

- (1) If the total available for payment collected in that closing related to the past due Payment Advice is less than \$5,000, then the funds shall accumulate in an interest-bearing account until either: (a) the account exceeds \$5,000, (b) there have been no distributions from the account for six months, or (c) all defaults for that month a given Payment Advice are available for payment ~~have been collected exclusive of any bankruptcy defaults.~~
- (2) If all CAISO Creditors for that Payment Advice have been paid, then the proceeds will either be paid *pro rata* to the CAISO Creditors in the oldest unpaid Payment Advice, or, if the defaulted receivables are allocated pursuant to Section 11.29.17.2, the proceeds will be paid to the Default-Invoiced SCIDs in proportion to their allocated shares of the default amount, as calculated pursuant to Section 11.29.17.2.1 in the oldest unpaid Payment Advice.
- (3) ~~This provision is also applicable to the amounts netted against CAISO Creditor balances related to prior defaulted receivables.~~
- (4) — All defaulted receivables disbursed under this Section shall be disbursed in accordance with the timeframes set forth in Section 11.29.9.6.1.

Sixth, to the Penalty Reserve Account to the extent funds were used to cover the debtor's payment default. Seventh, any remaining balance to the CAISO Reserve Account.

* * * * *

11.31.3 Allocation of Under/Over Delivery Charges

For any Trading Day on which the CAISO assesses an Under/Over Delivery Charge, each Scheduling Coordinator receives a credit on its Settlement Statement for its share of the total Under/Over Delivery Charges collected for that day. The CAISO distributes the total ~~charges collected~~ revenue pro rata based on a Scheduling Coordinator's Measured CAISO Demand on that day as a percent of total Measured CAISO Demand for the CAISO Balancing Authority Area on that day. Both the numerator and denominator of the pro rata calculation exclude demand served by ETCs and TORs.

* * * * *

Section 12

12. Creditworthiness

12.1 Credit and Minimum Participation Requirements

- (a) The creditworthiness and minimum participation requirements in this section apply to the CAISO's acceptance of any transaction in a CAISO Market, to the payment of charges pursuant to the CAISO Tariff (including the Grid Management Charge), and to establish credit limits for participation in any CAISO auction of CRRs and to CRR Holders for the holding of CRRs. Each Market Participant that has a direct financial relationship with the CAISO (including each Scheduling Coordinator, UDC, MSS, CRR Holder, or Candidate CRR Holder) shall secure its financial transactions with the CAISO (including its participation in any auction of CRRs and for

the holding of CRRs) by maintaining an Unsecured Credit Limit and/or by posting Financial Security, the level of which constitutes the Market Participant's Financial Security Amount. For each Market Participant, the sum of its Unsecured Credit Limit and its Financial Security Amount shall represent its Aggregate Credit Limit. Each Market Participant shall have the responsibility to maintain an Aggregate Credit Limit that is at least equal to its Estimated Aggregate Liability.

- (b) In order to participate in the CAISO Markets, each prospective Market Participant or existing Market Participant with a direct financial relationship with the CAISO must satisfy all of the following minimum participation requirements:
 - (i) Provide the CAISO annually, as detailed in the Business Practice Manual, a certified statement executed by an officer of the prospective or existing Market Participant certifying that the prospective or existing Market Participant has met the following criteria and relevant requirements consistent with these criteria set forth in the Business Practice Manual:
 - (1) Has undergone training commensurate and proportional in sophistication, scope, and frequency to the volume of transactions and the nature and extent of the risk taken by the prospective or existing Market Participant, including but not limited to any applicable CAISO training requirements as specified in Sections 4.5.1.1.10.1 and 36.5.2;
 - (2) Has and maintains written policies, procedures, and controls approved by the appropriate officer or corporate authority of the prospective or existing Market Participant's governing body which provide an appropriate, comprehensive risk management framework that, at a minimum, clearly identifies and documents the range of risks to which the prospective or existing Market Participant is exposed, including, but not limited to, legal risk, credit risk, liquidity risk, risk of loss of financial security amounts held and invested by the CAISO, investment risk, concentration

risk, default risk, operation risk, market risk, and business risk;

- (3) To the extent the Market Participant engages in the CRR market, the Market Participant must demonstrate that it has policies in place that are consistent with generally accepted industry risk management standards;
- (4) Has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all CAISO communications and directions, including, but not limited to, the CAISO's issuance of invoices and collateral requests to the prospective or existing Market Participant; and
- (5) Satisfies the requirements of Section 12.1(b)(iv).

- (ii) Provide annually for CAISO review and verification, as detailed in the Business Practice Manual, the risk management policies, procedures, and controls applicable to the CRR trading activities of the prospective or existing Market Participant, if the prospective or existing Market Participant has a CRR portfolio that meets the applicable risk criterion set forth in the Business Practice Manual.

- (iii) Satisfy the ~~following~~ capitalization requirement ~~ps:~~

~~(4)~~ Pursuant to Sections 12.1 and 12.1.1, the prospective or existing Market Participant or its guarantor must have at least \$1 million in Tangible Net Worth or \$10 million in total assets, or post Financial Security of \$500,000 using one or more of the forms specified in Section 12.2 ~~in the amounts set forth below~~. In the event the prospective or existing Market Participant must post Financial Security, that financial security will not be added to Market Participant's Aggregate Credit Limit and, therefore, cannot be used to meet Market

Participant's minimum credit requirements to participate in a Congestion Revenue Rights auction or to offset any market obligations as reflected in Market Participant's Estimated Aggregate Liability. However, all Financial Security in any form may be used to satisfy any financial obligation of the Market Participant.

~~(2) — \$500,000 for a prospective or existing Market Participant with fewer than six (6) months of CAISO Market activity; \$100,000 for an existing Market Participant with six (6) months or more of CAISO Market activity and whose highest Estimated Aggregate Liability for the preceding six (6) months is less than or equal to \$100,000; or \$500,000 for an existing Market Participant with six (6) months or more of market activity and whose highest Estimated Aggregate Liability for the preceding six (6) months is greater than \$100,000.~~

~~(3) — The CAISO will review whether the prospective or existing Market Participant continues to satisfy the capitalization requirements set forth in Section 12.1(iii)(a). The CAISO will conduct such a review every six (6) months, when new financial statements are posted for the prospective or existing Market Participant, or when an increase in CAISO Market activity causes the Market Participant's Estimate Agreement Liability to exceed \$100,000.~~

* * * * *

Section 23

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23.7 Use of ETC or TOR Capacity to Support a Wheeling Through Priority

A Scheduling Coordinator may use ETC or TOR capacity to support a Wheeling Through Priority. The Scheduling Coordinator may use ETC or TOR capacity for that portion of the Wheeling Through Priority

from the import Scheduling Point to the export Scheduling Point that is covered by the ETC or TOR capacity the Scheduling Coordinator chooses to use. The Scheduling Coordinator must use transmission capacity on the CAISO Controlled Grid to support the balance of the Wheeling Through Priority. The Scheduling Coordinator will ~~pay~~ be assessed the applicable Wheeling Through Priority charges pursuant to Section 26.1.4.5 for the MW quantity of the Wheeling Through Priority.

* * * * *

Section 26

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26. Transmission Rates and Charges

26.1 Access Charge

- (a) **In General.** All Market Participants withdrawing Energy from the CAISO Controlled Grid shall ~~pay~~ be assessed Access Charges in accordance with this Section 26.1 and Appendix F, Schedule 3, except (1) as provided in Section 4.1 of Appendix I (Station Power Protocol) and (2) for storage resources, including Non-Generator Resources and Pumped-Storage Hydro Units, withdrawing Energy for later resale to the CAISO Markets or to provide Ancillary Services. The Access Charge shall comprise two components, which together shall be designed to recover each Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement. The first component shall be the annual authorized revenue requirement, as approved by FERC, associated with (1) the transmission facilities and Entitlements turned over to the Operational Control of the CAISO by a Participating TO or (2) transmission facilities that are not yet in operation, but approved under Section 24, and assigned to an Approved Project Sponsor. The second component shall be based on the Transmission Revenue Balancing Account (TRBA), which shall be designed to flow through the Participating TO's Transmission Revenue

Credits calculated in accordance with Section 5 of the TO Tariff and other credits identified in Sections 6 and 8 of Schedule 3 of Appendix F of the CAISO Tariff. Non-Subscribers scheduling transactions on transmission assets or Entitlements of a Subscriber Participating TO shall ~~pay~~be assessed the Access Charge and Wheeling Access Charge, as applicable.

The Access Charges shall be paid by any UDC or MSS Operator that is serving Gross Load in a PTO Service Territory, and shall consist, where applicable, of a Regional Access Charge, and a Local Access Charge. The Regional Access Charge and the Local Access Charges shall each comprise two components, which together shall be designed to recover each Participating TO's Regional Transmission Revenue Requirement and Local Transmission Revenue Requirement, as applicable. The Regional Access Charge and the Local Access Charge for the applicable Participating TO shall be paid by each UDC and MSS Operator based on its Gross Load in the PTO Service Territory.

- (b) **Allocation of Transmission Revenue Requirement.** Each Participating TO or Approved Project Sponsor shall provide in its TO Tariff or Approved Project Sponsor Tariff filing with FERC an appendix to such filing that states the Participating TO's or Approved Project Sponsor's Regional Transmission Revenue Requirement, its Local Transmission Revenue Requirement (if applicable) and its Gross Load used in developing the rate. The allocation of each Participating TO's Transmission Revenue Requirement between the Regional Transmission Revenue Requirement and the Local Transmission Revenue Requirement shall be undertaken in accordance with Section 11 of Schedule 3 of Appendix F. To the extent necessary, each Participating TO shall make conforming changes to its TO Tariff. A Participating TO that is a UDC or MSS Operator to whom the Local Access Charge of a Non-Load-Serving Participating TO is assessed shall include these billed Local Access Charge amounts in its Local TRBA adjustment for its Local Access Charge, together with all other applicable Local TRBA adjustments. If an Approved Project Sponsor that is a Non-Load-Serving Participating TO has been

assigned responsibility to construct and own a Local Transmission Facility because the CAISO concluded, pursuant to Section 24.4.10, that it was not reasonable to divide construction responsibility, the Approved Project Sponsor shall include any pre-operational cost recovery approved by FERC for the Local Facility in its Local Transmission Revenue Requirement, The division of the total revenue requirement associated with the facility between Regional and Local Transmission Revenue Requirements shall consistent with Appendix F, Schedule 3, Sections 11 and 12.

