



California Independent
System Operator Corporation

June 30, 2011

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

**Re: Credit Reforms in Organized Wholesale Electric Markets
ISO Compliance Filing
Docket No. ER11-____-000**

Dear Secretary Bose:

The California Independent System Operator Corporation (ISO)¹ hereby submits this filing to comply with the credit reform requirements of Commission Order Nos. 741, 741-A, and 741-B (credit reform orders), which were issued in Docket No. RM10-13.² The instant filing includes proposed revisions to the ISO's existing settlements cycle and credit policy in the ISO tariff to satisfy the requirements of the credit reform orders.

I. INTRODUCTION

A. The Credit Reform Orders

The ISO supports the Commission's stated goal in the credit reform orders of adopting uniform credit policies to be used in organized wholesale electric power markets. The Commission has a statutory mandate to ensure that all

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

² *Credit Reforms in Organized Wholesale Electric Markets*, Order No. 741, FERC Stats. & Regs ¶ 31,317 (2010), *order on reh'g*, Order No. 741-A, FERC Stats. & Regs ¶ 31,320, *order denying reh'g*, Order No. 741-B, 135 FERC ¶ 61,242 (2011).

rates charged for the transmission or sale of electric energy in interstate commerce are just, reasonable, and not unduly discriminatory or preferential.³ Pursuant to that mandate, the Commission should ensure that clear and consistent credit practices are implemented in organized wholesale electric power markets operated by ISOs and RTOs.

Clear and consistent credit practices assist the ISOs and RTOs in balancing the management of risk and credit in the markets they operate. If access to credit is too easily obtained, the markets become exposed to defaults and customers bear the burden of those costs. As the Commission correctly noted in Order No. 741, defaults not supported by collateral are socialized among all other market participants in the markets.⁴ However, if access to credit is too restrictive, competition is reduced and entry into the markets is unnecessarily limited.

The ISOs and RTOs, in collaboration with their respective stakeholders, have developed credit practices separately over time for their organized wholesale electric markets. This has consequently led to some varying credit practices. Correctly, the Commission identifies that because of the varying requirements and because a participant (although not necessarily a participant in all markets) can participate in more than one region or market, a default in one market could weaken that participant and have consequences in other markets. Thus, credit practices in all ISOs and RTOs may only be as strong as the weakest credit practice.⁵ The credit reform orders address these issues, which became more pressing after the credit crunch of 2008 and subsequent events.⁶

As discussed further below, the credit reform orders directed each ISO and RTO to submit a compliance filing to include the following provisions in its tariff or to explain how its tariff already includes these provisions:

- (1) shortened settlement timeframes where the billing and payment period are no more than seven days each;
- (2) limits on unsecured credit of no more than \$50 million per market participant and no more than \$50 million per corporate family;

³ 16 U.S.C. §§ 824d, 824e (2006).

⁴ Order No. 741 at P 2.

⁵ *Id.* at P 3.

⁶ *Id.* at PP 4-10.

- (3) elimination of unsecured credit in all financial transmission rights (including congestion revenue rights) markets;
- (4) prohibition of the use of netting and set-offs (to be addressed in a subsequent compliance filing, as discussed below);
- (5) establishment of minimum criteria for market participation;
- (6) clarification of when organized market administrators may invoke a “material adverse change” to demand additional collateral;
- (7) inclusion of a standard two-day period for curing collateral calls;
and
- (8) application of the directives in the credit reform orders to all market participants without any exemptions.

In Order No. 741, the Commission established June 30, 2011 as the due date for the ISOs and RTOs to submit their compliance filings, with any tariff revisions included therein to take effect on October 1, 2011.⁷ Subsequently, in Order No. 741-A, the Commission granted an extension for the ISOs and RTOs to file any tariff revisions required to comply with the Commission’s directives on the sole issue of prohibiting the use of netting and set-offs; the ISOs and RTOs must submit those compliance filings by September 30, 2011, with the relevant tariff revisions to take effect January 1, 2012.⁸

B. The California ISO’s Process for Complying with the Credit Reform Orders

On February 1, 2011, the ISO initiated a stakeholder process to develop the revisions to the ISO tariff required to comply with the credit reform orders.⁹ The stakeholder process began on February 1 when the ISO posted an issue paper on the requirements of Order No. 741 for stakeholder review.¹⁰ Based on the comments received from stakeholders on the issue paper, the ISO prepared and posted a straw proposal for complying with the credit reform orders on March 21, 2011. The ISO posted a final draft proposal for complying with the credit

⁷ See *id.* at PP 32, 52, 54, 75, 118, 132, 150, 159.

⁸ Order No. 741-A at P 25.

⁹ Materials related to the stakeholder process are available on the ISO’s website at <http://www.caiso.com/docs/2003/04/21/2003042117001924814.html>.

¹⁰ At that time only Order No. 741 had been issued. Order Nos. 741-A and 741-B were issued during later points in the stakeholder process.

reform orders on April 18, 2011, and posted draft tariff language to comply with the credit reform orders on May 25, 2011. Each of these steps in the stakeholder process was followed by an opportunity for written stakeholder comments. The ISO held a total of four meetings and conference calls with stakeholders. On May 18, 2011, the ISO governing board authorized ISO management to make all necessary and appropriate filings to comply with the credit reform orders.¹¹

II. TARIFF REVISIONS TO COMPLY WITH THE CREDIT REFORM ORDERS

A. Shortening the Settlement Cycle

In Order No. 741, the Commission observed that there is a correlation in the wholesale electric markets between reducing the length of the settlement cycle from the date service is provided to the date payment for the service is made and reducing the magnitude of the costs attributable to a financial default by a market participant.¹² The Commission noted that no correlation exists, however, between the length of the settlement cycles for the ISOs and RTOs. Each ISO and RTO has a different length settlement cycle, which results in varying levels of credit risk exposure across the county for participants in the wholesale electric markets.¹³ In order to reduce default risks and decrease the amount of collateral market participants must post, Order No. 741 directs each ISO and RTO to submit a compliance filing by June 30, 2011 that proposes tariff revisions to establish a settlement cycle with a billing period of no more than seven days and settlement period of no more than seven days after issuance of bills.¹⁴

In accordance with the Commission's directive, the ISO proposes a significantly shorter settlement cycle than is currently in place. At present, the ISO publishes a settlement statement seven business days after each trading day ("T+7B"). The settlement statement details transactions and the related charge components (positive and negative) for the trading day. Based on the settlement statements, the ISO issues invoices on a semi-monthly basis -- the invoice for the first billing period of the month (first through fifteenth day of the month) is issued seven business days after the end of the period and the invoice for the second billing period of the month (sixteenth through the last day of the

¹¹ Materials related to the ISO governing board's authorization are available on the ISO's website at <http://www.caiso.com/2b7b/2b7b91b44230.html>.

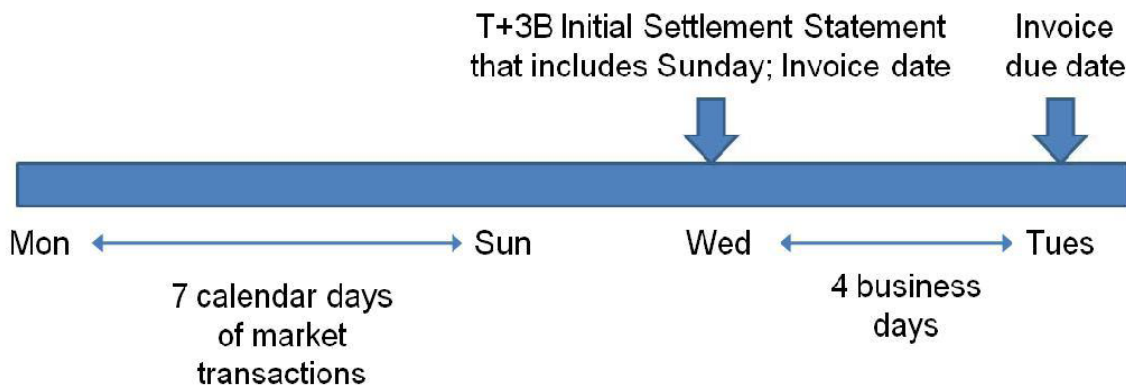
¹² Order No. 741, P. 17.

¹³ *Id.* at P. 16, 18.

¹⁴ *Id.* at P. 32.

month) is issued seven business days after the end of the month. Invoice payments are due to the ISO five business days after the invoice is issued, and the ISO disperses the funds the same day.

The settlement cycle proposed by the ISO in this compliance filing provides for a settlement statement to be issued three business days after each trading day (“T+3B”). The ISO will then aggregate the settlement statements and invoice seven calendar days of market transactions (Monday through Sunday) on the following Wednesday, with payment due on the following Tuesday, four business days after the invoice is issued. The ISO submits that this settlement cycle complies with the directives in Order No. 741 and will put in place a process for weekly billing and settlement that is just and reasonable for all market participants. In addition, the overall proposal has widespread support by stakeholders. The graphic below illustrates the proposed timeline.



The billing period will consist of seven trading days, Monday through Sunday of each week. The invoice for that weekly billing period will be issued three days later, on the following Wednesday. The average time that the trading days in each weekly billing period will pend before they are invoiced will be six days. For Monday trading days, nine days will lapse prior to invoicing, which is the longest pendency period, while for Sunday trading days, the lapse will be only three days and the Sunday trading days will be invoiced on the same day that their initial settlement statement issues. The ISO considered issuing the initial settlement statement sooner than three business days after the trading day, but concluded that a lag of only one or two days would not allow sufficient time for the ISO to complete after-the-fact data processing and conduct cursory data validations necessary to ensure reasonable and accurate settlement of market transactions. More specifically, the ISO pulls market data into one calculation engine, makes manual workaround adjustments to the data, runs the calculation engine and then transfers that data to Settlements. Settlements takes

the market data along with various data from other sources and calculates the settlements charges. There are various control points in those process steps to catch system processing or data issues. Publishing statements earlier than T+3B limits the ability of the ISO to effectively manage those control points. In addition, additional hardware and software upgrades would have been necessary.

The ISO selected a structured billing period, with Wednesday as fixed day for publishing invoices throughout the year, because issuing the invoice on Wednesday will rarely conflict with a holiday and will result in a payment calendar that has the least amount of variability for stakeholders. In the event that Wednesday is a holiday, the ISO will issue the invoice on the next business day and maintain the same four business day invoice clearing timeframe. Thus, an invoice published on Thursday will be due the following Wednesday (provided the following Wednesday is not a holiday).

This shorter settlement cycle will be achieved by implementing four key changes to the ISO's existing billing and invoicing processes. First, the ISO proposes to amend ISO Tariff Section 11.29.7, Settlements Cycle, to move forward issuance of the initial settlement statement from seven business days after the trading day to three business days after the trading day. Issuing the initial settlement statement at T+3B, rather than T+7B under the current process, is necessary in order to accommodate preparation and issuance of the weekly invoice.

Second, the ISO proposes to base the quantity values in initial settlement statement T+3B only on estimated meter data calculated by the ISO. Existing ISO Tariff Section 10.3.6.1 provides that scheduling coordinators must submit actual or estimated settlement quality meter data for the entities they represent for calculation of the initial settlement statement. In the absence of such data, the ISO will estimate the entity's settlement quality meter data for any outstanding demand or generation. The ISO proposes to eliminate the requirement that stakeholders submit actual or estimated settlement quality meter data for the initial settlement statement. The ISO will add ISO Tariff Sections 10.3.6.1, No Meter Data Submission for Initial Settlement Statement T+3B, and Section 11.1.4, CAISO Estimates for Initial Settlement Statement, to provide that initial settlement statement T+3B will be based entirely on ISO estimated meter data. True-up of the ISO estimated meter data to actual settlement quality meter data will occur on the next recalculation settlement statement.

The ISO is proposing to change to an all-estimated initial settlement statement in order to expedite preparation and issuance of that statement and the weekly invoice. The ISO is not confident that all Scheduling Coordinators will have sufficient time for processing actual or estimated settlement quality meter data by the day following the trading day, and then that the ISO will be able to

validate and process the meter data in time to consistently include it on the T+3B settlement statement. Before scheduling coordinator data can be used to calculate quantity values for the initial settlement statement, the ISO must have a consistent amount of meter data to include in the settlements process. The meter data estimation process already established for the payment acceleration settlement timeline is based on the available data from the day-ahead and real time markets. The ISO performed a study utilizing historic meter data that showed the ISO estimated meter data to be more accurate than estimated meter data submitted by scheduling coordinators. Therefore, to establish consistent and more accurate results, the ISO proposes to estimate all meter data associated with the T+3B initial statement.

Although stakeholders favored moving the initial settlement statement forward to T+3B, there were differing views on using all-estimated meter data for the quantity values. A few stakeholders expressed concern that they would not be able to compile meter data or prepare meter data estimates for submission to the ISO in time for those values to be reflected on the earlier initial settlement statement at T+3B. Other stakeholders claimed that scheduling coordinators can submit more accurate generation meter values or estimates and/or that the ISO should permit such data to be submitted and should use it in the calculation.

The ISO believes that its proposal to use only ISO estimated meter data on the initial settlement statement is reasonable and appropriately balances these differing stakeholder views. The use of ISO estimates will expedite the settlement process by reducing the time that the ISO would otherwise utilize in reviewing and validating the meter data submitted by scheduling coordinators. If some scheduling coordinators are rushed to compile and submit their settlement quality meter data to the ISO by around T+1B in order for the data to be used in the calculation of initial settlement statement T+3B, there is potential for the ISO to encounter significant data problems that require correction before the statement issues in order to avoid an adverse market impact. If the problems cannot be resolved prior to T+3B, the initial settlement statement may be delayed, which could in turn affect the timely production of the weekly invoice. This is particularly true if the problems are inherent in scheduling coordinator data for a Sunday trading day because the initial settlement statement for that day is issued the same day as the weekly invoice that includes the Sunday trading day. In addition, using only ISO estimates will provide a more level playing field for all scheduling coordinators. The same methodology will be used for the estimations, rather than relying on estimates from scheduling coordinators that would likely result from multiple different methodologies and assumptions. Accordingly, implementing a streamlined process based on ISO estimation is an important step in enabling the ISO to meet the settlement requirements established in Order No. 741 and timely issue the initial settlement statement at T+3B and the weekly invoice.