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26.1.3 Distribution of RAC Revenues

The CAISO shall ~~charge and credit~~collect and pay, on a monthly basis, to Participating TOs and Approved Project Sponsors all Regional Access Charge revenues, and shall ~~provide credit~~ to Subscriber Participating TOs all Non-Subscriber Usage Payment Amounts, at the same time as other CAISO charges ~~and payments~~ are settled and invoiced. Regional Access Charge revenues received with respect to the Regional Access Charge shall be distributed to Participating TOs and Approved Project Sponsors in accordance with Appendix F, Schedule 3, Section 10. Non-Subscriber Usage Payment Amounts will be provided to the Subscriber Participating TO in accordance with Appendix F, Schedule 3, Sections 10 and 15.

26.1.4 Wheeling

Any Scheduling Coordinator or other such entity submitting a Bid or Self-Schedule for a Wheeling transaction shall ~~pay to the CAISO~~be charged the product of (i) the applicable Wheeling Access Charge, and (ii) the total hourly Schedules and awards of Wheeling in kilowatt-hours for each month at each Scheduling Point associated with that transaction, except as provided in Section 4.1 of Appendix I (Station Power Protocol). Schedules and awards that include Wheeling transactions shall be subject to any charges resulting from the CAISO Markets in accordance with Section 27.

26.1.4.1 Wheeling Access Charge

The Wheeling Access Charge shall be determined by the transmission ownership or Entitlement, less all

Encumbrances, associated with the Scheduling Point at which the Energy exits the CAISO Controlled Grid. The Wheeling Access Charge for Scheduling Points that are not joint facilities shall be equal to the Regional Access Charge in accordance with Schedule 3 of Appendix F plus the applicable Local Access Charge if the Scheduling Point is on a Local Transmission Facility. Wheeling Access Charges shall not apply for Wheeling under a bundled non-economy Energy coordination agreement of a Participating TO executed prior to July 9, 1996.

26.1.4.2 Wheeling Over Joint Facilities

To the extent that more than one Participating TO owns or has Entitlement to transmission capacity, less all Encumbrances, exiting the CAISO Controlled Grid at a Scheduling Point, the Scheduling Coordinator shall ~~pay the CAISO~~be charged each month a rate for Wheeling at that Scheduling Point which reflects an average of the Wheeling Access Charge applicable to those Participating TOs, weighted by the relative share of such ownership or Entitlement to transmission capacity, less all Encumbrances, at such Scheduling Point. If the Scheduling Point is located at Regional Transmission Facilities, the Wheeling Access Charge will consist of a Regional Wheeling Access Charge component. Additionally, if the Scheduling Point is located at Local Transmission Facilities, the applicable Local Wheeling Access Charge component will be added to the Wheeling Access Charge. The methodology for developing the weighted average rate for Wheeling at each Scheduling Point is set forth in Appendix F, Schedule 3, Section 14.4.

26.1.4.3 Disbursement of Wheeling Revenues

The CAISO shall collect and ~~pay~~credit to Participating TOs and other entities as provided in Section 24.14.4 all Wheeling revenues at the same time as other CAISO charges and ~~payments~~credits are settled and invoiced. For Wheeling revenues associated with CRRs allocated to Load Serving Entities outside the CAISO Balancing Authority Area, the CAISO shall ~~pay~~credit to the Participating TOs and other entities as provided in Section 24.14.3 any excess prepayment amounts within thirty (30) days of the end of the term of the CRR Allocation. The CAISO shall provide to the applicable Participating TO and other entities as provided in Section 24.14.4 a statement of the aggregate amount of Energy delivered to each Scheduling Coordinator using such Participating TO's Scheduling Point to allow for calculation of Wheeling revenue and auditing of disbursements. Wheeling revenues shall be disbursed

by the CAISO based on the following:

26.1.4.3.1 Scheduling Point with All Participating TOs in the Same TAC Area

With respect to revenues received for the ~~payment of~~ Regional Wheeling Access Charges for Wheeling to a Scheduling Point at which all of the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in the same TAC Area, Wheeling revenues shall be disbursed to each such Participating TO based on the ratio of each Participating TO's Regional Transmission Revenue Requirement to the sum of all such Participating TOs' Regional Transmission Revenue Requirements. If the Scheduling Point is located at a Local Transmission Facility, revenues received with respect to Local Wheeling Access Charges for Wheeling to that Scheduling Point shall be disbursed to the Participating TOs that own facilities and Entitlements making up the Scheduling Point in proportion to their Local Transmission Revenue Requirements. Additionally, if a Participating TO has a transmission upgrade or addition that was funded by a Project Sponsor, the Wheeling revenue allocated to such Participating TO shall be disbursed as provided in Section 24.14.4.

26.1.4.3.2 Scheduling Point without All Participating TOs in the Same TAC Area

With respect to revenues received for the ~~payment of~~ Wheeling Access Charges for Wheeling to a Scheduling Point at which the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in different TAC Areas, Wheeling revenues shall be disbursed to such Participating TOs as follows. First, the revenues shall be allocated between such TAC Areas in proportion to the ownership and Entitlements of transmission capacity, less all Encumbrances, at the Scheduling Point of the Participating TOs in each such TAC Area. Second, the revenues thus allocated to each TAC Area shall be disbursed among the Participating TOs in the TAC Area in accordance with Section 26.1.4.3.1.

26.1.4.3.3 Scheduling Point of a Subscriber Participating TO

With respect to Non-Subscriber Usage Payment Amounts provided for Wheeling to a Scheduling Point at which all of the facilities and Entitlements, less all Encumbrances, are owned by Subscriber Participating TOs, the Non-Subscriber Usage Payment Amounts shall be provided to Subscriber Participating TO based on the Non-Subscriber's usage of the Scheduling Point in accordance with Sections 10 and 15 of Schedule 3 of Appendix F. Additionally, if a Subscriber Participating TO has a transmission upgrade or addition that was funded by a Project Sponsor, the Wheeling revenue allocated to the Subscriber

Participating TO shall be disbursed as provided in Section 24.14.4.

26.1.4.4 Information Required from Scheduling Coordinators

Scheduling Coordinators for Wheeling Out or Wheeling Through transactions to a Bulk Supply Point, or other point of interconnection between the CAISO Controlled Grid and the transmission system of a Non-Participating TO, that are located within the CAISO Balancing Authority Area, shall provide the CAISO, by eight (8) Business Days after the Trading Day (T+8B), details of such transactions (other than transactions submitted as Self-Schedules pursuant to Existing Contracts) sorted by Bulk Supply Point or point of interconnection for each Settlement Period (including kWh for each transaction). The CAISO shall use such information, which may be subject to review by the CAISO, to settle and pay Wheeling Access Charges ~~and payments~~. The CAISO shall publish a list of the Bulk Supply Points or interconnection points to which this Section 26.1.4.4 applies together with details of the electronic form and procedure to be used by Scheduling Coordinators to submit the required information on the CAISO Website.

26.1.4.5 Charges for Wheeling Through Priorities

Scheduling Coordinators for customers with a monthly or daily Wheeling Through Priority awarded under Section 23 will pay be charged the applicable Wheeling Access Charge, as illustrated in the Business Practice Manual, based on the MW amount and total hours of the priority for the applicable period of the Wheeling Through Priority. For example, a Scheduling Coordinator with a monthly Wheeling Through Priority based on a (six) 6-day-by-sixteen (16)-hours power supply contract would pay be charged Wheeling Access Charges on a six (6)-day-by-sixteen (16)-hour basis for all applicable days during the entire month of the Wheeling Through Priority regardless of the Scheduling Coordinator's actual scheduled Priority Wheeling Throughs during that period. A Scheduling Coordinator with a one (1)-day Wheeling Through Priority based on an eight (8)-hour power supply contract would pay be charged Wheeling Access Charges for eight (8) hours regardless of the Scheduling Coordinator's actual scheduled Wheeling Throughs during that day. To the extent a Scheduling Coordinator with a Wheeling Through Priority schedules a Wheeling Through transaction in excess of its Wheeling Through Priority quantity or outside of the hours associated with its Wheeling Through Priority, such volumes are not covered by the Wheeling Through Priority and will be separately charged at the applicable Wheeling

Access Charge based on the amount of scheduled energy delivered.

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Section 28

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28.2 Inter-SC Trades of Ancillary Services

Inter-SC Trades of Ancillary Services enable a Scheduling Coordinator to transfer any fixed quantity of Ancillary Services (MW) to another Scheduling Coordinator. An Inter-SC Trade of AS shall consist of a quantity in MWs traded between two Scheduling Coordinators for a specific hour and for a specific Ancillary Service type. The Inter-SC Trade of AS is a financial trade. The CAISO shall charge and ~~pay~~ credit the two parties of the trade based on the quantity (MW) of the Ancillary Service Obligation traded times the user rate for the Ancillary Service trades for the Trading Hour. Scheduling Coordinators may submit Inter-SC Trades of Ancillary Services for Regulation Up, Regulation Down, Spinning and Non-Spinning Reserves.

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Section 29

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29.11 Settlements and Billing for EIM Market Participants.

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- (n) **EIM Transfers and Settlement for Contingency Reserve Obligations.** The CAISO shall allocate Operating Reserve Obligations to EIM Entity Scheduling Coordinators for EIM Transfers as follows –

- (1) EIM Entity Scheduling Coordinators will receive a payment-credit equal to three (3) percent of the hourly MW EIM Transfer into the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively; and
- (2) EIM Entity Scheduling Coordinators will receive a charge equal to three (3) percent of the hourly MW EIM Transfer out of the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively.

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Section 40

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40.6.1 Day-Ahead Availability

Except as otherwise provided in Sections 40.6.1.1 and 40.6.4, Scheduling Coordinators supplying Resource Adequacy Capacity shall make such Resource Adequacy Capacity, available Day-Ahead to the CAISO as follows:

- (1) Resource Adequacy Resources physically capable of operating must submit: (a) Economic Bids for Energy and/or Self-Schedules for all their Resource Adequacy Capacity and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services in the IFM for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services. For Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary

Services, the resource must submit Economic Bids for each Ancillary Service for which the resource is certified. For Resource Adequacy Capacity subject to this requirement for which no Economic Energy Bid or Self-Schedule has been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8. For Resource Adequacy Capacity subject to this requirement for which no Economic Bids for Ancillary Services or Submissions to Self-Provide Ancillary Services have been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8 for each Ancillary Service the resource is certified to provide.