Further, the ISO will calculate the ISO estimated meter values for the initial settlement statement T+3B using the same overall methodology that is already contained in the tariff. Proposed Tariff Section 11.1.4, CAISO Estimates for Initial Settlement Statement T+3B, will incorporate the methodology in existing Tariff Section 11.1.5 to estimate settlement quality meter data for metered generation, metered demand, and proxy demand resources when scheduling coordinators fail to submit the required data. It should be noted that Tariff Section 11.1.4 will depart slightly from this methodology for a limited number of charge codes that have a very minor impact on the market. The ISO will not estimate unaccounted for energy, the proxy demand response default load adjustment, the rescission of payments for regulation up and regulation down, or the MSS deviation penalty for inclusion on the initial settlement statement. The ISO does not have the processing time or available data to produce sufficiently reliable estimates for these charge codes.

The existing estimation methodology has been utilized successfully, without controversy or questions about its accuracy, since it was implemented in conjunction with the ISO's payment acceleration initiative on November 1, 2009. There is no reason to expect that the methodology will now produce less accurate estimates when used to calculate meter values for an all-estimated settlement statement.

Moreover, to the extent that variances occur between the ISO estimates and subsequently available actual meter values, they will be captured as incremental changes between the initial settlement statement and the subsequent recalculation settlement statements and will be reconciled with interest. At present, the recalculation settlement statement that follows the initial settlement statement is issued thirty-eight business days after the trading day. As a result of a stakeholder initiative the ISO has just completed, the issuance of the first recalculation settlement statement will be moved forward to just twelve business days after the trading day ("T+12B").¹⁵ Assuming that the filing resulting from that initiative is accepted by the Commission, the differences between the ISO's estimated meter data on initial settlement statement T+3B and available actual data will be reconciled much earlier, on recalculation settlement statement T+12B; they will not pend for a lengthy period of time. In addition, they will be subject to interest.

¹⁵ In the Settlements Process Timeline Change stakeholder initiative, the ISO considered changes that will shorten the settlements cycle and enhance the settlements process in addition to the directives in Order No, 741 to establish weekly billing and invoicing periods. The ISO has completed that initiative and expects to seek approval of the final recommendation by the ISO governing board at its meeting on July 13-14, 2011. The ISO then anticipates filing the necessary tariff amendments by the end of July and requesting Commission acceptance of the modifications so they may become effective on October 1, 2011 along with the tariff amendments proposed in this compliance filing. Information pertaining to this initiative is posted the ISO's website at <http://www.caiso.com/2b6b/2b6b81c056f40.html>.

Several stakeholders objected to the application of interest for variances between the T+3B and the subsequent recalculation settlement statement that are attributable to ISO estimations. They claimed that assessing interest would “punish” stakeholders for ISO errors. The ISO disagrees with this argument. The application of interest is not punitive. It is necessary in order to account for the time value of money – those stakeholders with positive incremental changes were underpaid on the initial settlement statement and are entitled to receive interest to compensate them for the time value of money on the short funds; while those stakeholders with negative incremental changes were overpaid on the initial settlement statement and should pay interest to account for the time value of money for the excess funds they held. Importantly, the Commission’s decision on the ISO’s payment acceleration tariff filing expressly supported this economic principle. The Commission stated that “compensating scheduling coordinators for the time value of money is an important objective throughout the proposed settlement process.”¹⁶

The third significant change from the ISO’s existing billing and invoicing processes is that initial settlement statement T+3B will not be disputable. The ISO proposes to amend Tariff Section 11.29.8.2, Review of Initial Settlement Statement T+3B, to provide that the statement will not be subject to dispute for any terms it contains and that it will be financially binding on the scheduling coordinator, CRR holder, black start generator, or participating TO to which it relates. Because that statement will be calculated using ISO estimates of meter values that will be reconciled to actual data on subsequent recalculation settlement statements, any calculational differences on the initial settlement statement will be automatically adjusted. There is no need for a separate dispute process to review and correct errors. Market Participants will be able to review the first recalculation settlement statement and submit relevant disputes for ISO review and resolution.

Fourth, the ISO proposes to amend Tariff Section 11.29.10 to shorten the period between the date the invoice is issued and the date payment is due from five business days to four business days. The invoices will be published each week on Wednesday and the payment due date will be the following Tuesday. As discussed above, this invoice period is designed to avoid, as much as possible, the invoice date or payment due date falling on a holiday. If the fourth business day after the invoice date falls on an ISO holiday, the payment date for the invoice will likewise be extended to the next business day. In addition the invoice period is designed to establish a structured settlement cycle that provides

¹⁶ *Cal. Indep. Sys. Operator Corp.*, 128 FERC ¶ 61,265 (2009) at P. 53.

certainty to market participants in the timing of the payments they will remit and receive.

Most stakeholders support the proposed invoice period. A few stakeholders requested that the ISO issue invoices no later than noon on the invoice publishing date. The ISO does not propose to amend the tariff to adopt this requirement. While the ISO endeavors to publish invoices as early in day as possible, it receives settlements data pertinent to an invoice even on the invoice date, and reconciles that data before publishing the invoice. The ISO believes that taking the time to reconcile the latest data and include it on the invoice so that the invoiced amounts are as current and accurate as possible provides a greater benefit to the market than issuing an invoice earlier in the day that is incorrect.

For these reasons, the ISO requests that the Commission accept this proposed settlement cycle as complying with the Commission's directive in Order No. 741 to establish a billing period of no more than seven days and settlement period of no more than seven days after issuance of bills.

B. Limit on Unsecured Credit

In the credit reform orders, the Commission determined that the allocation of unsecured credit should be no more than \$50 million per market participant, and no more than \$50 million per corporate family.¹⁷ Section 12.1.1 of the existing ISO tariff already limits each market participant's maximum unsecured credit amount to \$50 million. To comply with the credit reform orders, the ISO proposes to revise Section 12.1.1 to include language that provides that the \$50 million credit limit applies to corporate families. In connection with this proposed tariff change, the ISO also proposes to modify Section 12.1.1.4 of the tariff to delete language stating that the ISO may (but is not required to) determine the maximum unsecured credit limit specified in Section 12.1.1 based on the combined activity of market participant affiliates.

C. Elimination of Unsecured Credit for Financial Transmission Rights Markets

The credit reform orders eliminated unsecured credit for financial transmission rights markets or for their equivalent in the ISO, congestion revenue rights markets.¹⁸ This Commission directive requires candidate and current congestion revenue rights holders to post a secured form of collateral such as a letter of credit, escrow account or cash to meet their congestion revenue right pre-auction credit requirements and holding credit requirements.

¹⁷ Order No. 741 at P 52; Order No. 741-A at P 9; Order No. 741-B at PP 8-12.

¹⁸ Order No. 741 at PP 70, 75; Order No. 741-A at PP 14-16.

The ISO proposes to modify Sections 12.6.1, 12.6.2, 12.6.3.1, and 12.6.3.4 of its tariff to implement the Commission's directive that candidate and current congestion revenue rights holders must post a secured form of collateral. In order for the ISO to implement this directive, a candidate congestion revenue rights holder must ensure it has sufficient secured collateral available to participate in the auction.

In order to satisfy this elimination of unsecured credit for financial transmission rights and congestion revenue rights, the ISO has revised Section 12.6.2 of its tariff to require congestion revenue rights holders satisfy the credit requirements of Section 12.1 of the tariff and to have secured credit as described in 12.1.2 of the tariff.

D. Minimum Criteria for Market Participation

The Commission determined in the credit reform orders that each ISO and RTO should include language in its tariff that specifies minimum participation criteria for participation in the organized wholesale electric market. By including specific criteria, the Commission concluded that it will protect the markets from risks posed by under-capitalized participants or those who do not have adequate risk management procedures in place. The Commission did not prescribe the criteria, but suggested that minimum criteria include the capability to engage in risk management or hedging, including outsourcing of this capacity, with periodic compliance verification to ensure that each market participant has adequate risk management capabilities and adequate capital to engage in trading with minimal risk to the market as a whole.¹⁹

The Commission directed each ISO and RTO to develop these criteria through its stakeholder process. Based on the stakeholder process described above, the ISO has revised Section 12.1 of its tariff to explicitly set forth the minimum criteria requirements for entry into the ISO markets.

Revised Section 12.1 provides that each prospective or existing market participant must provide an annual certification representing that it: (a) has 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 ISO, custody and investment risk, concentration risk, default

¹⁹ Order No. 741 at PP 131-33; Order No. 741-A at P 33.

risk, operation risk, market risk, and business risk; (b) has appropriate operating procedures and technical abilities to promptly and effectively respond to all applicable ISO communications and directions, including but not limited to the ISO's issuance of invoices and collateral requests to the market participant; and (c) has satisfied any applicable ISO training requirements.²⁰

In addition to the certification component, the ISO has added Section 12.1(ii) to the tariff to set forth certain capitalization requirements. Section 12.1(ii) requires a prospective or existing market participant to have at least \$1 million in tangible net worth or \$10 million in total assets, or to post a secured form of collateral that the market participant cannot use to meet any of its minimum credit requirements or collateral requirements as further described. In order to address concerns about barriers to entry into the market, while at the same time balancing the risk of adequate capitalization, the ISO developed the following methodology regarding secured collateral: if a prospective or existing market participant cannot meet the \$1 million requirement or the \$10 million requirement, then the entity must post \$500,000 in a secured form of collateral if the entity is a prospective or existing market participant with fewer than six (6) months of ISO market activity. Once the market participant has established a record with the ISO market and has complied with all credit policy requirements, then the secured form of collateral will be reduced to \$100,000 for an existing market participant with six (6) months or more of ISO market activity and whose highest estimated aggregate liability for the preceding six (6) months is less than or equal to \$100,000. The posting requirement remains at \$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. The ISO will review whether the prospective or existing market participant continues to satisfy the capitalization requirements set forth in Section 12.1(ii) every six (6) months.

Stakeholders were largely in favor of the ISO's proposed minimum participation requirements. The only notable stakeholder concern was raised by Olivine, Inc., through written comment in a letter dated May 13, 2011, as well as during the public comment period at the May 18, 2011 ISO governing board meeting. Olivine asserted that it and other similarly situated entities will be unable to participate in the ISO markets if the proposed capitalization requirements of the credit reform initiative are approved and implemented. Olivine stated that the initial requirement of posting \$500,000 for prospective

²⁰ The ISO has initiated a supplemental stakeholder process to develop a more robust verification component beyond what is proposed here. The ISO held an initial stakeholder call on June 24, 2011. On June 28, 2011, the ISO issued a market notice to notify market participants of (1) the publication of the new draft verification proposal, including an officer certification form, and (2) that the proposal will be discussed on a conference call scheduled for July 5, 2011. The ISO plans to seek Board approval on July 13 or 14 and submit the supplemental compliance filing to the Commission shortly thereafter.

participants was a barrier to entry and that even if the minimum collateral is reduced to \$100,000 after six months based on certain market activity, the amount is still excessive. The ISO believes its proposal to add new Section 12.1(ii) to the tariff strikes an appropriate balance and recognizes the needs of smaller market participants while maintaining some assurance that the market participant has adequate capitalization to continue its participation in the market. The ISO recognizes that the minimum criteria would create a barrier to entry for some entities, but it is necessary to reduce the risk of under-capitalized entities disrupting the market. However, ISO management committed to the governing board that we will monitor the market and concern regarding barriers to entry for smaller participants and be prepared to reassess this recommendation at a future date if it proves to inhibit meaningful participation by smaller market participants.

As a final component of the minimum criteria requirements for market participation, revised Section 12.1 also requires that each prospective or existing market participant meet the training requirements for scheduling coordinators or congestion revenue rights participants as set forth in Section 4.5.1 or Section 4.10.1, respectively. Revised Section 12.1 states that if any prospective or existing market participant fails to satisfy the requirements of Section 12.1, then the prospective or existing market participant will not be permitted to participate in the ISO market.

In connection with these proposed revisions to Section 12.1, the ISO also proposes to revise Section 12.5.1 of the tariff to state that the ISO may take the enforcement actions specified in Section 12.5.1 if a prospective or existing market participant that fails to satisfy all of the minimum participation requirements set forth in Section 12.1 does not cure that failure within thirty (30) days of notification of when the failure occurs.

E. Meaning of a “Material Adverse Change”

In Order No. 741, the Commission directed each ISO and RTO to specify in its tariff conditions under which the ISO or RTO would request additional collateral due to a “material adverse change.” The Commission did not require each ISO and RTO to create an exhaustive list, but rather an illustrative list of events that if they occurred would trigger an ISO or RTO to request additional collateral.²¹ In this regard, the Commission acknowledged the material adverse change language recommended by the ISO / RTO council as a good start, but noted that it generally included items that potentially lagged the events that constituted a material adverse change. The Commission encouraged the ISOs and RTOs, through their respective stakeholder processes, to identify more

forward-looking criteria that would allow an ISO or RTO to request collateral before a market participant is in financial distress.²²

The equivalent of a material adverse change under the ISO tariff is a material change in financial condition. To comply with the Commission's directives, the ISO has modified Section 12.1.1.5 of its tariff to include examples of material changes in financial condition as currently identified in its Business Practice Manual for Credit Management ("BPM") with further forwarding looking and other enhancements (*i.e.*, items (a), (f) and (g) listed below)). The new Section 12.1.1.5 provides examples of a material change in financial condition that include, but are not limited to, the following:

- (a) a credit agency or Moody's KMV 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 percent (5%) reduction in the market participant's tangible net worth or net assets for the market participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

These proposed revisions to Section 12.1.1.5 are largely in line with the ISO/RTO council's recommended language. Moreover, in accordance with Order No. 741, the ISO has included in Section 12.1.1.5 forward-looking metrics such as significant changes in Moody's KMV estimated default frequency and

²² Order No. 741 at PP 147-50.