- (2) Resource Adequacy Resources must be available except for limitations specified in the Master File, legal or regulatory prohibitions or as otherwise required by this CAISO Tariff or by Good Utility Practice.
- (3) Through the IFM co-optimization process, the CAISO will utilize available Resource Adequacy Capacity to provide Energy or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services. In so doing, the IFM will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy one hundred percent (100%) of the Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self-Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. If the IFM reduces the Energy Self-Schedule of Resource Adequacy Capacity to provide an Ancillary Service, the Ancillary Service Marginal Price for that Ancillary Service will be calculated in accordance with Section 27.1.2 using the Ancillary Service Bids submitted by the Scheduling Coordinator for the Resource Adequacy Resource or inserted by the CAISO pursuant to this Section 40.6.1, and using the resource's Generated Energy Bid to determine the Resource Adequacy Resource's opportunity cost of Energy. If the Scheduling Coordinator for the Resource

Adequacy Resource believes that the opportunity cost of Energy based on the Resource Adequacy Resource's Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the Scheduling Coordinator may submit evidence justifying the increased amount to the CAISO and to the FERC no later than seven (7) days after the end of the month in which the submitted Energy Self-Schedule was reduced by the CAISO to provide an Ancillary Service.

The CAISO will treat such information as confidential and will apply the procedures in Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall ~~credit pay~~ any higher opportunity costs approved by FERC.

- (4) A Resource Adequacy Resources must participate in the RUC to the extent that the resource has available Resource Adequacy Capacity that is not reflected in a Day-Ahead Schedule. Resource Adequacy Capacity participating in RUC will be optimized using a zero dollar (\$0/MW-hour) RUC Availability Bid.
- (5) Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.

40.6.1.1 Day-Ahead Availability - Specific RA Resource Types

- (a) **Distributed Generation Facilities.** Distributed Generation Facilities shall comply with the IFM and RUC bidding requirements that apply to the same technology type of a resource connected to the CAISO Controlled Grid.
- (b) **Non-Generator Resources**
 - (1) Non-Generator Resources that do not use Regulation Energy Management shall submit Economic Bids or Self-Schedules into the IFM for all RA Capacity for all hours of the month the resource is physically capable of operating.
 - (2) Non-Generator Resources using Regulation Energy Management shall submit Economic Bids or Self-Schedules into the IFM for all RA Capacity for Regulation for all hours of the month the resource is physically capable of operating.
- (c) **Extremely Long-Start Resources.** Extremely Long-Start Resources that are Resource

Adequacy Resources must make themselves available to the CAISO by complying with:

- (1) the Extremely Long-Start Commitment Process under Section 31.7 or otherwise committing the ELS Resource upon instruction from the CAISO, if physically capable; and
- (2) the applicable provisions of Section 40.6.1 regarding Day-Ahead availability for the Trading Days for which it was committed.

* * * * *

Appendix A

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- IFM Load Uplift Obligation

The obligation of a Scheduling Coordinator ~~to pay for~~ its share of unrecovered IFM Bid Costs paid to resources through Bid Cost Recovery.

- Non-Spinning Reserve Obligation

The obligation of a Scheduling Coordinator ~~to pay for~~ its share of costs incurred by the CAISO in procuring Non-Spinning Reserve.

- Operating Reserve Obligation

The obligation of a Scheduling Coordinator ~~to pay for~~ its share of costs incurred by the CAISO in procuring Operating Reserves.

- Regulation Up Reserve Obligation

The obligation of a Scheduling Coordinator ~~to pay for~~ its share of costs incurred by the CAISO in procuring Regulation Up Reserves.

- Settlement Statement Any one of the following: Initial Settlement Statement T+3B, Initial Settlement Statement T+9B, Recalculation Settlement Statement T+12B, Recalculation Settlement Statement T+55B, Recalculation Settlement Statement T+70B, Recalculation Settlement Statement T+9M, Recalculation Settlement Statement T+11M, Recalculation Settlement Statement T+18M, Recalculation Settlement Statement T+21M, Recalculation Settlement Statement T+24M, Recalculation Settlement Statement T+33M, Recalculation Settlement Statement T+36M, Unscheduled Reissue Recalculation Settlement Statement, or any other Recalculation Settlement Statement authorized by the CAISO Governing Board or FERC.

- Spinning Reserve Obligation

The obligation of a Scheduling Coordinator ~~to pay for~~ its share of costs incurred by the CAISO in procuring Spinning Reserve.

- Virtual Demand Bid

A Bid submitted in the DAM that, if cleared in the IFM, represents a financial commitment ~~to pay~~ for Energy at the LMP in the DAM and to receive ~~revenues credits~~ as specified in Section 11.3.

Attachment C – Issue Paper and Draft Final Proposal

Tariff Amendment – Billing, Payment, and Credit Enhancements

California Independent System Operator Corporation

October 11, 2024



California ISO

Billing, Payment and Credit Enhancements

Issue Paper and Draft Final Proposal
September 26, 2023

Prepared by: Dan Shonkwiler

California Independent System Operator

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1.0 Executive Summary

This initiative aims to enhance CAISO's rules around billing, payment and credit, with the goal of reducing the risk of a financial default on market invoices and improving CAISO's ability to pay market participants after a default.

The payments that CAISO makes each week to market participant creditors depend on other market participants paying the amounts they owe on their market invoices. If a market participant defaults on its payment to CAISO, the result could be a loss that must be allocated to other market participants, including WEIM or (in the future) EDAM participants. This loss could be only temporary – a delay of full payment while CAISO works through the legal process for using collateral or otherwise collecting a debt, with the market then paid in full using the amounts collected. Or a loss could be permanent, if CAISO were ultimately unable to collect the full amount due from the defaulting market participant.

It has been more than 22 years since CAISO has needed to spread any default loss to market participants, either temporarily or permanently. But recent events have prompted CAISO to scrutinize its rules and search for possible improvements. This review began in the fall of 2021 as part of an effort to identify lessons from events in other energy markets in Texas and the UK. Specifically, CAISO staff considered the potential impact if California were to endure a period of sustained high energy prices, or if market participants were under other financial distress. We also considered lessons from the 2021 bankruptcy of an entity that served load in the CAISO's balancing authority area. In addition, in the summer of 2022 while we were evaluating these issues, there was a payment default by a small market participant that pointed to other areas for possible improvement.¹

While CAISO's billing and payment rules and its credit policy are fundamentally sound, our review identified several targeted improvements that should further enhance the resilience of the market during periods of financial stress. Except as noted, these changes represent a draft final proposal, which CAISO plans to bring to the ISO Board of Governors and the WEIM Governing Body for approval in November.

The proposed changes fall into four categories: preventing payment defaults from occurring, responding to defaults that have occurred, improving billing and payment rules generally, and improving CAISO's visibility into the financial condition of load-serving entities. The proposed changes in the first three categories are all presented as draft final proposals, because CAISO proposes straightforward rule changes that it anticipates will receive broad support. The proposed change in the fourth category (visibility into the financial condition of load-serving entities), has not yet been completely developed, and therefore is presented as an issue paper.

¹ See CAISO Market Notice dated November 22, 2022.

By way of an overview, the proposed changes are:

Section 2 - Changes to enhance CAISO's ability to prevent market defaults:

- Increasing financial resources available to cover potential defaults. An exception to the minimum capitalization requirement allows a scheduling coordinator that does not meet the minimum standard to qualify instead by posting an additional \$500,000. The proposal would eliminate a related rule that allows certain participants who use this exception to later decrease their posting to \$100,000.
- Improving CAISO's ability under bankruptcy law to use the legal doctrine of recoupment as opposed to setoff to collect amounts due. When a market payment is due to a market participant that has filed for bankruptcy, the doctrine of recoupment would give CAISO a stronger claim to withhold those amounts and apply them to the bankrupt market participant's debts to the market, if it applies. Accordingly, CAISO proposes rules that would ensure its financial relationship with each market participant is governed by a single agreement, which is a requirement for recoupment.

Section 3 - Changes to improve CAISO's ability to respond to a payment default or series of defaults:

- Revising rules about how CAISO would allocate default losses to market participants to eliminate the possibility of allocating losses to a new supplier that enters the market after a default or bankruptcy filing;
- Clarifying rules about the use of funds in CAISO's reserve accounts to cover defaults;
- Providing CAISO with discretion about how it invoices penalties for late payment or late collateral posting, which could otherwise unnecessarily increase the amount of a default that would be charged to the market;
- Authorizing CAISO to invoice Black Start Agreements separately from other market invoices and clarifying that any default would be allocated solely between the parties to the agreement, not spread more broadly to the market; and
- When CAISO invoices trading days in the distant past (*i.e.*, old market reruns), authorizing CAISO to write off small invoices up to a total of \$2,000 rather than continue to pursue collection if CAISO believes the cost of further collection efforts would exceed the benefit to the market, and instead pay the market with funds from the reserve accounts.

Sections 4 and 5 - Changes to update and improve the billing and payment process generally:

- Authorizing CAISO to accept payments and pay by any electronic means specified in the BPM, which could include the FedNow system, in place of the current tariff rules that limit payment to ACH or FedWire, and

- Clarifying various tariff provisions about billing and settlement and correcting drafting errors.

In addition to those proposals, Section 6 serves as an issue paper requesting input about the best way to increase visibility into financial conditions of market participants that serve load. Following stakeholder comment, CAISO plans to propose further tariff changes to address this issue in early 2024.

2.0 Reducing the Risk of Payment Default

If a market participant files for bankruptcy or otherwise becomes insolvent, two protections for the market are, first, any collateral that the distressed market participant has posted with CAISO and, second, CAISO's ability to use that collateral or any amounts that may come due to the market participant to pay its debts to the market. This section proposes enhancements to both of those protections.

2.1 Minimum Participation Requirement for Financial Participants: Tightening an Exception

Since FERC Order No. 741, every ISO and RTO imposes minimum capitalization requirements any market participant to engage directly with CAISO in settlement and billing.² In general, such market participants must have total assets exceeding \$10 million or a tangible net worth exceeding \$1 million. There is an exception for smaller entities that do not meet this requirement but wish to engage directly in settlement and billing. They may post additional cash, above and beyond the collateral required based on market activity. CAISO proposes to adjust this exception to provide that a small entity that satisfies the minimum capitalization requirement only by virtue of posting additional cash must maintain the full cash posting with CAISO unless it is able to meet the minimum capitalization requirement in a different way.

This exception for small participants currently allows smaller market participants to engage directly in settlement and billing by posting an additional \$500,000 cash, but it allows them to later reduce this amount to \$100,000. The reduction is available if the participant maintains an "estimated aggregate liability" less than \$100,000 over a period of six months. See § 12.1(b)(iii)(2)-(3). CAISO proposes to eliminate this second part of the exception, and thus to require entities that avail themselves of the exception to maintain the full \$500,000 posting.

This proposal stems from the September 27, 2022, payment default of a small market participant, which indicated that the current requirement is insufficient to protect the market. The bankruptcy participant, which had been a virtual bidder, ceased operations without filing for bankruptcy. It left CAISO with its collateral, which exceeded its "estimated aggregate liability" during the time it participated in the market, plus the

² That is, to qualify as a scheduling coordinator, EIM scheduling coordinator, CRR entity or participating transmission owner.

\$100,000 posted to meet the minimum participation requirement. But these amounts combined did not cover the full balance due, which exceeded the participant's total postings by \$7,233. CAISO was fortunate to avoid having to spread a loss to the market.³ In other words, the minimum participation requirement of \$100,000 was insufficient to deter a participant from deciding to walk away from its obligations.

In the process of reviewing lessons learned, CAISO has come to conclude that it should not allow a market participant to decrease its posting to \$100,000. One reason is a recognition that this rule could be exploited if a market participant were to invest six months in transacting at low levels in order to reduce its posting requirement, and only then enter larger transactions that leave the CAISO market holding most of the downside risk. Another reason is that CAISO's requirement is lower than other ISOs and RTOs, which generally require \$500,000 for entities that hold CRRs or participate in virtual bidding.

CAISO considered proposing different thresholds depending whether an entity may hold CRRs or engage in virtual bidding, with lower requirements for scheduling coordinators that buy and sell energy only. But CAISO ultimately concluded that such a rule is necessary. Entities that participate directly in settlement and billing overwhelmingly meet the general requirement of \$10 million total assets or \$1 million tangible net worth. Those few participants that appear to rely on the exception have shown an ability to post \$500,000, and, for the most part, are participants in financial transactions. For these reasons, CAISO is proposing to simplify the rule and require that an entity that is authorized to participate directly in settlement and billing only by virtue of the \$500,000 posting must maintain that posting.

2.2 Enhancing CAISO's Ability to Recoup by Designating a Single Agreement to Govern Settlement, Billing and Payment

This section proposes that when a market participant has multiple agreements that could govern its financial relationship with CAISO, tariff rules will designate one of those agreements as controlling with respect to settlement, billing and payment. Such a designation will reduce the risk of further payment defaults after a bankruptcy filing by expanding CAISO's ability to employ the bankruptcy law doctrine of "recoupment" (in contrast to "setoff") to collect unpaid amounts. It would also reduce the risk of unnecessary litigation in a bankruptcy court.

Only some of the multiple types of agreements that a market participant may have with CAISO enable the participant to engage directly with CAISO in the settlement and billing process. Specifically, scheduling coordinators, EIM scheduling coordinators, CRR entities and participating transmission owners transact directly with CAISO. Other types of market participants, such as participating generators, must either engage a

³ CAISO was able to avoid spreading the loss over the market because the shortfall was covered temporarily with funds from the penalty reserve account. Over time, CAISO recouped the amounts due from funds that otherwise would have been paid to the defaulting market participant and used these sums to replenish the penalty reserve account.

scheduling coordinator to handle this process for them, or else enter an additional agreement with CAISO in order to handle billing and payment themselves.

Many market participants have more than one of the types of agreement that enable settlement and billing with CAISO. If such a market participant were to file for bankruptcy, issues could arise regarding which of its multiple agreements governs a particular set of market transactions. Uncertainty about the governing contract could hinder CAISO's ability to collect amounts due and pay the market. To avoid this possibility, CAISO proposes to amend the tariff to clarify which among the multiple agreements with a market participant that could govern settlements, billing and payment will in fact govern these processes. This change would benefit the market by enhancing CAISO's ability to collect any late payments.

In particular, this change would help the market by expanding CAISO's ability to employ recoupment. If a market participant has filed for bankruptcy and defaulted on payments to the market, and then subsequently is due to receive payment from the market, CAISO would seek to use those funds to pay the debt to the market (or to reimburse the reserve account). One of two legal doctrines would govern CAISO's effort: recoupment or setoff. Recoupment would be preferable for the market because it would authorize CAISO to take action immediately and authorize action in a broader range of possible scenarios, to better protect the market in the future. Recoupment applies, however, only when the financial transactions are governed by a single contract. Otherwise, the law governing setoff would apply, which requires advance authorization from the bankruptcy court before the funds could be used, thus delaying payment. The proposed rule change would support the application of recoupment in this scenario, supporting collection and avoiding unnecessary legal costs.

Accordingly, when a single entity is party to multiple agreements that implicate settlement, billing and payment, the tariff would specify that all of the entity's settlements and bills will be assigned to one particular agreement. For example, if an entity has both a CRR Entity agreement, which enables them to hold CRRs only, and a Scheduling Coordinator Agreement, the tariff would specify that the more general purpose agreement would govern all settlements, billing and payment of that entity. In this case it would be the Scheduling Coordinator Agreement.

The full set of rules to be included in the tariff would be as follows:

If an entity is party to the following agreements	This agreement will control billing, payment and settlements under either agreement during the period that both are in effect
Scheduling Coordinator Agreement and CRR Entity Agreement	Scheduling Coordinator Agreement
Scheduling Coordinator Agreement and EIM Scheduling Coordinator Agreement	Scheduling Coordinator Agreement
CRR Entity Agreement and EIM Scheduling Coordinator Agreement	EIM Scheduling Coordinator Agreement
Transmission Control Agreement and Scheduling Coordinator Agreement	Scheduling Coordinator Agreement

CRR Entity Agreement and Transmission Control Agreement	Transmission Control Agreement
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If a single entity is party to three or more such agreements, multiple rules would apply to designate a single agreement that controls settlement and billing.

3.0 Enhancing CAISO's Ability to Respond to Defaults

If a market participant defaults on a weekly invoice and the balance cannot be covered immediately using its collateral, CAISO has two tools to clear the market. First, CAISO may use funds in its reserve accounts. If there are not sufficient funds in a reserve account to clear the market, it must allocate a payment shortfall to market participants. Such an allocation would impose significant administrative costs on CAISO and market participants, as explained below. Accordingly, this section proposes a range of enhancements intended to minimize the number of occasions when CAISO must allocate a shortfall to the market in a situation. It also proposes enhancements to the process for allocating default losses so that this step is handled using the most current data and in a way that minimizes disruption.

3.1 The Reserve Accounts: Clarifying Rules about Replenishment

The tariff requires CAISO to establish a reserve account to hold funds to be used if a market participant defaults as a way to clear the market temporarily, subject to later replenishing the reserve account. This "CAISO reserve account" currently holds approximately \$1.8 million. There is also a "penalty reserve account" with a much smaller balance, which has a similar function.⁴

CAISO Reserve Account

Generally speaking, the CAISO reserve account is replenished either after CAISO collects the default (using the collected funds) or after CAISO determines that it has exhausted reasonable collection possibilities. In the latter case, the account is replenished by allocating the final shortfall to the market and transferring those funds to the account.

This section proposes to clarify the rules about replenishment of the CAISO reserve account to state more clearly that CAISO need not replenish the account, and instead

⁴ See generally Section 11.29.9.6.4, which explains that the penalty reserve account will be funded by penalties collected from market participants that are late in paying or in posting collateral. In contrast to the CAISO reserve account, the penalty reserve account does not have to be replenished after use, and instead can cover a default loss permanently if the default is not collected. See *California Independent System Operator Corp.*, Order Conditionally Accepting Tariff Revisions, 131 FERC ¶ 61,009 (April 6, 2010) PP 30-32. In other words, if CAISO were unable to collect the full payment default to replenish the funds, there would be no need to allocate the net loss to the market if there were sufficient funds in the penalty reserve account to make up the shortfall.

may continue to use the funds to cover the default losses, so long as CAISO expects to collect from the market participant. This would eliminate ambiguous language that could be read to suggest that CAISO must quickly replenish the account by charging losses to market participants, even in situations where CAISO expects collection efforts to succeed later.

The CAISO reserve account and the “penalty reserve account” benefit the market by avoiding the need to allocate a payment shortfall to market participants unnecessarily. Without these accounts, CAISO might need to allocate a payment default to the market and then later – after collection of the amounts due – process payment of the amounts collected. Both steps would incur significant administrative costs for CAISO and for market participants, and neither would be necessary with sufficient funds in a reserve account.

The bankruptcy of Lehman Brothers in 2008 provides a good example of how the CAISO reserve account has been used. A Lehman affiliate failed to pay approximately \$15,000 in CAISO market invoices. Although CAISO was holding collateral to cover the unpaid balance, it needed permission from the bankruptcy court before it could use the funds. Accordingly, CAISO instead used funds in the CAISO reserve account to pay the market, and later obtained authorization from the bankruptcy court to use Lehman’s collateral to repay the CAISO reserve account. This process avoided both an unnecessary shortfall allocation, and the need for market participants to account for a collection of long-overdue funds. This situation – i.e., where CAISO is holding collateral sufficient to cover a payment default, but is not yet authorized to apply the collateral – is likely to recur if there are future bankruptcy filings by market participants.

Consistent with longstanding CAISO practice and tariff language that had been in place since startup, CAISO replenishes the reserve account for any funds used to cover a default. This replenishment is triggered when the CAISO either collects the default amount or concludes that reasonable collection efforts will be fruitless. In the latter case, the CAISO would charge the market by allocating the loss, and transfer the funds collected to the reserve. This allows CAISO to delay the process of allocating a default amount to the market during the time it has reason to believe collection efforts may succeed, including while CAISO is holding collateral sufficient to cover the default but waiting for a ruling from the bankruptcy court that allows it to set off the collateral to pay the debt.

The tariff language governing replenishment of the market reserve account was amended in 2011 as part of a settlement agreement relating to the allocation of default losses. This amendment included language about replenishing the account “on the next practicable invoices,”⁵ which could be misinterpreted to suggest that CAISO must either

⁵ The change that is central to this particular issue is highlighted:

11.29.9.6.2.1 Replenishing the CAISO Reserve Account

If the CAISO has debited the CAISO Reserve Account then:

collect on the default or charge the loss to the market on the first possible invoice available to do so. Such an approach would undermine the effective use of the CAISO reserve account, and contradict how CAISO used the reserve account before, during and after that amendment.

To clarify the rules going forward, CAISO proposes to modify Section 11.29.9.6.2.1(c) to be consistent with the historical use of the account by deleting the reference to “on the next practicable Invoices.” In addition, CAISO proposes to clarify language about the steps it must take to replenish the account by collecting a payment default. Section 11.29.9.6.2 states CAISO shall “as soon as possible take any necessary steps” to replenish the reserve account. This may not be consistent with the general rule regarding CAISO’s effort to collect in Section 11.29.20, which requires CAISO to take commercially reasonable steps. To harmonize these two sections, CAISO proposes to amend the final sentence of Section 11.29.9.6.2 to read as follows:

“CAISO shall as soon as possible ~~thereafter take any necessary steps~~ **begin collection efforts consistent with Section 11.29.20** against the defaulting Scheduling Coordinator or CRR Holder pursuant to Section 12 including making any calculations or taking any other appropriate action **in order** ... to replenish the CAISO Reserve Account.”