Moody's KMV resultant equivalent rating. At this time, due to the lack of industry-specific standards about acceptable thresholds for credit default swaps and liquidity ratios for the various types of entities participating in the ISO market, the ISO proposes to enhance the existing language in Section 12.1.1.5 to make a Moody's KMV equivalent rating downgrade a type of material change in financial condition. Moody's KMV estimated default frequency is a measure of the probability that a firm will default over a specified period of time, typically one year. According to the Moody's KMV estimated default frequency model, a firm defaults when the market value of its assets (the value of the ongoing business) falls below its liabilities payable (the default point). Therefore, to remove any element of subjectivity, the ISO has further clarified that a material change in financial condition would result from a "credit agency or Moody's KMV equivalent rating downgrade to below investment grade."

In addition to including the Moody's KMV metric, the ISO proposes to further enhance Section 12.1.1.5 by including restatement of prior-year financials and a default in another organized market as conditions for types of material changes in financial condition. Invoking a material change in financial condition due to restatement of prior-year financials recognizes the fact that an unsecured credit limit may have been set based on prior-year financials and that restatement of those financials may result in a condition requiring reduction of an unsecured credit limit.

Finally, because ISO market participants or their affiliates may participate in other ISOs and RTOs, a default in another market may trigger a similar event in the ISO. Therefore, it is prudent for the ISO to be aware of such an event and take any appropriate actions to mitigate a similar, potentially disruptive event in the ISO market.

The ISO developed the proposed revisions to Section 12.1.1.5 in collaboration with its stakeholders and with other ISOs and RTOs. No party raised notable objections to the proposed revisions.

In Order No. 741, the Commission also directed the ISOs and RTOs to provide reasonable advance notice to a market participant, when feasible, when the ISOs and RTOs are compelled to invoke a material adverse change clause. The Commission stated that the notification should be in writing, contain the reason behind the invocation of the material adverse change clause, and be signed by a person with authority to represent the ISO or RTO in such actions.²³ To comply with this directive, the ISO proposes to modify Section 12.1.1 of its tariff to state that, in the event the ISO determines that the unsecured credit of a market participant must be reduced as a result of a subsequent review due to a

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Id. at P 151.

material change in financial condition, the ISO will notify the market participant of the reduction in writing and will provide the market participant with a written explanation of the reasons for the reduction, either in advance of the reduction if reasonably practicable or after the reduction was made if providing the written notification and explanation in advance is not reasonably practicable, as set forth in the BPM.

F. Grace Period to “Cure” Collateral Posting

The credit reform orders require a two-day grace period for curing collateral calls.²⁴ The current ISO tariff provides a three-day grace period for curing collateral calls. To comply with the Commission’s directive, the ISO has revised Sections 12.1.3.1.1, 12.4, 12.4.1, 12.4.2, and 12.5.2 of its tariff to allow market participants no more than two (2) business days to post additional collateral in the event of a collateral call or the occurrence of a material change in financial condition.

G. General Applicability

The Commission determined that the credit practices set forth in Order No. 741 would apply to all market participants without any exemptions.²⁵ Consistent with that Commission determination, the ISO does not seek an exemption to any of the Commission’s directives in this compliance filing.

III. COMMUNICATIONS

Communications regarding this filing should be address to the following individuals, whose names should be placed on the official service list established by the Secretary with respect to this submittal:

Nancy Saracino
General Counsel
Sidney Davies
Assistant General Counsel
Beth Ann Burns
Senior Counsel
Grace Arupo
Counsel
The California Independent System Operator
Corporation

²⁴ Order No. 741 at P 160; Order No. 741-A at P 35.

²⁵ Order No. 741 at P 165.

250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7144
Tel: (916) 608-7146
Tel: (916) 608-7107
Fax:(916) 608-7296
sdavies@caiso.com
bburns@caiso.com
garupo@caiso.com

IV. EFFECTIVE DATE

Pursuant to the directives Order No. 741 discussed above, the ISO proposes that the tariff revisions contained in this June 30, 2011 compliance filing be made effective on October 1, 2011.

V. SERVICE

The ISO has served copies of this transmittal letter and all attachments upon all parties on the official service list for Docket No. RM10-13, the Commission proceeding in which the credit reform orders were issued. In addition, the ISO is posting this transmittal letter and all attachments on the ISO website.

VI. ATTACHMENTS

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

Attachment A	Revised ISO tariff sheets to comply with the directives in the credit reform orders
Attachment B	ISO tariff revisions show in black-line format

VII. CONCLUSION

For the foregoing reasons, the Commission should accept the instant filing as satisfying the ISO compliance obligations with respect to the directives in the credit reform orders.

Respectfully submitted,

By: **/s/ Grace Arupo**

Nancy Saracino
General Counsel
Sidney Davies
Assistant General Counsel
Beth Ann Burns
Senior Counsel
Grace Arupo
Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 351-4400
Fax: (916) 351-4436
garupo@caiso.com

Attachment A – Clean Sheets

California Independent System Operator Corporation

Fifth Replacement Tariff

Credit Reforms Compliance Filing

June 30, 2011

* * *

10.2.1.3 Provision of and Access to Settlement Quality Meter Data

Scheduling Coordinators may obtain Settlement Quality Meter Data relating to the CAISO Metered Entities they represent by directly accessing the Settlement Quality Meter Data Systems as specified in the applicable Business Practice Manual.

- For CAISO Metered Entities, Revenue Quality Meter Data obtained by successfully polled meters will be validated, estimated and edited by the CAISO to produce Settlement Quality Meter Data (actual), which will be made available to Scheduling Coordinators within five (5) Business Days from the Trading Day (T+5B) and will be used in the Recalculation Settlement Statement T+7B calculation.
- In the event that Revenue Quality Meter Data remains unavailable at noon on the fifth Business Day after the Trading Day (T+5B) due to unsuccessfully polled meters or facility and/or systems failures, the CAISO will estimate Settlement Quality Meter Data for CAISO Metered Entities for any outstanding metered Demand and/or Generation for the Recalculation Settlement Statement T+7B calculation as provided in Section 11.1.5.
- If the CAISO is notified in accordance with Section 10.2.13.2 that the revenue quality meter for a CAISO Metered Entity requires repair, the CAISO will produce Settlement Quality Meter Data (actual) for that entity using the estimation procedures referred to in Section 10.2.9, which will be made available to the Scheduling Coordinator for the CAISO Metered Entity within forty-three (43) calendar days from the Trading Day (T+43C) and will be used in the Recalculation Settlement Statement T+38B calculation.

* * *

10.3.6 Settlement Quality Meter Data Submission

Scheduling Coordinators shall submit to the CAISO Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data, as provided in Section 10.3.6.2(a), for Scheduling Coordinator Metered Entities they represent for each Settlement Period in an Operating Day according to the timelines established in Section 10.3.6.2 and the CAISO Payments Calendar and as provided in the applicable Business Practice Manual. Scheduling Coordinators must also submit Settlement Quality

Meter Data (actual and Scheduling Coordinator estimated) on demand as provided in the applicable Business Practice Manual.

10.3.6.1 No Meter Data Submission for Initial Settlement Statement T+3B

Because Initial Settlement Statement T+3B is solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand and Generation, Scheduling Coordinators cannot submit Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for the entities they represent for purposes of the Initial Settlement Statement T+3B calculation.

10.3.6.2 Timing of Settlement Quality Meter Data Submission for Calculation of Recalculation Settlement Statement T+7B.

Scheduling Coordinators must submit Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO no later than noon on the fifth Business Day after the Trading Day (T+5B) for the Recalculation Settlement Statement T+7B calculation. Scheduling Coordinators cannot submit Estimated Settlement Quality Meter Data for Proxy Demand Resources.

- (a) In the absence of Actual Settlement Quality Meter Data, Scheduling Coordinators may submit Scheduling Coordinator Estimated Settlement Quality Meter Data using interval metering when available, sound estimation practices, and other available information including, but not limited to, bids, schedules, forecasts, temperature data, operating logs, recorders, and historical data. Scheduling Coordinator Estimated Settlement Quality Meter Data must be a good faith estimate that reasonably represents Demand and/or Generation quantities for each Settlement Period.
- (b) When Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data is not received by the CAISO for a Scheduling Coordinator Metered Entity within five (5) Business Days from the Trading Day (T+5B), the CAISO will estimate the entity's Settlement Quality Meter Data for any outstanding metered Demand and/or Generation for use in the Recalculation Settlement Statement T+7B calculation, as provided in Section 11.1.5.

10.3.6.3 Timing of Settlement Quality Meter Data Submission for Recalculation Settlement Statement T+38B

Scheduling Coordinators must submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO no later than midnight on the forty-third (43) calendar day after the Trading Day (T+43C) for the Recalculation Settlement Statement T+38B. A Scheduling Coordinator that timely submits Actual Settlement Quality Meter Data for the Recalculation Settlement Statement T+7B pursuant to Section 10.3.6.2 may submit revised Actual Settlement Quality Meter Data for the Recalculation Settlement Statement T+38B no later than the forty-third (43) calendar day after the Trading Day pursuant to this Section.

- (a) When Actual Settlement Quality Meter Data is not received by the CAISO for a Scheduling Coordinator Metered Entity by forty-three (43) calendar days after the Trading Day (T+43C), the Scheduling Coordinator has failed to submit complete and accurate meter data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2.
- (b) Any Scheduling Coordinator Estimated Settlement Quality Meter Data submitted by a Scheduling Coordinator on behalf of the Scheduling Coordinator Metered Entities it represents that is not replaced with Actual Settlement Quality Meter Data by forty-three (43) calendar days after the Trading Day (T+43C) has failed to submit complete and accurate meter data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2. In the absence of Actual Settlement Quality Meter Data, Scheduling Coordinator Estimated Settlement Quality Meter Data will be used in the Recalculation Settlement Statements.
- (c) The CAISO will not estimate a Scheduling Coordinator Metered Entity's Settlement Quality Meter Data for any outstanding metered Demand and/or Generation for use in a Recalculation Settlement Statement calculation. Any previous CAISO Estimated Settlement Quality Meter Data that the Scheduling Coordinator does not replace with Actual Settlement Quality Meter Data by forty-three (43) calendar days after the Trading Day (T+43C) will be set to zero. The CAISO will follow the control process described in the BPM for Metering to monitor and identify the CAISO Estimated Settlement Quality Meter Data that was not timely replaced and will take proactive measures to obtain the

Actual Settlement Quality Meter Data. A Scheduling Coordinator that fails to replace CAISO Estimated Settlement Quality Meter Data with Actual Settlement Quality Meter Data by forty-three (43) calendar days after the Trading Day (T+43C) has failed to provide complete and accurate Settlement Quality Meter Data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2.

10.3.6.4 Timing of Settlement Quality Meter Data Submission for Recalculation Settlement Statements after the Recalculation Settlement Statement T+38B

Scheduling Coordinators may continue to submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO for use in Recalculation Settlement Statements subsequent to the Recalculation Settlement Statement T+38B according to timelines established in the CAISO Payments Calendar.

* * *

11.1 Settlement Principles

The CAISO shall calculate, account for 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 and payments for Initial Settlement Statement T+3B based on CAISO estimates and for all other settlement statements 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. HASP Intertie Schedules shall be settled at the relevant HASP Intertie LMP at the relevant Scheduling Point. 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.

* * *

11.1.4 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 Proxy Demand Response Energy Management. 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 and dispatch of the resource as calculated in the Real-Time Market and as modified by any applicable corrections to the Dispatch Operating Point for the resource.
- (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 Quantity Meter Demand for Participating Load will not be increased by fifteen (15) percent.

- (c) CAISO Estimated Settlement Quality Meter Data for Proxy Demand Response Energy Management 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) CAISO will not estimate Unaccounted For Energy under Section 11.5.3, the rescission of payments for Regulation Up and Regulation Down Capacity under Section 8.10.8.6 or MSS deviation payments under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.

11.1.5 SQMD For Recalculation Settlement Statement T+7B

The CAISO's Recalculation Settlement Statement T+7B shall be based on the Settlement Quality Meter Data (actual or Scheduling Coordinator estimated) received in SQMDS. In the event Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data is not received from a Scheduling Coordinator or CAISO Metered Entity, the CAISO will estimate Settlement Quality Meter Data for that outstanding metered Demand or Generation, including a Proxy Demand Resource, for the Recalculation Settlement Statement T+7B calculation. CAISO Estimated Settlement Quality Meter Data for metered Generation, metered Demand, and Proxy Demand Response Energy Management will be calculated using the same method as set forth in Section 11.1.4.