Penalty Reserve Account

As noted above, the penalty reserve account does not have to be replenished after use, and instead can cover a default loss permanently if the default is not collected. See *California Independent System Operator Corp.*, Order Conditionally Accepting Tariff Revisions, 131 FERC ¶ 61,009 (April 6, 2010) PP 30-32. In other words, if CAISO were unable to collect the payment default to replenish the funds, there would be no need to

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- (a) If, after the CAISO has debited the CAISO Reserve Account on a Payment Date, the CAISO Bank receives a payment from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Reserve Account, such payment shall be credited to the CAISO Reserve Account.
 - (b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Reserve Account.
 - (c) If, after taking reasonable action, the CAISO determines that the default amount (or any part) and/or Interest cannot be recovered **on the next practicable Invoices**, the CAISO shall notify Market Participants of the identity of the defaulting Business Associate together with the unrecoverable amounts and such amounts shall be allocated in accordance with Section 11.29.17 of the CAISO Tariff with corresponding credits to the CAISO Reserve Account.

allocate the net loss to the market if there were sufficient funds in the penalty reserve account to make up the shortfall.

Consistent with this intention and historical practice, CAISO proposes to delete Section 11.29.9.6.4.1(c), which has language suggesting that losses covered by this account must be replenished and charged to the market.

3.2 Use of Reserve Accounts to Prevent Payment Shortfall: Adding Flexibility to Optimize Value to the Market

The value of the reserve accounts is to avoid allocating a default loss to the market unnecessarily, which would require significant administrative costs for both CAISO and affected market participants. This section proposes rules to optimize use of the reserve account during a period when repeated defaults are expected. The goal is to enable CAISO to reduce the number of times it would need to spread default losses to market participants.

As noted above, the CAISO reserve account currently holds approximately \$1.8 million that can be used to help clear the market in the event of a payment default. If, after borrowing from the reserve account to support a clearing, CAISO determines that the default “cannot be recovered,” § 11.29.9.6.2.1(c), then it must allocate the loss to the market in order to reimburse the reserve account. In other words, the funds in the reserve account do not cover market defaults permanently, only temporarily as cash flow measure. This arrangement nevertheless benefits the market by avoiding unnecessary small payment defaults that would otherwise impose substantial administrative costs on CAISO and market participants.

Currently the tariff indicates that use of reserve account funds is mandatory to cover a payment default. See tariff §§ 11.29.13.4 (reserve account) and 11.29.9.6.4.1 (penalty reserve). While this rule has served the market well to date, it could become disadvantageous if the amount of a payment default were to exceed the balance of the reserve accounts, which has not happened since the crisis of 2000-01. In such a case, use of a reserve account would not result in full payment to the market, but instead only reduce the amount of the shortfall that has to be allocated. While this would provide some benefit to market participants by reducing the amount of the current default, it would also exhaust the full balance of the reserve accounts and leave no funds remaining to help prevent further payment shortfalls. If further payment defaults were expected, which could be the case in the event a market participant had filed for bankruptcy,⁶ the market would be better overall off if the reserve accounts were used

⁶ Unless a bankrupt debtor obtains special permission to continue paying CAISO in the ordinary course of business, defaults would be possible for up to two years after the bankruptcy filing date, as pre-petition trading days are recalculated, if those recalculations result in charges to the debtor. While CAISO should be holding collateral from the bankrupt debtor that it can eventually access to pay these charges, there could be a delay in obtaining permission from the bankruptcy court to use the collateral, resulting in temporary shortfalls.

only when they can cover the full payment default. This use of the funds would avoid a short-payment and reduce the administrative burden associated with allocating a shortfall.

For these reasons, CAISO proposes the following additional tariff rules:

- When the amount of a payment default or combined defaults on a particular payment day exceeds the combined balances in the reserve accounts, the use of those reserve accounts to help clear the market should not be mandatory, but rather at the discretion of CAISO.
- When the amount of a payment default or combined defaults on a particular payment day exceeds the balance of the penalty reserve account, the use of the funds in the penalty reserve account should be discretionary.

The tariff would also require CAISO, in exercising its discretion, to use reasonable diligence to determine what use of reserve account funds would most benefit the market overall.

The proposed new rules would also preclude CAISO from drawing down the balance in the CAISO reserve account below \$1,000 when it is using funds to cover a market invoice default. Preserving this minimum balance would help ensure that funds are available to clear the market in the scenario discussed below in Section 6.1 of this paper.

3.3 Refining Rules about Allocating Default Losses

In 2010 and 2011, in response to a complaint at FERC, CAISO agreed to amend its tariff rules about allocating any market losses that may result from a payment default. Until then, the tariff had allocated default losses entirely to market creditors, meaning participants that were due money on the payment date when the default occurred. Payments to these market creditors were reduced pro rata to cover the shortfall. To implement the settlement agreement, CAISO amended the tariff in 2011 to allocate losses more broadly across the entire market, including net debtors, based on each market participant's overall activity level. This rule requires CAISO to calculate on a quarterly basis allocation percentages that show how any default losses would be allocated during the coming quarter. See Section 11.29.17.

If it became necessary to allocate a loss, CAISO would follow a two-step process. It would initially allocate any shortfall to market creditors pro rata, consistent with its historic practice. Then, on a subsequent settlement statement, CAISO would issue charges and credits to re-allocate the loss to the entire market according to the allocation percentages calculated pursuant to Section 11.29.17.

Avoiding Allocations to New Market Participants

CAISO proposes to adjust the rules about allocating default losses to the market to ensure that new market participants that enter the market after a bankruptcy filing or

other payment default will not be allocated default losses for trading days before they joined the market.

In reviewing scenarios with sustained financial stress on the market, CAISO has identified a possible gap in this process that stems from the fact that losses are allocated according to the percentages for “the most current calendar quarter.” Section 11.29.17.2.1. This rule could in some circumstances spread default losses to new market participants that have entered the market after the defaulting market participant stopped paying or filed for bankruptcy. These new participants would be at risk of sharing a default loss, albeit a small part, even if the defaulting market participant filed for bankruptcy before the new participant joined the market, and even if the defaulting participant was solvent – post-bankruptcy filing – by the time the new supplier entered the market.

The risk arises because of CAISO’s settlement cycle, in which settlements are subject to adjustment for up to two years after a trading day. Even the later recalculation settlement statements, long after a bankruptcy proceeding has been filed, are subject to a default risk because they involve transactions on a pre-petition trading date. If a defaulting market participant were to receive a charge on a later recalculation statement, such as the T+11M, T+21M or T+24M, and had not obtained special approval from the bankruptcy court to pay pre-petition invoices from the CAISO, it could default on these later recalculation invoices. Under the currently effective rules, a portion of the default amounts could be allocated to market participants who joined after the defaulting participant filed for bankruptcy or left the market. This potential seems undesirable, however small the risk that it may occur, and regardless how low the percentage allocation to this participant.

To address the potential problem and improve incentives for new suppliers to enter the market during a period of financial distress, CAISO proposes to revise the rule that losses will be allocated according to the percentage shares for “the most current calendar quarter.” See § 11.29.17.2.1. Default losses should be allocated using the allocation percentages in effect on the earliest date for which the defaulting market participant failed to pay its obligations. This would be the payment date when the market participant first defaulted or, if the market participant that filed for bankruptcy, the last full trading date before the bankruptcy petition is filed, if that date was earlier.

Under the proposed rule, all default losses resulting from a bankruptcy or other insolvency would be allocated according to the default loss percentages that were in effect at the time the bankruptcy was filed or the other insolvency began. This rule is also consistent with the intentions of the 2011 amendment, but will avoid the possibility that losses might be allocated to new participants who joined the market after those events.

New Allocation Percentages

CAISO calculates new loss allocation percentages for each market participant on the first business day of each quarter, as required by Section 11.29.17.2.7. The tariff specifies that the percentages will be calculated using market and settlement data from the most recent four quarters for which data is available from the second settlement statement. See Section 11.29.17.2.6(a)(iv). Through 2020, this meant the data would

exclude only the quarter that just ended because the second settlement statement was issued after 12 business days. This changed, however, after the settlement timeline revision in 2021, and the data set now excludes the two most recent quarters. The change occurred because the second settlement statement is now issued at T+70B, which takes more than 90 calendar days, and thus is not available for more than a quarter.

After gaining experience with the new settlement timelines, CAISO notes that while the T+70B settlements produce more accurate data than the initial settlements at T+9B, the initial settlement statements are reasonably accurate. Accordingly, in order to use more current data in the allocation percentages, CAISO proposes to change Section 11.29.17.2.6(a)(iv) as follows:

For each payment default that occurs in any subsequent calendar quarter in which Section 11.29.17.2.1 is in effect, the applicable Default Look-Back Period will be **a total of four quarters**: the most recent ~~three~~^{four} (3) full calendar quarters for which T+70B data are available, **plus the following quarter using T+9B data from that quarter.**

Conforming changes would be necessary elsewhere in Section 11.29.17.2.

Rules about Use of Funds Collected

CAISO proposes to clarify the rules that govern how, after a payment default has been allocated to the market, CAISO should distribute any amounts that it later collects from the defaulting market participant. Currently, this issue is addressed in several tariff sections, including Sections 11.29.17.3, 11.29.13.8, 11.29.13.10, 11.29.9.6.2.

CAISO proposes to clarify these sections so that they consistently provide the following priorities. Any collections should be used and distributed to pay defaults caused by the debtor from whom the funds are collected, using the following priorities for apply the funds:

- First to any CAISO GMC that was not collected as a result of this debtor's defaults and then to any other internal accounts, such as the balancing accounts for CRRs or RAAIM;
- Second to the CAISO reserve account, to the extent it was drawn down to cover a payment default by that market participant (but not to the CAISO penalty reserve account at this point);
- Third, to market participants that were allocated part of the shortfall on that invoice, beginning on the oldest unpaid invoice first.

To the extent CAISO collects small amounts, less than \$5,000, it will have discretion to hold those amounts to await further collections, to reduce administrative costs of distributions, consistent with section 11.29.17.3 (1).

3.4 Penalties may be Invoiced Separately to Avoid Increasing Default Amount

This section proposes to authorize CAISO to invoice “late payment” penalties separately from the remainder of the market when doing so would reduce the size of an expected payment default that would have to be spread to the market.

The tariff imposes penalties on market participants that are late either paying a market invoice or in posting collateral.⁷ While these penalties serve as an incentive for timely payments and postings, they could also exacerbate a payment default because the amount of the penalties can accumulate rapidly when a market participant that has not filed for bankruptcy stops paying and responding to collateral calls. Accumulated penalties could increase the amount of a future payment default, which could result in CAISO spreading a loss to the market unnecessarily.

The risk of penalties causing a default loss that would not occur otherwise arises only in a specific situation. Ordinarily, when the total penalties assessed to an insolvent market participant are small, there should be enough funds in the penalty reserve account to cover the default. Such a default would not affect the market, even indirectly, because the proceeds from the charges, covered by funds from the penalty reserve, end up being returned to that fund. However, if the total amount of penalties that results from a series of defaults exceeds the balance of the penalty reserve fund, then the amount of the default will eventually have to be charged to other market participants. Regardless how small the amount of the loss that is charged to the market, it will result in administrative costs for both CAISO and each market participant.

To avoid this possibility, CAISO proposes that if a market participant has defaulted on its most recent market invoice, then CAISO will have discretion to handle any further penalties differently. Specifically, CAISO may record these additional penalties but settle and invoice them separately from other market activities, similar to the authorization to invoice separately certain other charges under Section 11.29.10.3. As a result, the full amount of any default loss would be borne by the penalty reserve account rather than market participants. The concept of issuing a separate invoice is discussed further in the next section.

3.5 Separate Invoices: Clarify Significance and Use for Black Start Agreements

CAISO is authorized to issue certain invoices for market activity separately from other market invoices. See sections 11.29.10.3 and 11.29.7.3.6. The use of separate invoices stems from the legacy method of allocating default losses to market creditors exclusively, without re-allocating them to the entire market. The purpose of separate invoices is to ensure that any default loss would affect only a certain segment of the market – specifically, the corresponding creditors for the charges on the separate

⁷ The penalty for paying invoices late is imposed by section 11.29.14(c). The penalty for posting collateral late is imposed by Section 12.5.2(c). These penalties are never less than \$1,000. See Section 11.29.14.

invoice. For example, in the section just above, CAISO proposes that in certain circumstances late payment penalties would be invoiced separately from the market to ensure that default losses on late payment penalties are allocated entirely to the penalty reserve account. This would avoid the possibility that unpaid penalties would cause (or exacerbate) a shortfall that would have to be spread to the market.

On a related note, a sentence in Section 11.29.17 could be read as undermining the authorization to invoice certain charges separately. This sentence dates back to the 2011 tariff amendment about allocation of default losses, and indicates that all default losses will be re-allocated to the entire market. To reconcile this section with CAISO's authority to issue separate invoices, CAISO proposes to add the highlighted language:

Except to the extent a payment default is for an invoice that was separate from market invoices under Section 11.29.10.3, eEach payment default amount allocated to CAISO Creditors through a shortfall allocation under this Section 11.29.17.1 that remains unpaid by the defaulting CAISO Debtor will be allocated as set forth in Section 11.29.17.2.

Another situation where separate invoicing may be appropriate involves Black Start Agreements. The financial obligations that arise under Black Start Agreements are "reliability services costs" that are chargeable to and recovered by the transmission owner in whose service territory the black start generator is located. Recognizing this, the Black Start Agreements reflect that the generator will look exclusively to the transmission owner for payment of the black start services (as opposed to the energy the generator may also provide). To support this arrangement, the CAISO proposes to add invoices for black start resources to the list of charges that may be invoiced separately. To the extent that separate invoicing is consistent with the Black Start Agreement, this would involve CAISO issuing an invoice to the transmission owner for the black start services and an offsetting payment advice to the black start generator. Both the invoice and the payment advice would be separate from other market invoices so that, in the event of a default by the transmission owner, CAISO would allocate the payment shortfall to the black start generator and not to the rest of the market.

3.6 Out-of-Cycle Invoices: Options to Avoid Inefficient Collections and Pay Market from Reserve Account

This section proposes an efficiency enhancement in the unusual situation where CAISO issues invoices after the ordinary two-year settlement cycle has completed and market participants default on those invoices. CAISO proposes that it should have the option if necessary to write off small invoices instead of pursuing collection if it concludes that collection efforts may not benefit the market.

If a market participant defaults on a market invoice and the shortfall is small enough to be covered by the reserve accounts, CAISO must pursue reasonable collection efforts and either collect the payment in full or, after concluding it cannot, allocate the remaining shortfall to the market. See § 11.29.20 (requires "commercially reasonable efforts" to collect from defaulting market participant) and § 11.29.9.6.2.1(c) (if after taking

reasonable action CAISO determines that the default “cannot be recovered,” it must allocate the shortfall to the market and repay the reserve account). In ordinary circumstances, these rules make sense.

Occasionally, however, CAISO must invoice a settlement adjustment long after all scheduled recalculations have concluded. See *generally* § 11.29.7.3.2 (unscheduled directed recalculation settlement statements). A recent example involved invoices directed in litigation over “Amendment 60,” see FERC Docket ER04-835, which required settlement adjustment to trading days more than a decade old. In this type of situation, collection can become more difficult for a variety of reasons, including the fact that some market participants have terminated their agreements with CAISO and ceased operating. While these companies remain liable to pay, the time required in this situation to collect on small invoices can in some cases be better used. The tariff currently requires CAISO to choose between two undesirable options: collection efforts that will not benefit the market because their cost exceeds the low amounts at stake, or allocating the small shortfall to the market, which would impose significant administrative costs on both CAISO and market participants.

To offer a more efficient option in this unlikely scenario, CAISO proposes to amend the tariff to provide that, if CAISO issues invoices that reflect settlement statements issued after the last scheduled recalculation, currently at T+24M, then CAISO has the option, after pursuing commercially reasonable collection efforts, of writing off invoices that total less than \$2000 and paying creditors using any available funds from the reserve accounts. The authority to make payment to creditors from the reserve account, without a need to later replenish the reserve account, would be new. If this option were invoked, a market notice would be required. The tariff would also state that CAISO should exercise this option only if it believes that it would reduce administrative costs for CAISO and market participants collectively that would exceed the value of the funds used from the reserve account to pay the invoices.

4.0 New Payment Options, Such as FedNow

To enable CAISO to adapt more readily to new payment systems, such as FedNow, this section proposes to revise current tariff rules about the means for payment. It would authorize payment by any electronic means specified in the Business Practice Manual.

The tariff currently requires that all payments on market invoices must be made by either FedWire or ACH. See Sections 11.1.3(d) and 11.29.9.3; accord Section 11.29.3(c) (prepayments). In July 2023 the the Federal Reserve began offering FedNow, which is a real-time payment service designed to provide speed, efficiency and safety of payments around the clock. FedNow payments will settle instantaneously, thereby potentially providing economic benefits for CAISO and its customers by allowing time-sensitive payments to be made whenever needed and providing more flexibility to manage cash flows. The launch of FedNow could lead to additional related services from other financial institutions that could benefit the CAISO market.

CAISO Finance is reviewing the FedNow service to determine the risks and opportunities related to market clearing and collateral payments. To the extent that CAISO decides to authorize the use of FedNow or similar services, it desires to avoid legal uncertainty about whether the tariff authorizes payments by these means, and afford flexibility to modify the approved means of payment. Accordingly, CAISO proposes to amend the tariff sections referenced above to clarify that payment to and from a market participant may be made by any electronic means that is authorized in the Business Practice Manual. Initially, the Business Practice Manual would continue the current practice of allowing payment by FedWire and ACH.

5.0 Other Tariff Clarifications and Corrections

The section proposes to clarify or correct tariff language related to the billing and payment process. None of these proposals would substantively change CAISO rules or policy.

5.1 Imbalances Resulting from Invoices Less than \$10

This section proposes to expressly authorize CAISO to use the reserve account to resolve cash imbalances that result from the rule eliminating invoices and payment advices in amounts under ten dollars.

CAISO issues invoices (and payment advices) every Wednesday based on each recipient's net amount payable (or receivable) across all settlement statements issued during the relevant days. Any invoice or payment advice in an amount less than ten dollars is adjusted to zero, and no payment is due to or from that market participant. See Section 11.29.7.2.1. This rule was adopted to avoid inefficient payments at a time when the tariff permitted payment only by Fedwire, which cost more than \$10 to send.

Without this rule eliminating small invoices, the cash flow on any payment date should always net to zero, assuming CAISO receives payment in full. As a result of eliminating small invoices, however, cash flow can be slightly out of balance, with either a deficiency or a surplus. CAISO's practice has been to fund any shortfall from the reserve account, as required by the tariff. See Section § 11.29.9.6.1 ("If required, the CAISO shall instruct the CAISO Bank to transfer amounts from the CAISO Reserve Account to enable the CAISO Clearing Account to clear."); *accord* § 11.29.9.6.2. When the imbalance results in CAISO receiving more funds than necessary to clear the market, CAISO places these funds in the reserve account. Though not expressly addressed in the tariff, this latter practice effectively balances the inflows and outflows, which is consistent with the purpose of the reserve account to resolve short-term cash flow issues.

CAISO proposes to clarify the tariff rules to more clearly authorize this practice, including the transfer to the reserve account of any excess received in the CAISO Clearing Account.

5.2 Definition of “Settlement Statement”

CAISO proposes to adjust the defined term “Settlement Statement” to add references to new settlement statements added in 2021, and to reflect the fact that FERC may direct CAISO to issue settlement statements. The current definition pre-dates CAISO’s 2021 tariff amendment that changed the timelines for settlement recalculations. It also lacks an express reference to the fact that FERC may authorize additional recalculation settlement statements. See tariff 11.29.7.3.2.

Draft revision

Any one of the following: Initial Settlement Statement T+3B, **Initial Settlement Statement T+9B**, Recalculation Settlement Statement T+12B, Recalculation Settlement Statement T+55B, **Recalculation Settlement Statement T+70B**, Recalculation Settlement Statement T+9M, **Recalculation Settlement Statement T+11M** Recalculation Settlement Statement T+18M, **Recalculation Settlement Statement T+11M, Recalculation Settlement Statement T+21M, Recalculation Settlement Statement T+24M**, Recalculation Settlement Statement T+33M, Recalculation Settlement Statement T+36M, Unscheduled Reissue Recalculation Settlement Statement, or any other Recalculation Settlement Statement authorized by the CAISO Governing Board **or FERC**.

5.3 Basis of Billing and Payment

The tariff currently includes two separate sections with similar statements to the effect that settlement statements form the basis for the billing and payment process. Using varying language to describe the same issue could pose a legal risk. To mitigate that risk, CAISO proposes to delete the first of the two sections, Section 11.29.1, and to clarify the language of the other, Section 11.29.7.2.