* * *

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. Publishing of Uninstructed Deviation Penalty results will not occur on the Initial Settlement Statement T+3B but rather

will occur on the Recalculation Settlement Statement T+7B. The Uninstructed Deviation Penalty will be applied as follows:

- (a) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval. The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval in which the CAISO has not declared a staged System Emergency;
- (b) The Uninstructed Deviation Penalty will apply to pre-Dispatched Bids from Non-Dynamic System Resources identified, when such a pre-Dispatch Instruction is issued more than forty (40) minutes prior to the relevant Operating Hour, subject to the following conditions: (i) the Uninstructed Deviation Penalty will only apply to the pre-Dispatched amount of the Bid that is declined or not delivered, (ii) the Uninstructed Deviation Penalty will not apply to a portion of a pre-Dispatched Bid that is subsequently not delivered at the direction of a Balancing Authority, including the CAISO, due to a curtailment of transmission capability or to prevent curtailment of native firm load occurring subsequent to issuing the pre-Dispatch Instruction, (iii) the Uninstructed Deviation Penalty will not apply to Uninstructed Imbalance Energy resulting from declining subsequent intra-hour Dispatch Instructions. Dynamically scheduled Dynamic System Resources, to the extent they deviate from their Day-Ahead Schedule plus any Dispatch Instructions, will be subject to the Uninstructed Deviation Penalty.
- (c) The Uninstructed Deviation Penalty will not apply to Load, Curtailable Demand, or Demand Response Services.
- (d) **[NOT USED]**
- (e) The Uninstructed Deviation Penalty will not apply to Regulatory Must-Run Generation or Participating Intermittent Resources that meet the scheduling obligations established in the Eligible Intermittent Resources Protocol in Appendix Q. No other applicable charges will be affected by this exemption.

The Uninstructed Deviation Penalty also will not apply to Qualifying Facilities (QFs), including those that are dynamically scheduled, that have not executed and are not required pursuant to this CAISO Tariff to execute a Participating Generator Agreement (PGA) or Qualifying Facility Participating Generator Agreement.

- (f) All MSS resources designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net settlement election) are exempt from Uninstructed Deviation Penalties in this Section 11.23. All MSS resources not designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net Settlement election) are subject to Uninstructed Deviation Penalties in this Section 11.23.
- (g) The Uninstructed Deviation Penalty will apply to Generating Units providing Regulation and dynamically scheduled Dynamic System Resources providing Regulation to the extent that Uninstructed Deviations from such resources exceed each resource's actual Regulation range plus the applicable Tolerance Band. Resources providing Regulation and generating within their relevant Regulating range (or outside their relevant Regulating range as a direct result of CAISO control or instruction) will be deemed to have zero (0) deviations for purposes of the Uninstructed Deviation Penalty.
- (h) The Uninstructed Deviation Penalty will be calculated and assessed for each resource individually, except as specified in Appendix R, which specifies when Uninstructed Deviations from individual resources may be aggregated.
- (i) The Uninstructed Deviation Penalty shall not apply to any Uninstructed Imbalance Energy resulting from compliance with a directive by the CAISO or the Reliability Coordinator.
- (j) **[NOT USED]**
- (k) The Uninstructed Deviation Penalty will not apply when the applicable LMP is negative or zero.

- (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 percent (100%) 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 pay for such Energy.
- (m) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to fifty percent (50%) of the corresponding Resource-Specific Settlement Interval LMP or, in the case of aggregated resources, the Settlement Interval Penalty Location Real-Time LMP.
- (n) The Uninstructed Deviation Penalty will not apply to deviations from Energy delivered as part of a scheduled test so long as the test has been scheduled by the Scheduling Coordinator with the CAISO or the CAISO has initiated the test for the purposes of validating unit performance.
- (o) The Uninstructed Deviation Penalty shall not apply to any excess Energy delivered from or any shortfall of Energy not delivered from an Exceptional Dispatch, involving a Generating Unit or a System Unit unless the CAISO and the supplier have agreed upon the time of, duration of, and amount of Energy to be delivered in the out-of-market transaction and the CAISO reflects the out-of-market transaction in its Real-Time Expected Energy calculations. The Uninstructed Deviation Penalty shall apply to Energy outside the Tolerance Band from out-of-market transactions with dynamically scheduled Dynamic System Resources to the extent the agreed-to Energy is not delivered or over-delivered, and to any Energy from Non-Dynamic System Resources to the extent the

agreed-to Energy is not delivered if that over- or under-delivery was due to action taken by or not taken by the System Resource and not the result of action taken by a Balancing Authority due to a curtailment of firm transmission capability or to prevent curtailment of native firm load occurring subsequent to the out-of-market transaction.

- (p) The Uninstructed Deviation Penalty shall not apply to Generating Units and dynamically scheduled Dynamic System Resources with Uninstructed Imbalance Energy if the Generating Unit or dynamically scheduled Dynamic System Resource was physically incapable of delivering the expected Energy or if systems malfunctions prevent receipt of Dispatch Instructions, provided that the Generating Unit or dynamically scheduled Dynamic System Resource had notified the CAISO within thirty (30) minutes of the onset of an event that prevents the resource from performing its obligations. A Generating Unit or dynamically scheduled Dynamic System Resource must notify CAISO operations staff of its reasons for failing to deliver the Expected Energy in accordance with Section 9.3.10.6 and must provide information to the CAISO that verifies the reason the resource failed to comply with the Dispatch Instruction within forty-eight (48) hours of the Operating Hour in which the instruction is issued.
- (q) Adjustments to any Generating Unit, Curtailable Demand and System Resource Day-Ahead Schedules or HASP Intertie Schedules made in accordance with the terms of TRTC Instructions for Existing Contracts or TORs shall not be subject to Uninstructed Deviation Penalties. Valid changes to ETC Self-Schedules or TOR Self-Schedules submitted after the close of the HASP or the RTM shall not be subject to Uninstructed Deviation Penalties.
- (r) Any changes made to Schedules prior to the CAISO issuing HASP Intertie Schedules shall not be subject to Uninstructed Deviation Penalties.

- (s) Uninstructed Deviation Penalties shall not be charged to any deviation from a Dispatch Instruction that does not comply with the requirements set forth in this CAISO Tariff.
- (t) Amounts collected as Uninstructed Deviation Penalties shall first be assigned to reduce the portion of above-LMP costs that would otherwise be assigned pro rata to all Scheduling Coordinators in that Settlement Interval. Any remaining portion of amounts collected as Uninstructed Deviation Penalties after satisfying these sequential commitments shall be treated in accordance with Section 11.29.9.6.3.
- (u) Condition 2 RMR Units shall be exempt from Uninstructed Deviation Penalties.
- (v) The Uninstructed Deviation Penalty shall not apply to positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit from the time the Generating Unit synchronizes to the grid to the earlier of (1) the Settlement Interval in which the Generating Unit produces a quantity of Energy that represents an average rate of delivery over such Settlement Interval in excess of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band, or (2) the first Settlement Interval after the expiration of a period of time that begins at the end of the Settlement Interval in which the Generating Unit synchronizes to the grid and ends after the Generating Unit's maximum Start-Up Time as specified in the Master File. The Uninstructed Deviation Penalty shall not apply to any positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit for a duration equal to the minimum of two Settlement Intervals or the time specified in the Master File for the Generating Unit to disconnect from the grid after reaching its Minimum Operating Limit following either (1) the last Settlement Interval of an hour in which the Generating Unit had a non-zero Day-Ahead Schedule or (2) the Settlement Interval in which the Generating Unit is expected to reach its Minimum Operating Limit based on the applicable Ramp Rate when the CAISO instructed the Generating Unit to Shut-Down. The amount of

Uninstructed Imbalance Energy exempted from the Uninstructed Deviation Penalty shall not exceed the amount of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band. This exception from the application of the Uninstructed Deviation Penalty does not apply to Dynamic System Resources.

- (w) UDP shall not apply to deviations by a Generating Unit that are attributable to any automatic response to a system disturbance, including a response to correct frequency decay, in accordance with Applicable Reliability Criteria for the duration of the system disturbance, and for an additional five (5) minutes when a Generating Unit's deviation is in the same direction as the mitigating frequency response.
- (x) The Uninstructed Deviation Penalty shall not apply in the event that a malfunction in a CAISO system application causes an infeasible Dispatch Instruction to be communicated or prevents timely communication of a Dispatch Instruction or a SLIC malfunction prevents a resource from reporting an event that affects the resource's ability to deliver Energy.
- (y) The Uninstructed Deviation Penalty shall not apply to a failure to comply with a manual Dispatch Instruction that is not confirmed by a Dispatch Instruction transmitted through the CAISO's Automated Dispatch System.
- (z) The Uninstructed Deviation Penalty shall not apply if a Dispatch Instruction is validated after the start time of the instruction from the Settlement Interval in which the Dispatch Instruction was first effective to the earliest Settlement Interval, inclusive, in which the resource is able to respond to the Dispatch Instruction.

* * *

11.5.3 Unaccounted For Energy (UFE)

For each Settlement Interval, the CAISO will calculate UFE for each utility Service Area for which the IOU or Local Publicly Owned Electric Utility has requested separate UFE calculation and has met the

requirements applicable to a CAISO Metered Entity. The UFE will be settled as Imbalance Energy at the Settlement Interval Locational Marginal Price calculated for each utility Service Area for which UFE is calculated separately. UFE attributable to meter measurement errors, load profile errors, Energy theft, and distribution loss deviations will be allocated to each Scheduling Coordinator based on the ratio of its metered CAISO Demand within the relevant utility Service Area for which UFE is calculated separately to total metered CAISO Demand within that utility Service Area. UFE charges will not be estimated or included on Initial Settlement Statement T+3B.

* * *

11.29 Billing And Payment Process

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 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.

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+3B and the Recalculation Settlement Statements.

11.29.2 Time-Frame For Payments Or Charges

Payments or charges for the items referred to in Section 11.1.2 (except for the charges payable under long-term contracts) for each Trading Day in each calendar month shall be made four (4) Business Days after issuance of the Invoices and Payment Advices issued in accordance with Section 11.29.10.

Payments for FERC Annual Charges will be made in accordance with Section 11.19.

* * *

11.29.5 General Principles For Production Of Settlement Statements

11.29.5.1 Basis of Settlement

The basis of each Settlement Statement shall be the debiting or crediting of an account in the name of the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO in the general ledger set up by the CAISO to reflect all transactions, charges or payments settled by the CAISO.

11.29.5.2 Right to Dispute

All Scheduling Coordinators, CRR Holders, Black Start Generators or Participating TOs shall have the right to dispute any item or calculation set forth in any Recalculation Settlement Statement T+7B or Recalculation Settlement Statement T+38B, or Incremental Changes in Recalculation Settlement Statements T+76B, T+18M, and T+35M in accordance with this CAISO Tariff, but not those set forth in Initial Settlement Statement T+3B or Recalculation Settlement Statement T+36M.

* * *

11.29.7.1 Timing of the Settlements Process

The CAISO will publish: (i) Initial Settlement Statements T+3B on the third Business Day from the relevant Trading Day (T+3B), (ii) Recalculation Settlement Statements T+7B on the seventh Business Day from the relevant Trading Day (T+7B), (iii) Recalculation Settlement Statements on the thirty-eighth Business Day from the relevant Trading Day (T+38B), (iv) Recalculation Settlement Statements on the seventy-sixth Business Day after the Trading Day (T+76B), (v) Recalculation Settlement Statements on the Business Day eighteen (18) calendar months from the relevant Trading Day (T+18M) if necessary, (vi) Recalculation Settlement Statements on the Business Day thirty-five (35) calendar months from the relevant Trading Day (T+35M) if necessary, (vii) Recalculation Settlement Statements on the Business Day thirty-six (36) calendar months from the relevant Trading Day (T+36M) if necessary, and (viii) any other Recalculation Settlement Statement authorized under Section 11.29.7.3. The CAISO will issue a notice to the market if a Recalculation Settlement Statement T+18M, Recalculation Settlement Statement T+35M, Recalculation Settlement Statement T+36M, or any additional Recalculation Settlement Statement is required for a Trading Day. The CAISO will notify affected Market Participants regarding

failed or late publication of any Settlement Statements specified above and will rectify such failed or late publications pursuant to its procedure posted on the CAISO Website.

11.29.7.1.1 Initial Settlement Statement T+3B

The CAISO shall provide to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for validation an Initial Settlement Statement T+3B for each Trading Day within three (3) Business Days of the relevant Trading Day, covering all Settlement Periods in that Trading Day. Each Initial Settlement Statement T+3B will be solely based on CAISO Estimated Settlement Quality Meter Data in accordance with Section 11.1.4. The Initial Settlement Statement T+3B will include the following:

- (a) the amount payable or receivable by the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge referred to in Section 11 for each Settlement Period in the relevant Trading Day;
- (b) the total amount payable or receivable by that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for all Settlement Periods in that Trading Day after the amounts payable and the amounts receivable under (a) have been netted off pursuant to Section 11.29;
- (c) the components of each charge in each Settlement Period except for information contained in the Imbalance Energy report referred to in this Section 11.29.7.1.1; and
- (d) a breakdown of the components of the Imbalance Energy charge (the Imbalance Energy report).

11.29.7.1.2 Recalculation Settlement Statements

The CAISO shall provide to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO Recalculation Settlement Statements in accordance with the CAISO Tariff and the CAISO Payments Calendar. Recalculation Settlement Statements shall be in a format similar to that of the Initial Settlement Statement T+3B and shall include the same granularity of information provided in the Initial Settlement Statement T+3B as amended following the validation procedure.

* * *

11.29.7.2 Basis for Billing and Payment

The Initial Settlement Statement T+3B and any Recalculation Settlement Statement shall constitute the basis for billing in accordance with this CAISO Tariff. The Initial Settlement Statement T+3B shall constitute the basis for billing for all charges in the first instance. The Recalculation Settlement Statements T+7B and T+38B shall constitute the basis for billing for adjustments to charges set forth in the Initial Settlement Statement T+3B. Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall pay any net debit and shall be entitled to receive any net credit shown in an Invoice or Payment Advice on the Payment Date, whether or not there is any dispute regarding the amount of the debit or credit.

* * *

11.29.7.3 Additional Recalculation Settlement Statements

The CAISO shall issue no Recalculation Settlement Statements other than Recalculation Settlement Statements T+7B, Recalculation Settlement Statements T+38B, Recalculation Settlement Statements T+76B, Recalculation Settlement Statements T+18M, Recalculation Settlement Statements T+35M, and Recalculation Settlement Statements T+36M, unless directed by the CAISO Governing Board or pursuant to a FERC order.