The section that would be deleted currently reads as follows:

11.29.1 Billing and Payment Process Based on Settlement Statement

The billing and payment process shall be based on the issuance of Initial Settlement Statement T+9B and Recalculation Settlement Statements.

This concept is reflected in Section 11.29.7.2, which uses more expansive language. Thus the deletion of Section 11.29.1 should have no negative effect.

In addition, CAISO proposes the following clarifications to Section 11.29.7.2 to more accurately reflect that the second settlement statement, issued at T+70B, recalculates all charges instead of showing incremental changes. In other words, it adjusts the initial settlement statement, but not necessarily each charge in that statement:

The Initial Settlement Statement T+9B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+9B will constitute the basis for billing ~~for all charges~~ in the first instance. The Recalculation Settlement Statements will

constitute the basis for billing for adjustments to ~~charges set forth in the Initial Settlement Statement T+9B.~~

5.4 Clarification of Terminology: Settlement versus Billing and Payment

CAISO proposes to clarify the terminology in certain sections about settlement that currently use the term “pay,” and use instead terms that more accurately describe the settlement function such as “credit,” “debit” or “charge.”

Section 11 of the tariff addresses two distinct CAISO functions. One is settlements, meaning the calculation of settlements and charges that appear on settlement statements. The other concept is billing, which is addressed mainly in Section 11.29. While settlements and billing are related in the sense that settlements are in input into the billing process, the two processes are different. Settlement is a matter of accounting whereas billing involves cash flow. The issuance of a settlement credit does not, by itself, cause cash to flow. For example, a market participant with an accounting credit may have more charges than credits for that payment date. In technical terms, payments result from invoices and payment advices, which reflect the net of several settlement statements.

Certain provisions in Section 11 that concern the settlements function use the term “payment” where the words “credit,” “debit” or “charge” would be more appropriate. A good illustration of the issue in Section 11.14, about neutrality. The CAISO issues neutrality charges or credits on each settlement statement to ensure that the settlement statements for a given trading day will net to zero. Section 11.14, however, refers to these settlements adjustments as “payments.” To avoid confusion or the possibility of unnecessary litigation, CAISO proposes to clarify these provisions as illustrated by these proposed changes to Section 11.14:

11.14 Neutrality

The CAISO shall be authorized to ~~issue~~ ~~levy additional~~ charges or ~~make additional payments~~ **credits** as special adjustments in regard to:

- (a) amounts required to reach an accounting trial balance of zero in the course of the Settlement process in the event that the charges calculated as due from CAISO Debtors are lower than ~~credits payments~~ **credits** calculated as due to the CAISO Creditors for the same Trading Day, which includes any amounts required to round up any invoice amount expressed in dollars and cents to the nearest whole dollar amount. These charges will be allocated amongst the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day on a monthly basis. In the event that the charges due from CAISO Debtors are higher than the ~~credits issued payments due to~~ **credits issued** CAISO Creditors, the CAISO shall ~~allocate a credit payment to the~~ Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day on a monthly basis; and

This will also require changes to Section 11.1.3 and how the term “receive” is used in the Section 11. Assuming the concept is acceptable, CAISO will prepare a draft of the proposed changes during the review of tariff language. In the meantime, CAISO seeks stakeholder input on this proposed change.

5.5 Deletion of Extraneous Language

This section proposes to delete extraneous language that survived erroneously from an earlier era. Specifically, CAISO proposes to remove the phrase “on a monthly basis,” which appears twice in the phrase “Energy for that Trading Day on a monthly basis.” In each case, the language should read simply “Energy for that Trading Day,” because the referenced charge is daily.

The revised language is in Section 11.14, which could also be affected by the proposed change described just above in Section 5.4:

These charges will be allocated amongst the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day ~~on a monthly basis~~. In the event that the charges due from CAISO Debtors are higher than the payments due to CAISO Creditors, the CAISO shall allocate a payment to the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day ~~on a monthly basis~~.

Along the same lines, Section 11.29.7.3 provides that amounts debited or credited on an unscheduled directed settlement statement will be included on the next invoices or payment advices. The phrase at the end is unnecessary and should be deleted, as indicated:

11.29.7.3.5 Where an Unscheduled Directed Recalculation Settlement Statement indicates that the accounts of Scheduling Coordinators, CRR Holders, Black Start Generators, or Participating TOs should be debited or credited to reflect alterations to Settlements previously made under the CAISO Tariff, for those Scheduling Coordinators, CRR Holders, Black Start Generators, or Participating TOs affected by the additional Recalculation Settlement Statement, the CAISO will reflect the amounts to be debited or credited in the next scheduled weekly Invoice or Payment Advice ~~for the end of the month~~.

6.0 Issue Paper Topic: Visibility into Financial Condition of Load-Serving Customers

In 2021, an entity that served load in the CAISO balancing authority area filed for bankruptcy. CAISO had no advance notice about the financial difficulties facing this entity, which was insolvent and beyond rescue before CAISO learned of the issues. Such lack of notice poses a unique credit risk if a market participant serves retail

load because, in contrast to other type of market participants, significant time may be required to terminate service. Retail customers must be transferred to a different load-serving utility, which takes time and thus increases the risk of a payment default that could be spread to the market.

The urgent work required to avoid a default in 2021 likely could have been avoided if CAISO had the same level of visibility into the financial condition of the load-serving entity that it has currently into the financial condition of most other companies, including those that are publicly traded or have credit ratings. Though both types of disclosure are imperfect, they provide updates about the financial condition of a company at least quarterly, with more frequent updates about certain material developments.

Updates quarterly or more often would have provided CAISO with advance notice in 2021 of the load-serving entity's significant losses that dated back to the third quarter of 2020, almost three full financial quarters before its bankruptcy, as well as cash flow issues related to the Covid-19 pandemic. Advance notice would have allowed CAISO more time to address a potential default by taking actions earlier in the process, such as increasing collateral requirements for the relevant scheduling coordinator.

For these reasons, CAISO is seeking comment on how to best ensure that it can obtain financial disclosure about all load-serving customers in the CAISO balancing authority area, comparable to the disclosure provided by publicly traded companies or companies with credit ratings.

CAISO recognizes that financial disclosure can impose a burden on its market participants. Accordingly, it seeks comment on a way to require such disclosure under its tariff while minimizing any additional burden on market participants. We note that one possibility would be to expand the scope of Section 12.1.1.5, which currently requires market participants that have an unsecured credit limit to notify CAISO about any "material change in financial condition."⁸

⁸ From Section 12.1.1.5: "Examples of a Material Change in Financial Condition may include, but are not limited to:

- a) A credit agency or Moody's Analytics equivalent rating downgrade to below investment grade;
- b) Being placed on a negative credit watch list by a major rating agency;
- c) A bankruptcy filing;
- d) Insolvency;
- e) The filing of a material lawsuit that could significantly and adversely affect past, current, or future financial results;
- f) Restatement of one or more financial statements for a prior year in a way that reduces the amount of unsecured credit that was previously provided;
- g) A default in another organized market for which any cure period has expired; or
- h) Any change in the financial condition of the Market Participant that exceeds a five (5) percent reduction in the Market Participant's Tangible

7.0 WEIM Decisional Classification

CAISO staff believes that the WEIM Governing Body has joint authority with the Board of Governors with respect to the tariff amendments proposed here.

The Board and the WEIM Governing Body have joint authority over any

proposal to change or establish any CAISO tariff rule(s) applicable to the EIM Entity balancing authority areas, EIM Entities, or other market participants within the EIM Entity balancing authority areas, in their capacity as participants in EIM. This scope excludes from joint authority, without limitation, any proposals to change or establish tariff rule(s) applicable only to the CAISO balancing authority area or to the CAISO-controlled grid.

Charter for EIM Governance § 2.2.1. All of the tariff rule changes proposed in this initiative would be “applicable to EIM Entity balancing authority areas, EIM Entities, or other market participants within EIM Entity balancing authority areas, in their capacity as participants in EIM.” None of the proposed tariff rules would be applicable “only to the CAISO balancing authority area or to the CAISO-controlled grid.” Accordingly, the items that require approval from the Board fall entirely within the scope of joint authority.

Stakeholders are encouraged to submit a response to the WEIM classification of this initiative as described above in their written comments, particularly if they have concerns or questions.

8.0 Next Steps

CAISO will hold a call to discuss this paper on Tuesday, October 3, 2023 at 1:00 pm. Written comments will be due by October 17, 2023.

Event	Date
Stakeholder call to discuss this paper	October 3, 2023
Comments due	October 17, 2023
Phase 1 Decision during Meeting of WEIM Governing Body and Board and Governors	November 7-9, 2023
Phase 2 begins, focused on visibility into financial condition of load (Section 6)	January 2024

Net Worth or Net Assets for the Market Participant’s preceding fiscal year, calculated in accordance with generally accepted accounting practices.”

Attachment D – Board Memo

Tariff Amendment – Billing, Payment, and Credit Enhancements

California Independent System Operator Corporation

October 11, 2024



Memorandum

To: ISO Board of Governors and Western Energy Imbalance Market Governing Body

From: Roger E. Collanton, Vice President, General Counsel and Chief Compliance Officer

Date: November 1, 2023

Re: **Decision on Billing, Payment and Credit Enhancements Phase 1**

This memorandum requires ISO Board of Governors and WEIM Governing Body action.

EXECUTIVE SUMMARY

This initiative proposes enhancements to the process of billing and paying market participants. It focuses on enhancing the ISO's ability to handle defaults on market payments, in order to reduce payment risk and costs for market participants.

Avoiding default losses is important for the success of the market. Every week, the ISO issues invoices to market participants who are net debtors for the relevant period – purchasers of energy, for example – and uses the funds collected to pay market participants that are net creditors, such as suppliers of energy and other services. In 2022, more than \$10 billion in payments cleared through this process. If a market participant were to default on its invoice to the ISO, the result could be a loss that the ISO would charge to other market participants, including participants in the Western Energy Imbalance Market (WEIM) or, in the future, Extended Day-Ahead Market (EDAM). A loss could be permanent or only a temporary delay of payment while the ISO pursues collection. The ISO has several tools to prevent defaults and collect debts, the most important of which is the credit program and the collateral that market participants must post to assure payment of their obligations.

The ISO has a strong record, paying market participants in full and on time for the last 22 years. During this period, the ISO has not needed to spread any kind of default loss to market participants, despite more than 20 market participants filing for bankruptcy or otherwise becoming insolvent.

Striving for continuous improvement, in 2021 Management began a review the rules around billing and payment, evaluating the possible effect of a period of sustained high prices for energy, as had happened in other electricity markets, and other stress on market participants' financial health. During the evaluation of these issues, a minor market participant defaulted on a payment to the ISO, which pointed to other areas for possible improvement.