* * *

11.29.8.2 Review of Initial Settlement Statement T+3B

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall have the opportunity to review the terms of the Initial Settlement Statement T+3B that it receives. Because this settlement statement is solely based on CAISO Estimated Settlement Quality Meter Data and is not subject to dispute or exception, the Initial Settlement Statement T+3B shall be deemed financially binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates.

11.29.8.3 Validation of Recalculation Settlement Statements

11.29.8.3.1 Validation of Recalculation Settlement Statement T+7B

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall have the opportunity to review the terms of the Recalculation Settlement Statement T+7B that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall be deemed to have validated each Recalculation Settlement Statement T+7B unless it has raised a dispute or reported an

exception within fourteen (14) Business Days from the date of issuance. Once validated, a Recalculation Settlement Statement T+7B shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, except to the extent that the CAISO performs a Recalculation Settlement Statement.

The notice of dispute, if any, shall state clearly the Trading Day, the issue date of the Recalculation Settlement Statement T+7B, the item disputed, the reasons for the dispute, and the amount claimed (if appropriate) and shall be accompanied with all available evidence reasonably required to support the claim.

11.29.8.3.2 Validation of Recalculation Settlement Statement T+38B

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall have the opportunity to review the terms of the Recalculation Settlement Statement T+38B that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall be deemed to have validated each Recalculation Settlement Statement T+38B unless it has raised a dispute or reported an exception within eighteen (18) Business Days from the date of issuance. Once validated, a Recalculation Settlement Statement T+38B shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, except to the extent that the CAISO performs a subsequent Recalculation Settlement Statement.

The notice of dispute, if any, shall state clearly the Trading Day, the issue date of the Recalculation Settlement Statement T+38B, the item disputed, the reasons for the dispute, and the amount claimed (if appropriate) and shall be accompanied with all available evidence reasonably required to support the claim.

11.29.8.3.3 Validation of Additional Recalculation Settlement Statements

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall have the opportunity to review the Incremental Changes, including the CAISO's implementation of a prior accepted dispute, that appear on or are omitted from any Recalculation Settlement Statement T+76B, Recalculation Settlement Statement T+18M or Recalculation Settlement Statement T+35M that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall be deemed to have validated the Incremental Changes on each Recalculation Settlement Statement unless

it has raised a dispute or reported an exception regarding those Incremental Changes within time periods set forth in Sections 11.29.8.4.1 through 11.29.8.4.6 from the date of issuance. Once validated, the Incremental Changes on a Recalculation Settlement Statement T+76B , Recalculation Settlement Statement T+18M, or Recalculation Settlement Statement T+35M shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, except to the extent that the CAISO performs an additional Recalculation Settlement Statement pursuant to Section 11.29.7.3.

The notice of dispute shall state clearly the Trading Day, the issue date of the Recalculation Settlement Statement, the item disputed, the reasons for the dispute, and the amount claimed (if appropriate) and shall be accompanied with all available evidence reasonably required to support the claim. No disputes or exceptions are permitted for any items reflected on Recalculation Settlement Statement T+36M.

* * *

11.29.8.4.1 Dispute of Initial Settlement Statement T+3B Not Permitted

Because Initial Settlement Statement T+3B is solely based on CAISO Estimated Settlement Quality Meter Data, which will be reconciled to actual data on subsequent Recalculation Settlement Statements, no disputes or exceptions shall be permitted for any terms reflected on this settlement statement.

11.29.8.4.2 Dispute of Recalculation Settlement Statement T+7B

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit a dispute that identifies discrepancies or errors for any item in a Recalculation Settlement Statement T+7B, except for CAISO or Scheduling Coordinator Estimated Settlement Quality Meter Data, no later than fourteen (14) Business Days from the publication date of the Recalculation Settlement Statement T+7B. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+7B 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 regarding data appearing on a Recalculation Settlement Statement T+7B, it may initiate a good faith negotiation of the dispute with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.3 Dispute of Recalculation Settlement Statement T+38B

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit a dispute that identifies discrepancies or errors for any item in a Recalculation Settlement Statement T+38B no later than eighteen (18) Business Days from the publication date of the Recalculation Settlement Statement T+38B. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+38B 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 regarding data appearing on a Recalculation Settlement Statement T+38B, it may initiate a good faith negotiation of the dispute with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.4 Dispute of Recalculation Settlement Statement T+76B

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit disputes regarding Incremental Changes in a Recalculation Settlement Statement T+76B, including the CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+76B, no later than twelve (12) months from the relevant Trading Day (T+12M). A dispute shall only be based on Incremental Changes between Recalculation Settlement Statement T+38B and Recalculation Settlement Statement T+76B. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+76B will be reflected on 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 regarding data appearing on a Recalculation Settlement Statement T+76B, it may initiate good faith negotiation of the dispute with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.5 Dispute of Recalculation Settlement Statement T+18M

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit disputes regarding Incremental Changes, including the CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+18M no later than nineteen (19) months from the relevant Trading Day (T+19M). A dispute shall only be based on Incremental Changes between Recalculation Settlement Statement T+76B and Recalculation Settlement Statement T+18M. Valid Disputes regarding data appearing on a Recalculation Settlement Statement T+18M will be reflected on a

later Recalculation Settlement Statement. If a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO disagrees with the CAISO's resolution of a dispute regarding data appearing on a Recalculation Settlement Statement T+18M, it may initiate a good faith negotiation with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.6 Dispute of Recalculation Settlement Statement T+35M

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit disputes regarding Incremental Changes in a Recalculation Settlement Statement T+35M, including the CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+35M, no later than seven (7) calendar days from the publication date of a Recalculation Settlement Statement T+35M. A dispute shall only be based on (i) Incremental Changes between Recalculation Settlement Statement T+18M and Recalculation Settlement Statement T+35M, (ii) Meter Data issues identified through the audit process, or (iii) any good faith negotiation or dispute resolution settlement. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+35M will be reflected on the Recalculation Settlement Statement T+36M. If a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO disagrees with the CAISO's resolution of a dispute regarding data appearing on a Recalculation Settlement Statement T+35M, it may pursue the dispute only through the dispute resolution process set forth in Section 13.

11.29.8.4.7 Dispute of Recalculation Settlement Statement T+36M

Recalculation Settlement Statement T+36M shall not be subject to either a dispute by a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO, or adjustment by CAISO, except as directed by the CAISO Governing Board or by an order of FERC. Nothing herein shall be construed to restrict the right of the CAISO or any Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO's to seek redress from FERC in accordance with the Federal Power Act.

11.29.8.4.8 Recurring Disputes or Exceptions

A Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may request the CAISO to treat as recurring a dispute or exception raised in accordance with Sections 11.29.8.1 and 11.29.8.3 above, if a dispute or exception would apply to Recalculation Settlement Statements for subsequent Trading Days as permitted by Section 11.29.8.4. A request for recurring treatment may be

made for any valid reason provided that Recalculation Settlement Statements for subsequent Trading Days would be affected, including, but not limited to, that the disputed calculation will recur, or that a disagreement as to policy will affect calculations in subsequent Recalculation Settlement Statements. If a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO wishes to request that the CAISO treat a dispute as recurring, it shall, in the notice, clearly indicate that it requests such treatment and set forth in detail the reasons that support such treatment. To the extent possible, the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall state the types of charges and dates to which the dispute will apply, and provide estimates of the amounts that will likely be claimed on each date.

The CAISO shall make a determination on such a request within five (5) Business Days of receipt. To preserve its right to dispute an item, a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO must continue to raise a dispute or report an exception until it is notified by the CAISO that the CAISO agrees to treat the dispute or exception as recurring. If the CAISO grants a request to treat a dispute or exception as recurring, the dispute raised or exception reported by the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall be deemed to apply to every subsequent Recalculation Settlement Statement provided to the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO from the date that the CAISO grants the request for recurrent treatment until: a) ninety (90) days have elapsed, unless the CAISO indicates a different expiration date on its response to the request, in which case the expiration date shall be as stated by the CAISO in its response or b) the dispute or exception is resolved, whichever is shorter. The CAISO may deny a request that the CAISO treat a dispute as recurring for any valid reason, including because the request is not adequately specific as to the basis for recurring treatment or the subsequent calculations that will be affected.

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 shall be as follows:

- (a) For a settlement statement dispute based on a Recalculation Settlement Statement T+7B, Recalculation Settlement Statement T+38B, Recalculation Settlement Statement

T+76B, or Recalculation Settlement Statement T+18M, the CAISO shall reach a determination to approve or deny the dispute, and provide electronic notice of the outcome to the Scheduling Coordinator that submitted the dispute, no later than twenty (20) 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 payments and/or charges, the CAISO in its notice to the disputing Scheduling Coordinator shall identify the subsequent recalculation settlement statement expected to include the adjustment.

- (b) For a settlement statement dispute based on Recalculation Settlement Statement T+35M, the CAISO shall reach a determination to approve or deny the dispute, and provide electronic notice of the outcome to the Scheduling Coordinator that submitted the dispute, no later than fourteen (14) days after the end of the dispute period for that settlement statement. Valid disputes regarding data appearing on Recalculation Settlement Statement T+35M will be reflected on Recalculation Settlement Statement T+36M.
- (c) 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 complex dispute. The CAISO will advise the disputing Scheduling Coordinator within twenty (20) Business Days after the end of the dispute period for that settlement statement if a dispute is a complex dispute. The CAISO shall make reasonable efforts to reach a determination to approve or deny a complex dispute resulting from (i) a Recalculation Settlement Statement T+7B, Recalculation Settlement Statement T+38B, or Recalculation Settlement Statement T+76B, no later than fifteen (15) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+18M, and (ii) a

Recalculation Settlement Statement T+18M, no later than thirty-three (33) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+35M.

* * *

11.29.10 Billing And Payment

The CAISO shall prepare and send to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO an Invoice or Payment Advice on Wednesday of each week. Each Invoice or Payment Advice will show amounts which are to be paid by or to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO, the Payment Date, being the date on which such amounts are 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 are to be paid. Revenues owed from a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO are expressed as a positive amount on an Invoice. Revenues owed to a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO are expressed as a negative amount on a Payment Advice. Payments or charges for the items referred to in an Invoice or Payment Advice (except for the charges payable under long-term contracts) for each Trading Day shall be made four (4) Business Days after the date on which the weekly Invoice or Payment Advice is issued. If the fourth Business Day after an Invoice or Payment Advice is issued falls on a CAISO holiday, then the Payment Date for the Invoice or Payment Advice shall be the next Business Day.

11.29.10.1 Billing Periods

Each Invoice or Payment Advice will include all of the Initial Settlement Statements T+3B published since the previous Invoice or Payment Advice was issued and up to six (6) other billing periods. The other billing periods correspond to the dates on which the Recalculation Settlement Statements are published. Any Invoice or Payment Advice for a billing period corresponding to a Recalculation Settlement Statement will be reflected on the next scheduled Invoice or Payment Advice. Each billing period will be represented separately on the Invoice or Payment Advice but the net Invoice or Payment Advice for a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO will reflect the entity's net financial obligations in all billing periods.

11.29.10.2 Interest

Interest will be applied to any Incremental Changes between Initial Settlement Statement T+3B and Recalculation Settlement Statement T+7B, and thereafter to any Incremental Changes between each subsequent Recalculation Settlement Statement through Recalculation Settlement Statement T+36M. Interest will be calculated from the Payment Date for the Invoice or 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.

* * *

11.29.21.2 Evidence of Unpaid Amount

The CAISO shall, on request, certify in writing the amounts owed by a CAISO Debtor that remain unpaid and the CAISO Creditors to whom such amounts are owed and shall provide certified copies of the relevant Initial Settlement Statement T+3B and the Recalculation Settlement Statements, Invoices, Payment Advices, and other documentation on which the CAISO's certificate was based to the CAISO Debtor and the relevant CAISO Creditors. A CAISO certificate given under this Section 11.29.21.2 may be used as prima facie evidence of the amount due by a CAISO Debtor to CAISO Creditors in any legal proceedings.

* * *

11.29.23 Communications

The Initial Settlement Statement T+3B, any Recalculation Settlement Statement, and Invoices, and Payment Advices will be considered issued to CAISO Creditors or CAISO Debtors when released by the CAISO's secure communication system. Communications on a Payment Date relating to payment shall be made by the fastest practical means including by telephone. If there is a failure of a communication system and it is not possible to communicate by electronic means, then the CAISO or CAISO Creditor or CAISO Debtor, as the case may be, shall communicate by facsimile but only if the recipient is first advised by telephone to expect the facsimile. Methods of communication between the CAISO and Market Participants may be varied by the CAISO giving not less than ten (10) days notice to Market Participants on the CAISO's secure communication system.

11.29.24 CAISO Payments Calendar

11.29.24.1 Preparation

In September of each year, the CAISO will prepare a draft CAISO Payments Calendar for the following calendar year showing for each Trading Day:

- (a) The date by which Scheduling Coordinators are required to provide Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for all their Scheduling Coordinator Metered Entities for each Settlement Period in the Trading Day;
- (b) The date on which the CAISO will issue Initial Settlement Statements T+3B and Invoices and Payment Advices to Scheduling Coordinators or CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (c) The date on which the CAISO will issue the Recalculation Settlement Statements T+7B, T+38B, T+76B, T+18M, T+35M, and T+36M, and Invoices and Payment Advices to Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (d) The dates by which Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs are required to notify the CAISO of any disputes in relation to their Recalculation Settlement Statements T+7B, T+38B, T+76B, T+18M and T+35M.
- (e) The date and time by which CAISO Debtors are required to have made payments into the CAISO Clearing Account in payment of Invoices for that Trading Day;
- (f) The dates and times on which CAISO Creditors will receive payments from the CAISO Clearing Account of amounts owing to them for that Trading Day; and
- (g) In relation to Reliability Must-Run Charges and RMR Payments, the details set out in paragraph 3 of Appendix N, Part J.