Based on this review, Management proposes a set of improvements through tariff amendments to reduce the risk of payment defaults and enhance the ISO's ability to respond to any defaults that may occur. The proposed changes would also allow the ISO to authorize new methods of electronic payment and clarify relevant tariff language.

In addition to these proposed improvements, the ISO is separately considering whether additional rule changes are needed to enhance the ISO's visibility into the financial condition of load-serving entities in the ISO's balancing authority area. The ISO requested and received comments on this issue, and will continue to consider this issue in phase 2 of this stakeholder process in 2024.

Moved, that the ISO Board of Governors and WEIM Governing Body approve the proposed enhancements to the rules about billing, payment and credit as described in the memorandum dated November 1, 2023; and

Moved, that the ISO Board of Governors and the WEIM Governing Body authorize Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the change proposed in this memorandum, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Commission guidance in any initial ruling on the proposed tariff amendment.

DISCUSSION AND ANALYSIS

Management is proposing several tariff amendments that address discrete aspects of the billing and payment process. The proposed amendments fall in four general categories:

1. Preventing payment defaults from becoming losses

Increasing financial resources available to cover potential defaults. FERC requires ISOs and RTOs to have a "minimum capitalization requirement" for any market participant that engages in settlement and billing. The ISO's basic requirement is that market participants must have either total assets exceeding \$10 million or a tangible net worth exceeding \$1 million. Smaller entities that do not meet this requirement may instead post additional cash above and beyond any collateral required based on their market activity. The ISO proposes to adjust this rule so that a small entity that satisfies the minimum capitalization requirement only by virtue of posting additional cash must maintain the full cash posting with the ISO until it is able to meet the capitalization requirement in a different way. Specifically, the rule for smaller participants allows them

to engage directly in settlement and billing by posting an additional \$500,000 cash. There is an exception to this rule, however, which allows a reduction of the posting to \$100,000 if the market participant maintains a low level of market activity for six months. Management proposes to eliminate this exception, and thus require entities that avail themselves of the posting alternative to maintain the full \$500,000 posting.

The proposal stems from the September 2022 payment default by a small market participant, which chose to walk away from its market obligations and cash deposit and cease operating. This was one indication that the current requirement is insufficient. In the process of developing this proposal, the ISO determined that its requirement is lower than other ISOs and RTOs, which generally require \$500,000 for entities that are authorized to hold congestion revenue rights (CRRs) or participate in virtual bidding. Rather than adopt a rule that imposes different financial postings for different participants, Management proposes a single rule for all market participants, which will be easier to administer.

Improving the ISO's ability to collect from bankrupt market participants. Management proposes to add tariff rules that designate one agreement between the ISO and market participant to control all settlement, billing and payment when there are multiple agreements with the ISO that could govern different aspects of the payment relationship. Designating one of these agreements as governing will improve the ISO's ability to collect amounts due from a bankrupt market participant using the doctrine of recoupment, which does not require advance authorization from the bankruptcy court. In addition, this change reduces the risk of unnecessary litigation over which contract governs the amount due.

2. Mitigating the harm to the market after a default

Enabling more effective use of reserve accounts. The tariff establishes two reserve accounts to hold funds that can be used to help clear the market after a payment default: the "CAISO Reserve Account" and the "Penalty Reserve Account." These reserve accounts have played an important role in the ISO's record of avoiding even temporary delays of payment going back to 2001, because they provide funds to pay market participants while the ISO collects from the defaulting party. The CAISO Reserve Account holds approximately \$1.8 million, and the Penalty Reserve Account holds approximately \$40,000.

Management proposes two changes that would enable the ISO to use these reserve accounts more effectively to minimize any losses. First, the use of the reserve account funds should be discretionary, unless the accounts contain funds sufficient to cover the entire default amount. The tariff currently indicates that the use of the reserve accounts is mandatory when payment is not received. This practice works well when reserve account balances are sufficient to cover the payment default and clear the market. But if there were a large default that exceeds the balance in the reserve accounts, mandatory use of the accounts would deplete the reserve accounts without preventing a payment shortfall. The ISO thus would be required to allocate the shortfall to market participants,

which would impose a significant administrative burden on both the ISO and market participants. If further defaults were expected, which is likely in certain bankruptcies, it could be more efficient for the ISO to use the reserve accounts only when they can prevent any shortfall for the weekly payment cycle, and avoid a need to allocate losses for that week. For these reasons, Management proposes that the use of the funds in the reserve accounts should be discretionary when they are insufficient to prevent a shortfall for that payment cycle.

Second, Management proposes to clarify the rules about replenishment of the reserve accounts. The CAISO Reserve Account covers cash flow problems temporarily, but does not cover losses permanently, subject to a minor exception proposed below. Accordingly, if the ISO cannot collect a debt covered by the CAISO Reserve Account, the account must be replenished by allocating the loss to market participants. The issue is the timing of this replenishment. The ISO's historical practice has been to wait to replenish the CAISO Reserve Account until it becomes clear the debt is uncollectible. This avoids the need to allocate the debt to the market, and then repay the market, which would incur significant administrative costs unnecessarily. There is tariff language, however, that could be read to require the ISO to replenish the CAISO Reserve Account within weeks after a default. Such a practice would be inefficient if the default amount remained collectible, such as when the ISO is holding collateral to cover the default but is waiting for bankruptcy court permission to apply it. To avoid both possible ambiguity and the possible need to allocate losses inefficiently, Management proposes to provide that the CAISO Reserve Account must be replenished only when the ISO concludes that the remaining debt is uncollectible.

The replenishment rule for the Penalty Reserve Account is different. While this account would be replenished if the ISO collects a debt, it is not replenished otherwise – i.e., by an allocation of the loss to market participants. This is because the Penalty Reserve Account is funded by penalties assessed to market participants that paid or posted collateral late, and replenishing it would spread these penalties to others unfairly. This intention is explained in the original FERC filings, but not reflected clearly in the tariff language. Management proposes to clarify this language.

Allocating losses among market participants fairly and efficiently. The tariff includes a process and a formula for allocating any losses to market participants according to their level of market activity. At the beginning of every financial quarter, the ISO calculates new “allocation percentages” based on data about market and payment activity. Presently, the tariff states that any losses will be allocated according to “the most current” allocation percentages. Management's review identified a possible negative outcome from this rule. In the case of an adjustment late in the two-year settlement cycle, this rule might result in allocating default losses to new market participants that entered the market only after the bankruptcy filing or insolvency event that is the cause of the loss being allocated. To avoid this possibility and help attract new participants after a period of financial stress, Management proposes to amend the tariff to specify that a loss will be allocated according to the percentages in effect at the time the bankruptcy or insolvency began.

Management also proposes to amend the tariff rules about the data to be used in calculating the allocation percentages so that the allocation is based on more current data. The current tariff rules preclude the ISO from using data from the two most recent quarters, because that data is subject to revision. Management proposes to include the data from the next-to-last quarter, even though that data is subject to revision, because it better reflects the level of market activity.

In addition, Management proposes to clarify rules about how, after a default loss is allocated to market participants, the ISO uses funds it collects from the defaulting market participant. Currently, the tariff addresses the payment priorities for such funds in several different sections that focus on different aspects of the issue. Management's proposed clarification is intended to avoid disputes about who should receive payment. The proposed rule is that, after paying any defaulted grid management charge and other internal accounts, market participants will be repaid beginning with those that were allocated losses on the oldest unpaid invoice.

Using "separate invoicing" to appropriately allocate certain types of possible losses. Two of the proposals concern "separate invoicing." Any default losses from ordinary market invoices are allocated across the entire market. In special circumstances, however, the ISO may invoice certain charges and credits separately, so that any default loss would be allocated only to specific participants. Historically, this practice has been used when the ISO is recalculating settlements from old trading days, so that any payment defaults would be allocated to the market participants from the relevant time rather than current participants, who may not have been involved in the transactions. The proposed changes would authorize separate invoicing for two types of charges:

- Penalties for late payment or late collateral posting, at the discretion of the ISO, so that any expected losses would be allocated to the Penalty Reserve Account rather than to market participants; and
- Charges for black starts services, consistent with the ISO's Black Start Agreements, which contemplate that any losses would be allocated between the parties to the agreement.

Recalculation of old trading days – authorizing write off of small uncollectible amounts. As noted just above, the ISO occasionally must issue invoices for adjustments to settlements that are more than two years in the past, and thus outside the normal settlement cycle. This happened recently after the resolution of a long-running complaint proceeding at FERC. On such "out-of-cycle" invoices, Management proposes to authorize the ISO to write off as uncollectible a small amount, up to a total of \$2,000, if the cost of further collection efforts would exceed the benefit to the market. In this case, market creditors would receive funds from the CAISO Reserve Account. Currently, the tariff requires the ISO to either collect the full amount due or allocate any uncollectible amounts to the market. Collection can be time-consuming for out-of-cycle

invoices, however, because some participants have left the market or ceased its business. The proposed change would authorize the ISO to avoid collection efforts that would be inefficient without also incurring the administrative expense, for both the ISO and market participants, of allocating a small shortfall.

3. Authorizing possible new methods of payment

Management proposes to amend the tariff to allow it to authorize payment on market invoices by any electronic means specified in a Business Practice Manual. The tariff currently requires payment by ACH or FedWire only. This change would enable the ISO to authorize new payment systems, including potentially the FedNow system which Management has been evaluating.

4. Clarifying other tariff provisions about billing and settlement

Finally, Management proposes to clarify or correct tariff language in a way that does not reflect a change in policy or practice, as follows:

- Expressly authorizing use of the CAISO Reserve Account to resolve small imbalances that result from the elimination of invoices less than \$10;
- Adjusting the definition of “settlement statement” to include new statements that become effective in 2021;
- Combining two tariff provisions that both discuss the basis of billing and payment;
- Clarifying terminology to distinguish billing and payment from settlement, which is an accounting exercise distinct from any flow of funds; and
- Deleting outdated tariff language about billing on a monthly basis.

POSITIONS OF THE PARTIES

The ISO posted its draft final proposal and issue paper on September 26, 2023. On October 3, the ISO held an online meeting with 49 stakeholder participants, during which the ISO presented the proposals and responded to questions. Stakeholders expressed no objections to these proposals either during the meeting or later, in written comments.

Written comments submitted by stakeholders were focused exclusively on the issue paper topic about visibility into the financial condition of load-serving entities in the ISO balancing authority area. As noted above, the ISO will further consider that issue in 2024.

CONCLUSION

Management requests the ISO Board of Governors and WEIM Governing Body approve the proposals described in this memorandum. The proposed rules will improve the ISO’s ability to prevent a payment default and to respond if one occurs, thereby mitigating possible losses that would be spread to market participants.