The CAISO will make a draft of the CAISO Payments Calendar available on the CAISO Website to Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners any

of which may submit comments and objections to the CAISO within two weeks of the date of posting of the draft on the CAISO Website. No later than October 31st in each year, the CAISO will publish the final CAISO Payments Calendar for the following calendar year, after considering the comments and objections received from Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners. The final CAISO Payments Calendar will be posted on the CAISO Website, and will show for the period from 1 January to 31 December in the next succeeding year (both dates inclusive), the dates on which Settlement Statements shall be published by the CAISO and the Payment Dates on which the CAISO will pay the Participating TOs the Wheeling revenues allocated to them pursuant to Section 26.1.4.3.

* * *

12. Creditworthiness

12.1 Credit and Minimum Participation Requirements

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.

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) Annually provide, as specified in the applicable Business Practice Manual, the CAISO with a certified statement executed by an officer of the prospective or existing Market Participant certifying that the prospective or existing Market Participant.
 - (a) Has 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;
 - (b) Has appropriate 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
 - (c) Has satisfied any applicable CAISO training requirements including as specified in Sections 4.5.1.2.10.1 and 36.5.2.
- (ii) Satisfy the following capitalization requirements:
 - (a) 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 using one or more of the forms specified in Section 12.2 (a) through (e) 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.

- \$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.

- (b) The CAISO will review whether the prospective or existing Market Participant continues to satisfy the capitalization requirements set forth in Section 12.1(ii)(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.

Each prospective Market Participant that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be prohibited from participating in the CAISO Markets. Each prospective Market Participant taking part in the Scheduling Coordinator certification process pursuant to Section 4.5.1 or the Candidate CRR Holder application process pursuant to Section 4.10.1 that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be ineligible to become a Market Participant or CRR Holder. Each existing Market Participant that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be out of compliance with the CAISO Tariff. Any failure of a Market Participant to satisfy the minimum participation requirements set forth in this Section 12.1 that is not cured within thirty (30) days of CAISO notification that a failure occurred will subject the Market Participant to CAISO enforcement actions as set forth in Section 12.5.

12.1.1 Unsecured Credit Limit

Each Market Participant requesting an Unsecured Credit Limit shall submit an application to the CAISO in the form specified on the CAISO Website. The CAISO shall determine the Unsecured Credit Limit for each Market Participant in accordance with the procedures set forth in the applicable Business Practice Manual. The maximum Unsecured Credit Limit for any Market Participant, and group of Market Participant Affiliates, shall be \$50 million. In accordance with the procedures described in the applicable Business Practice Manual, each Market Participant requesting or maintaining an Unsecured Credit Limit is required to submit to the CAISO or its agent financial statements and other information related to its overall financial health as directed by the CAISO. Each Market Participant is responsible for the timely submission of its latest financial statements as well as other information, including, but not limited to, information concerning all entities that are Affiliates or become Affiliates, that may be reasonably necessary for the CAISO to conduct its evaluation. The CAISO shall determine the Unsecured Credit Limit for each Market Participant as described in Sections 12.1.1.1, 12.1.1.1.1, and 12.1.1.1.2.

As a result of the CAISO's credit evaluation, a Market Participant may be given an Unsecured Credit Limit by the CAISO or denied an Unsecured Credit Limit with the CAISO. Following the initial application and the establishment of an Unsecured Credit limit, the CAISO will review each Market Participant's Unsecured Credit Limit on a quarterly basis, unless that entity does not prepare quarterly statements, in which case the review will occur on an annual basis, and no entity shall be required to submit a new application. In addition, the CAISO may review the Unsecured Credit Limit for any Market Participant whenever the CAISO becomes aware of information that could indicate a Material Change in Financial Condition. In the event the CAISO determines that the Unsecured Credit Limit of a Market Participant must be reduced as a result of a subsequent review due to a reason other than a Material Change in Financial Condition, the CAISO shall notify the Market Participant of the reduction, and shall, upon request, also provide the Market Participant with a written explanation of why the reduction was made. In the event the CAISO determines that the Unsecured Credit Limit of a Market Participant must be reduced as a result of a subsequent review due to a Material Change in Financial Condition, the CAISO shall notify the Market Participant of the reduction in writing and shall provide the Market Participant with a written explanation of the reasons for the reduction, either in advance of the reduction if reasonably

practicable or after the reduction was made if providing the written notification and explanation in advance is not reasonably practicable, as set forth in the applicable Business Practice Manual.

* * *

12.1.1.4 Determination of Unsecured Credit Limits for Affiliates

If any Market Participant requesting or maintaining an Unsecured Credit Limit is affiliated with one or more other entities subject to the credit requirements of this Section 12, the CAISO may consider the overall creditworthiness and financial condition of such Affiliates when determining the applicable Unsecured Credit Limit. The maximum Unsecured Credit Limit specified in Section 12.1.1 applies to the combined activity of such Affiliates.

12.1.1.5 Notification of Material Change in Financial Condition

Each Market Participant shall notify the CAISO in writing of a Material Change in Financial Condition, within five (5) Business Days of when the Material Change in Financial Condition is known or reasonably should be known by the Market Participant. Examples of a Material Change in Financial Condition may include, but are not limited to:

- a) A credit agency or Moody's KMV 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 Net Worth or Net Assets for the

Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

The provision to the CAISO of a copy of a Form 10-K, Form 10-Q, or Form 8-K filed with the U.S. Securities and Exchange Commission shall satisfy the requirement of notifying the CAISO of such Material Change in Financial Condition if such Material Change in Financial Condition is identified in the Form 10-K, Form 10-Q, or Form 8-K. Alternatively, the Market Participant may direct the CAISO to the location of the information on their company website or the website of the U.S. Securities & Exchange Commission.

* * *

12.1.2.1 Additional Procedures Regarding Certain Types of Financial Security

- (a) Unconditional and irrevocable guaranties: In those cases where a Market Participant is a subsidiary or Affiliate of another entity and would like to utilize the consolidated financial statements and other relevant information of that entity for obtaining credit, a signed corporate guaranty is required. A guarantor would be considered reasonably acceptable and a corresponding Financial Security Amount would be set based on the guarantor's credit evaluation according to the same procedures that apply to the credit evaluation of a Market Participant pursuant to Section 12.1.1.
- (b) Cash deposits standing to the credit of the CAISO in interest-bearing escrow accounts: Interest on a cash deposit standing to the credit of the CAISO in an interest-bearing escrow account will accrue to the Market Participant's benefit and will be added to the Market Participant's prepayment account on a monthly basis. Should a Market Participant become delinquent in payments, the Market Participant's outstanding account balance will be satisfied using deposited funds. The Market Participant must take care to replenish used funds to ensure that its Aggregate Credit Limit continues to exceed its Estimated Aggregate Liability.
- (c) Prepayments to the CAISO: Prepayments to the CAISO will be held in an interest-bearing account or another investment acceptable to the Market

Participant and the CAISO, and interest on the investment will accrue at the rate as provided for in the investment. Interest will accrue to the Market Participant's benefit and will be added to the Market Participant's prepayment account on a monthly basis. Due to the additional administrative effort involved in tracking and posting interest on such prepayments, the use of this option is not encouraged.

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12.1.3.1.1 Calculation of the EAL Amount

Except as described in Section 12.1.3.1.2, the CAISO shall use the method described in this Section 12.1.3.1.1 to calculate each Market Participant's Estimated Aggregate Liability (EAL). The Estimated Aggregate Liability represents the amount owed to the CAISO for all unpaid obligations, specifically, the obligations for the number of Trading Days outstanding at a given time based on the CAISO's Payments Calendar plus five (5) Trading Days based on the allowable period for Market Participants to respond to CAISO requests for additional Financial Security collateral (two (2) Business Days), and other liabilities including the value of a Market Participant's CRR portfolio, if negative. The charges the CAISO shall use to calculate Estimated Aggregate Liability shall be charges described or referenced in the CAISO Tariff. The CAISO shall calculate the Estimated Aggregate Liability for each Market Participant by aggregating the following obligations, including CRR liabilities even though such liabilities are secured separately:

- (a) invoiced amounts, i.e., any published but unpaid amounts on Invoices;
- (b) published amounts, i.e., amounts for Trading Days for which Settlement Statements have been issued;
- (c) estimated amounts, i.e., amounts based on estimated Settlement amounts calculated by the Settlement system using estimated meter data, and other available operational data;
- (d) extrapolated amounts, i.e., amounts calculated for Trading Days for which neither actual nor estimated Settlement Statements have been issued;
- (e) CRR portfolio value, i.e., the prospective value of the CRR portfolio, if negative, as described in Section 12.6.3;

- (f) CRR Auction limit, i.e., the maximum credit limit for participation in a CRR Auction;
- (g) CRR Auction awards (prior to invoicing), i.e., amounts to cover winning offers at the completion of the CRR Auction but prior to invoicing;
- (h) Estimated Aggregate Liability adjustments resulting from Virtual Bid Submission Charges and the submission of Virtual Bids and/or receipt of Virtual Awards pursuant to Section 12.8;
- (i) past-due amounts, i.e., any unpaid or past due amounts on Invoices;
- (j) FERC Annual FERC Charges, i.e., FERC Annual Charges for a Market Participant that has elected to pay such amounts on an annual basis that are owed and outstanding and not already captured in any other component of Estimated Aggregate Liability;
- (k) WAC Charges, i.e., WAC amounts for the current year or future years as specified in Section 36.9.2;
- (l) Estimated Aggregate Liability adjustments, i.e., adjustments that may be necessary as a result of analysis performed as a result of Section 12.4.2; and
- (m) extraordinary adjustments, i.e., adjustments to Settlement amounts related to FERC proceedings, if known and estimated by the CAISO, as described in Section 12.1.3.1.3.

For a Market Participant that maintains multiple BAID numbers, the Estimated Aggregate Liability of the Market Participant as a legal entity shall be calculated by summing the Estimated Aggregate Liabilities for all such BAID numbers and comparing the sum of the Estimated Aggregate Liabilities to the Aggregate Credit Limit of the Market Participant. Market Participants may recommend changes to the liability estimates produced by the CAISO's Estimated Aggregate Liability calculation through the dispute procedures described in Section 12.4.2.

* * *

12.4 Calculation Of Ongoing Financial Security Requirements

Following the date on which a Market Participant commences trading, if the Market Participant's Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, the CAISO shall direct the Market Participant to post an additional Financial Security Amount within two (2) Business Days that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability. The CAISO shall also notify a Market Participant if at any time its Estimated Aggregate Liability exceeds ninety (90) percent of its Aggregate Credit Limit. For the purposes of calculating the Market Participant's Estimated Aggregate Liability, the CAISO shall include (1) outstanding charges for Trading Days for which Settlement data is available, and (2) an estimate of charges for Trading Days for which Settlement data is not yet available. To estimate charges for Trading Days for which Settlement data is not yet available, the CAISO will consider available historical Settlement data, and other available operational and market data as described in the applicable Business Practice Manual.

12.4.1 Resolution Of A CAISO Request For Additional Security Amount

A Market Participant has two (2) Business Days to resolve a CAISO request for additional Financial Security. Within the two (2) Business Days, the Market Participant must either demonstrate to the CAISO's satisfaction that the CAISO's Financial Security request is entirely or partially unnecessary, or post the required Financial Security Amount calculated by the CAISO. If the CAISO and the Market Participant are unable to agree on the appropriate level of Financial Security during the two (2) Business Day review period, the Market Participant must post the additional Financial Security and may continue with the dispute process described in Section 12.4.2. Any excess Financial Security Amounts will be returned to the Market Participant if the dispute process finds in favor of the Market Participant.

12.4.2 Dispute Process For A Request For Additional Security Amount

Market Participants may dispute the Estimated Aggregate Liability calculated by the CAISO and, as a result, the CAISO may reduce or cancel a requested Financial Security adjustment. The following steps are required for a Market Participant to dispute a Financial Security request resulting from the CAISO's calculation of Estimated Aggregate Liability:

- (1) Request by the Market Participant to review the CAISO calculation.

- (2) A reasonable and compelling situation presented, as determined by the Market Participant's CAISO client representative.
- (3) Documentation of facts and circumstances that evidence that the CAISO's calculation of Estimated Aggregate Liability results in an excessive and unwarranted Financial Security posting requirement.
- (4) Approval by the CAISO Manager and/or Director of Customer Services and Industry Affairs and approval by the CAISO Treasurer.
- (5) The CAISO may decline to adjust the initial Estimated Aggregate Liability, as calculated by the CAISO, if the Market Participant has had Financial Security shortfalls in the past twelve (12) months (i.e., it has been shown that the Market Participant's Aggregate Credit Limit at times during the preceding twelve (12) months has been insufficient to cover the Market Participant's Estimated Aggregate Liability).

In no such case shall a CAISO request for increased Financial Security remain outstanding for more than two (2) Business Days. Either the above process is to be completed within two (2) Business Days from the date of the CAISO request for additional Financial Security, or the Market Participant is to post additional Financial Security within the two (2) Business Days and continue this process, which may result in a return of posted Financial Security back to the Market Participant if the results of the dispute process are found to favor the Market Participant.

Factors for consideration in the event this dispute process is utilized include: weighing the risk of using the lower figure to the potential detriment of market creditors if the Market Participant is under-secured and defaults, against the desire not to impose additional potentially unwarranted costs on a Market Participant; equity and consistency of treatment of Market Participants in the dispute process; and the evidentiary value of the information provided by the Market Participant in the dispute process.

* * *

12.5.1 Under-Secured and Non-Compliant Market Participants

If a Market Participant's Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, or if a Market Participant fails to satisfy all of the minimum participation

requirements set forth in Section 12.1 and does not cure that failure within thirty (30) days after notification of the failure by the CAISO, the CAISO may take any or all of the following actions:

- (a) The CAISO may withhold a pending payment distribution.
- (b) The CAISO may limit trading, which may include rejection of Bids, including Self-Schedules, rejection or cancellation of Inter-SC Trades in their entirety (i.e., both sides of the Inter-SC Trade) at any time, and/or limiting other CAISO Market activity, including limiting eligibility to participate in a CRR Allocation or CRR Auction. In such case, the CAISO shall notify the Market Participant of its action and the Market Participant shall not be entitled to participate in the CAISO Markets or CRR Auctions or submit further Bids, including Self-Schedules, or otherwise participate in the CAISO Markets until the Market Participant posts an additional Financial Security Amount that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability.
- (c) The CAISO may require the Market Participant to post an additional Financial Security Amount in lieu of an Unsecured Credit Limit for a period of time.
- (d) The CAISO may restrict, suspend, or terminate the Market Participant's CRR Entity Agreement or any other service agreement.
- (e) The CAISO may resell the CRR Holder's CRRs in whole or in part, including any Long Term CRRs, in a subsequent CRR Auction or bilateral transaction, as appropriate.
- (f) The CAISO will not implement the transfer of a CRR if the transferee or transferor has an Estimated Aggregate Liability in excess of its Aggregate Credit Limit.

In addition, the CAISO may restrict or suspend a Market Participant's right to submit further Bids, including Self-Schedules, or require the Market Participant to increase its Financial Security Amount if at any time such Market Participant's potential additional liability for Imbalance Energy and other CAISO

charges is determined by the CAISO to be excessive by comparison with the likely cost of the amount of Energy reflected in Bids or Self-Schedules submitted by the Market Participant.

12.5.2 Late Posting Of Financial Security

Each Market Participant that is late in posting Financial Security within two (2) Business Days as required by Section 12.4 will be subject to the following enforcement actions:

- (a) After each of the first two (2) times during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security within two (2) Business Days as required by Section 12.4, the CAISO will send the delinquent Market Participant a warning notice.
- (b) After the third time during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security, the CAISO may require the Market Participant to post an additional Financial Security Amount that is as high as the highest level of the Market Participant's Estimated Aggregate Liability during the preceding twelve (12) months. The CAISO will hold such additional Financial Security Amount for no fewer than twelve (12) months following the month in which the Market Participant's third delinquency occurs, and the CAISO may then return to the Market Participant all or a portion of such additional Financial Security Amount if, during the intervening time, the Market Participant has timely posted all further additional Financial Security Amounts requested by the CAISO and has timely paid all of the amounts set forth in the Invoices from the CAISO.
- (c) After the third time and each subsequent time during a rolling twelve (12) month period beginning no earlier than April 7, 2010 that a Market Participant is late in posting additional Financial Security, the CAISO will assess a penalty to the Market Participant equal to the greater of \$1,000 or two (2) percent of the additional Financial Security Amount that the Market Participant has been late in posting, up to a maximum amount of \$20,000 per each late posting for which the CAISO assesses a penalty pursuant to this Section 12.5.2(c). This penalty will be included in the next Invoice to the Market

Participant. Penalty amounts collected by the CAISO pursuant to this Section 12.5.2(c) will be treated as set forth in Section 11.29.9.6.4.

- (d) After the fourth and any subsequent times during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security, the CAISO may extend the time period that it holds all or a portion of the additional Financial Security Amount resulting from the Market Participant's third delinquency during a rolling twelve (12) month period as described in Section 12.5.2(b).
- (e) After the fifth time during a rolling twelve (12) month period beginning no earlier than April 7, 2010 that a Market Participant is late in posting additional Financial Security, the CAISO may, notwithstanding any other provision of the CAISO Tariff, (i) suspend any and all rights of the Market Participant under the CAISO Tariff, effective immediately after the CAISO sends written notice of the suspension to the Market Participant, and (ii) terminate any agreement entered into between the CAISO and the Market Participant that allows the Market Participant to participate in the CAISO Markets, effective upon the date the CAISO sends written notice of the termination to the Market Participant or upon the date established in accordance with FERC rules if FERC rules require the CAISO to file the notice of termination with FERC. If the CAISO sends a notice of suspension or termination to a Market Participant pursuant to this Section 12.5.2(e), the Market Participant will not have the right to prevent such suspension or termination by curing its late posting of additional Financial Security. The CAISO will, following termination of an agreement pursuant to this Section 12.5.2(e) and within thirty (30) days of being satisfied that no sums remain owing by the Market Participant under the CAISO Tariff, return or release to the Market Participant, as appropriate, any money or credit support provided by such Market Participant to the CAISO under Section 12.
- (f) Any time that a Market Participant is late in posting additional Financial Security, the CAISO may also take other enforcement actions as described in this Section 12 and in the applicable Business Practice Manual, if deemed necessary by the CAISO to protect the financial integrity of the CAISO Markets.

* * *

12.6.2 Credit Requirements For CRR Auctions

To establish available credit for participating in any CRR Auction, each CRR Holder or Candidate CRR Holder must satisfy the credit requirements set forth in Section 12.1 and provide Financial Security using one or more of the forms identified in Section 12.2 (a) through (e) to secure the right to participate in the ISO's CRR Auctions as set forth below. In order to participate in an annual CRR Auction, the CRR Holder or Candidate CRR Holder must have Financial Security using one or more of the forms identified in Section 12.2 (a) through (e) in an amount that is the greater of \$500,000 or the sum of the maximum credit exposures of all of the CRR Holder's or Candidate CRR Holder's bids for CRRs submitted in the annual CRR Auction. In order to participate in a monthly CRR Auction, the CRR Holder or Candidate CRR Holder must have Financial Security using one or more of the forms identified in Section 12.2 (a) through (e) in an amount that is the greater of \$100,000 or the sum of the maximum credit exposures of all of the CRR Holder's or Candidate CRR Holder's bids for CRRs submitted in the monthly CRR Auction. The maximum credit exposure of a positively valued CRR bid is the maximum value of the CRR Holder's or Candidate CRR Holder's bid quantity (MW) multiplied by the sum of the bid price corresponding to the bid quantity and the Credit Margin of the CRR within the range of the minimum and maximum bid quantities submitted by the CRR Holder or Candidate CRR Holder. The maximum credit exposure of a negatively valued CRR bid is the maximum bid quantity (MW) submitted by the CRR Holder or Candidate CRR Holder multiplied by the Credit Margin of the CRR. A CRR Holder or Candidate CRR Holder that fails to satisfy this requirement shall not be permitted to participate in the relevant CRR Auction, or shall have bids exceeding its available Financial Security as defined in this section for participation in the CRR Auction, in accordance with the above formula, rejected by the CAISO on a last-in, first-out basis. The CAISO will retain the CRR Auction proceeds for negatively valued CRRs and will apply them to credit requirements of the applicable CRR Holder.

* * *

12.6.3.1 Credit Requirements Generally

- (a) Each CRR Holder, whether it obtains CRRs through a CRR Allocation or a CRR Auction, must maintain Financial Security utilizing one or more of the forms

specified in Section 12.2 (a) through (e) that meets or exceeds the credit requirement of the CRR portfolio determined as described in this Section 12.6.3.

- (b) Each CRR Holder shall be required to ensure that its Financial Security is sufficient to satisfy the credit requirements described in this Section 12.6.3. Except as provided in this paragraph, CRRs are evaluated on a portfolio basis as follows. If a CRR Holder owns more than one (1) CRR, such CRR Holder shall be subject to an overall credit requirement that is equal to the sum of the individual credit requirements applicable to each of the CRRs held by such CRR Holder, which is calculated after the MW associated with any Offsetting CRRs are netted out. If this sum is positive, the amount will be added to the CRR Holder's Estimated Aggregate Liability. However, if the sum is negative, the CRR Holder's Estimated Aggregate Liability shall not be reduced. If a CRR Holder holds one (1) or more CRRs obtained through a CRR Allocation and also holds one (1) or more CRRs obtained through a CRR Auction, the individual credit requirements applicable to any of the CRRs obtained through a CRR Allocation may not be netted against the individual credit requirements applicable to any of the CRRs obtained through a CRR Auction in determining such CRR Holder's Estimated Aggregate Liability.
- (c) The CAISO shall reevaluate the credit requirements for holding CRRs, and shall adjust the credit requirements accordingly, not less than monthly. 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, or more frequently than monthly if necessary if the CAISO finds that actual or anticipated market conditions indicate that CRR credit requirements may be inadequate to cover the financial risk of the CRRs. The CAISO may also adjust the credit requirements for holding Long Term CRRs annually to reflect the changes in auction prices of one-year CRRs in annual auctions and changes in

the Historical Expected Values for CRRs, and to reflect updates to Credit Margins based on actual Locational Marginal Price data derived from market operations. Whenever the CAISO requests additional Financial Security from a Market Participant as a result of a change in CRR value that is not related to an adjustment due to the monthly CRR Auction Price or an adjustment related to Historical Expected Value, the CAISO will provide a written explanation of the reason for that request. Any additional Financial Security must be in one or more of the forms specified in Section 12.2 (a) through (e).

- (d) In cases where the ownership of a CRR is to be transferred through either the Secondary Registration System or through Load Migration, the CAISO shall evaluate and adjust the credit requirements for both the current owner of the CRR and the prospective owner of the CRR as appropriate prior to the transfer. If additional Financial Security is required from either the current or prospective owner, the transfer will not be completed until such Financial Security has been provided to and accepted by the CAISO. CRRs transferred through the Secondary Registration System will be treated like auctioned CRRs for the purpose of calculating the credit requirements for holding the CRRs, regardless of whether the CRRs were originally allocated or purchased at auction or acquired through the Secondary Registration System. CRRs assigned to Load-gaining or Load-losing Load Serving Entities as a result of Load Migration will be treated like allocated CRRs for the purpose of calculating the credit requirements for holding the CRRs. Any additional Financial Security must be in one or more of the forms specified in Section 12.2 (a) through (e).

* * *

12.6.3.4 Calculation of Credit Margin

The Credit Margin (\$/MW) for a CRR is equal to (i) the Expected Congestion Revenue minus (ii) the Fifth Percentile Congestion Revenue of such CRR. Both values will be based on the probability distribution of Congestion revenue of such CRR calculated using historical Locational Marginal Price data, when

available, and proxy values, including data taken from Locational Marginal Price studies conducted by the CAISO, until such time as historical Locational Marginal Price data is available, with the details of such calculation published in a Business Practice Manual. The CAISO may reassess its determinations regarding the Credit Margin determination at any time and shall require additional Financial Security if the reassessment results in an increase in a CRR Holder's CRR credit requirements that are not covered by the CRR Holder's Financial Security. Any additional Financial Security must be in one or more of the forms specified in Section 12.2 (a) through (e)

* * *

13.5.2 Timing Of Adjustments

Upon determination that an award is payable by or to the CAISO pursuant to good faith negotiations or the CAISO ADR Procedures, the CAISO shall calculate the amounts payable to and receivable from the party, Market Participants, and Scheduling Coordinators, as soon as reasonably practical, and shall show any required adjustments as a debit or a credit in a subsequent Recalculation Settlement Statement T+7B or, in the case of an amount payable by the CAISO to a party, as soon as the CAISO and that party may agree.

* * *

37.8.10 Review Of Determination

A Market Participant that receives a Sanction may obtain immediate review of the CAISO's determination by directly appealing to FERC, in accordance with FERC's rules and procedures. In such case, the applicable Scheduling Coordinator shall also dispute the Recalculation Settlement Statement T+7B containing the financial penalty, in accordance with Section 11. The Recalculation Settlement Statement T+7B dispute and appeal to FERC must be made in accordance with the timeline for raising disputes specified in Section 11.29.8. The penalty will be tolled until FERC renders its decision on the appeal. The disposition by FERC of such appeal shall be final, and no separate dispute of such Sanction may be initiated under Section 13, except as provided in Section 37.9.3.4. For the purpose of applying the time limitations set forth in Section 37.10.1, a Sanction will be considered assessed when it is included on a Recalculation Settlement Statement T+7B, whether or not the CAISO accepts a Scheduling Coordinator's

dispute of such Initial Settlement Statement T+7B pending resolution of an appeal to FERC in accordance with this section or Section 37.9.3.3.

* * *

37.11.1 Method For Calculating Inaccurate Meter Data Penalty

There is no Sanction for the submission of inaccurate Meter Data used for a Recalculation Settlement Statement T+ 7B. However, an error in submitted Meter Data that exists after forty three (43) calendar days after the Trading Day (T+43C) constitutes a Rule of Conduct violation. The level of the Sanction depends on whether the Scheduling Coordinator or the CAISO discovered the error. An increased penalty will apply for errors that are discovered by the CAISO.

Table A1 below shows how the level of the Sanction depends on the following factors: whether or not the Scheduling Coordinator finds the error; whether or not the Scheduling Coordinator owes the market, and whether or not the CAISO performs a re-run of the market or produces a Recalculation Settlement Statement. If the CAISO issues a Recalculation Settlement Statement or performs a re-run, then Settlement to all Scheduling Coordinators is recalculated, and the impact of such re-runs on charges assessed will be considered. A penalty charge equal to thirty (30) percent of the estimated value of the Energy error will apply if the Scheduling Coordinator discovers the error or seventy-five (75) percent of the estimated value of the Energy error if the CAISO discovers the error. Penalty assessment and disposition of penalty proceeds will be administered as described in Section 37.9.1 and Section 37.9.4 respectively. A Sanction will not be imposed unless such Sanction is more than \$1,000 for at least one Trading Day during the period for which there was incomplete or inaccurate Meter Data.

<p>Table A1 – Calculation of Inaccurate Meter Data Penalty When There Is A Recalculation Settlement Statement or re-run</p>	<p>Does SC Owe Market?</p>	
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Case		
Case 1: SC Identifies Inaccurate Meter Data	Yes	Penalty = (MWh x applicable price) x 0.30
Case 1: SC Identifies Inaccurate Meter Data	No	Penalty = (MWh x applicable price) x 0.30
Case 2: CAISO Identifies Inaccurate Meter Data	Yes	Penalty = (MWh x applicable price) x 0.75
Case 2: CAISO Identifies Inaccurate Meter Data	No	Penalty = (MWh x applicable price) x 0.75

Note to Table A1:

The applicable price will be the greater of: (1) the simple average of the relevant twelve (12) five-minute LMPs for each hour in which inaccurate Meter Data occurred; or (2) \$10/MWh. The LMP used will be the values posted on OASIS for each Trading Hour of the applicable Trading Day period.

2. Method for Calculating Inaccurate Meter Data Penalty When there is not a Recalculation Settlement Statement or re-run.

If the CAISO does not perform a Recalculation Settlement Statement or re-run, for cases of inaccurate Meter Data, Table A2 will be used to determine and allocate penalty and any market adjustment amount. The market adjustment approximates the financial impact on the market; however, it does not completely reflect all the Settlement consequences of inaccurately submitted Meter Data. The approximated value of the inaccurate Meter Data in question will be calculated and returned to the market based on the average of the pro rata share of Unaccounted for Energy (UFE) charged in the utility Service Area during the period of the inaccurate Meter Data event. The thirty (30) percent or seventy-five (75) percent penalty will be distributed as discussed in Section 37.9.4. For cases where the CAISO does not perform a

Recalculation Settlement Statement or re-run and the Scheduling Coordinator does not owe the market, then no market adjustment will be performed and no penalty will be assessed.

TABLE A2- Calculation Of Inaccurate Meter Data Penalty When There Is Not a Recalculation Settlement Statement or re-run Case	Does SC Owe Market?	CAISO does not perform a Recalculation Settlement Statement or re-run
Case 1: SC Identifies Inaccurate Meter Data	Yes	Market Adjustment = (MWh x applicable price) Penalty = (MWh x applicable price)) x 0.30
Case 1: SC Identifies Inaccurate Meter Data	No	No market adjustment will be made
Case 2: CAISO Identifies Inaccurate Meter Data	Yes	Market Adjustment = (MWh x applicable price) Penalty = (MWh x applicable price) x 0.75
Case 2: CAISO Identifies Inaccurate Meter Data	No	No market adjustment will be made

Notes to Table A2:

The applicable price will be the greater of: (1) the simple average of the relevant twelve (12) five-minute LMPs for each hour in which inaccurate Meter Data occurred; or (2) \$10/MWh. The LMP used will be the value posted on OASIS for each Trading Hour of the applicable Trading Day.

A Sanction will be imposed only if the Sanction is more than \$1,000 for at least one Trading Day during the period for which there was incomplete or inaccurate Meter Data.

If the error is to the detriment of the responsible Scheduling Coordinator (e.g., under-reported Generation or over-reported Demand), and the CAISO does not produce a Recalculation Settlement Statement or perform a re-run, then no market adjustment will be made and no penalty will be assessed. If the CAISO produces a Recalculation Settlement Statement or performs a re-run after the error is corrected, then the Scheduling Coordinator will be given credit for the additional Energy through the normal Settlement process. If the Scheduling Coordinator is paid for an error due to a Recalculation Settlement Statement or re-run, then a Sanction will be assessed to assure that Recalculation Settlement Statements or re-runs do not diminish the incentive to correct such errors. This Sanction would be thirty (30) percent of the Energy value of the error if the Scheduling Coordinator discovers the error or seventy-five (75) percent estimated value of the error if the CAISO discovers the error.

If the error is to the detriment of the market, then a charge equal to thirty (30) percent or seventy-five (75) percent of the estimated value of the error, as appropriate, will be added to the charge for the Energy. If there is no Recalculation Settlement Statement or re-run, then the cost of Energy supplied by the CAISO (and inappropriately charged to the market as Unaccounted for Energy) must be recovered as well, and the charge will be equal to one hundred thirty (130) percent or one hundred seventy-five (175) percent of the estimated value of the error, as appropriate.

* * *

Appendix A

Master Definition Supplement

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- CAISO Estimated Settlement Quality Meter Data

Settlement Quality Meter Data estimated by the CAISO in accordance with Sections 10.3.6.2 and 11.1.5.

* * *

- Initial Settlement Statement T+3B

A Settlement Statement generated by the CAISO for the calculation of Settlements for a given Trading Day, which is published on the third Business Day from the relevant Trading Day (T+3B) and is prior to the Invoice or Payment Advice published for the relevant bill period.

* * *

- Recalculation Settlement Statement T+7B

A Settlement Statement generated by the CAISO for the calculation of Settlements for a given Trading

Day, which is published on the seventh Business Day from the relevant Trading Day (T+7B) and is prior to the Invoice or Payment Advice published for the relevant bill period.

* * *

- Recalculation Settlement Statement T+38B

The reissue of an Initial Settlement Statement T+3B by the CAISO on the thirty-eighth (38th) Business Day from the relevant Trading Day.

- Recalculation Settlement Statement T+76B

The reissue of an Initial Settlement Statement T+3B or a Recalculation Settlement Statement T+38B by the CAISO on the seventy-sixth (76th) Business Day from the relevant Trading Day (T+76B).

- Recalculation Settlement Statement T+18M

The reissue of an Initial Settlement Statement T+3B, a Recalculation Settlement Statement T+38B, or a Recalculation Settlement Statement T+76B on the Business Day eighteen (18) calendar months from the relevant Trading Day (T+18M).

- Recalculation Settlement Statement T+35M

The reissue of an Initial Settlement Statement T+3B, a Recalculation Settlement Statement T+38B, a Recalculation Settlement Statement T+76B, or a Recalculation Settlement Statement T+18M, on the Business Day thirty-five (35) calendar months from the relevant Trading Day (T+35M).

- Recalculation Settlement Statement T+36M

The reissue of an Initial Settlement Statement T+3B, a Recalculation Settlement Statement T+38B, a Recalculation Settlement Statement T+18M or a Recalculation Settlement Statement T+35M on the Business Day thirty-six (36) calendar months from the relevant Trading Day (T+36M).

Attachment B - Blacklines

California Independent System Operator Corporation

Fifth Replacement Tariff

Credit Reforms Compliance Filing

June 30, 2011

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10.2.1.3 Provision of and Access to Settlement Quality Meter Data

Scheduling Coordinators may obtain Settlement Quality Meter Data relating to the CAISO Metered Entities they represent by directly accessing the Settlement Quality Meter Data Systems as specified in the applicable Business Practice Manual.

- For CAISO Metered Entities, Revenue Quality Meter Data obtained by successfully polled meters will be validated, estimated and edited by the CAISO to produce Settlement Quality Meter Data (actual), which will be made available to Scheduling Coordinators within five (5) Business Days from the Trading Day (T+5B) and will be used in the ~~Initial~~ Recalculation Settlement Statement T+7B calculation.
- In the event that Revenue Quality Meter Data remains unavailable at -noon on the fifth Business Day after the Trading Day (T+5B) due to unsuccessfully polled meters or facility and/or systems failures, the CAISO will estimate Settlement Quality Meter Data for CAISO Metered Entities for any outstanding metered Demand and/or Generation for the ~~Initial~~ Recalculation Settlement Statement T+7B calculation as provided in Section 11.1.5.
- If the CAISO is notified in accordance with Section 10.2.13.2 that the revenue quality meter for a CAISO Metered Entity requires repair, the CAISO will produce Settlement Quality Meter Data (actual) for that entity using the estimation procedures referred to in Section 10.2.9, which will be made available to the Scheduling Coordinator for the CAISO Metered Entity within forty-three (43) calendar days from the Trading Day (T+43C) and will be used in the Recalculation Settlement Statement T+38B calculation.

* * *

10.3.6 Settlement Quality Meter Data Submission

Scheduling Coordinators shall submit to the CAISO Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data, as provided in Section 10.3.6.24(a), for Scheduling Coordinator Metered Entities they represent for each Settlement Period in an Operating Day according to the timelines established in Section 10.3.6.24 and the CAISO Payments Calendar and as provided in the

applicable Business Practice Manual. Scheduling Coordinators must also submit Settlement Quality Meter Data (actual and Scheduling Coordinator estimated) on demand as provided in the applicable Business Practice Manual.

10.3.6.1 No Meter Data Submission for Initial Settlement Statement T+3B

Because Initial Settlement Statement T+3B is solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand and Generation, Scheduling Coordinators cannot submit Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for the entities they represent for purposes of the Initial Settlement Statement T+3B calculation.

10.3.6.12 Timing of Settlement Quality Meter Data Submission for Calculation of Initial Recalculation Settlement Statement T+7B.

Scheduling Coordinators must submit Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO no later than noon on the fifth Business Day after the Trading Day (T+5B) for the Initial Recalculation Settlement Statement T+7B calculation. Scheduling Coordinators cannot submit Estimated Settlement Quality Meter Data for Proxy Demand Resources.

- (a) In the absence of Actual Settlement Quality Meter Data, Scheduling Coordinators may submit Scheduling Coordinator Estimated Settlement Quality Meter Data using interval metering when available, sound estimation practices, and other available information including, but not limited to, bids, schedules, forecasts, temperature data, operating logs, recorders, and historical data. Scheduling Coordinator Estimated Settlement Quality Meter Data must be a good faith estimate that reasonably represents Demand and/or Generation quantities for each Settlement Period.

~~(a)~~ (b) When Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data is not received by the CAISO for a Scheduling Coordinator Metered Entity within five (5) Business Days from the Trading Day (T+5B), the CAISO will estimate the entity's Settlement Quality Meter Data for any outstanding metered Demand and/or Generation, ~~excluding a Proxy Demand Resource~~, for use in the Initial Recalculation Settlement Statement T+7B calculation, as provided in Section 11.1.5.

10.3.6.23 **Timing of Settlement Quality Meter Data Submission for Recalculation Settlement Statement T+38B**

Scheduling Coordinators must submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO no later than midnight on the forty-third (43) calendar day after the Trading Day (T+43C) for the Recalculation Settlement Statement T+38B. A Scheduling Coordinator that timely submits Actual Settlement Quality Meter Data for the ~~Initial~~ Recalculation Settlement Statement T+7B pursuant to Section 10.3.6.42 may submit revised Actual Settlement Quality Meter Data for the Recalculation Settlement Statement T+38B no later than the forty-third (43) calendar day after the Trading Day pursuant to this Section.

- (a) When Actual Settlement Quality Meter Data is not received by the CAISO for a Scheduling Coordinator Metered Entity by forty-three (43) calendar days after the Trading Day (T+43C), the Scheduling Coordinator has failed to submit complete and accurate meter data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2.
- (b) Any Scheduling Coordinator Estimated Settlement Quality Meter Data submitted by a Scheduling Coordinator on behalf of the Scheduling Coordinator Metered Entities it represents that is not replaced with Actual Settlement Quality Meter Data by forty-three (43) calendar days after the Trading Day (T+43C) has failed to submit complete and accurate meter data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2. In the absence of Actual Settlement Quality Meter Data, Scheduling Coordinator Estimated Settlement Quality Meter Data will be used in the Recalculation Settlement Statements.
- (c) The CAISO will not estimate a Scheduling Coordinator Metered Entity's Settlement Quality Meter Data for any outstanding metered Demand and/or Generation for use in a Recalculation Settlement Statement calculation. Any previous CAISO Estimated Settlement Quality Meter Data that the Scheduling Coordinator does not replace with Actual Settlement Quality Meter Data by forty-three (43) calendar days after the Trading Day (T+43C) will be set to zero. The CAISO will follow the control process described in the BPM for Metering to monitor and identify the CAISO Estimated Settlement Quality

Meter Data that was not timely replaced and will take proactive measures to obtain the Actual Settlement Quality Meter Data. A Scheduling Coordinator that fails to replace CAISO Estimated Settlement Quality Meter Data with Actual Settlement Quality Meter Data by forty-three (43) calendar days after the Trading Day (T+43C) has failed to provide complete and accurate Settlement Quality Meter Data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2.

10.3.6.34 **Timing of Settlement Quality Meter Data Submission for Recalculation Settlement Statements after the Recalculation Settlement Statement T+38B**

Scheduling Coordinators may continue to submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO for use in Recalculation Settlement Statements subsequent to the Recalculation Settlement Statement T+38B according to timelines established in the CAISO Payments Calendar.

* * *

11.1 **Settlement Principles**

The CAISO shall calculate, account for 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 and payments for Initial Settlement Statement T+3B based on CAISO estimates and for all other settlement statements 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. HASP Intertie Schedules shall be settled at the relevant HASP Intertie LMP at the relevant Scheduling Point. 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.

* * *

11.1.4 [NOT USED]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 Proxy Demand Response Energy Management. 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 and dispatch of the resource as calculated in the Real-Time Market and as modified by any applicable corrections to the Dispatch Operating Point for the resource.
- (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 Quantity Meter Demand for Participating Load will not be increased by fifteen (15) percent.

~~(c) CAISO Estimated Settlement Quality Meter Data for Proxy Demand Response Energy Management 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) CAISO will not estimate Unaccounted For Energy under Section 11.5.3, the rescission of payments for Regulation Up and Regulation Down Capacity under Section 8.10.8.6 or MSS deviation payments under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.~~

11.1.5 ~~Settlement Quality Meter Data SQMD~~ For ~~InitialRecalculation Settlement~~ Statement T+7B

The CAISO's ~~InitialRecalculation~~ Settlement Statement T+7B shall be based on the Settlement Quality Meter Data (actual or Scheduling Coordinator estimated) received in SQMDS. In the event Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data is not received from a Scheduling Coordinator or CAISO Metered Entity, the CAISO will estimate Settlement Quality Meter Data for that outstanding metered Demand or Generation, ~~excluding~~including a Proxy Demand Resource, for the ~~InitialRecalculation~~ Settlement Statement T+7B calculation. CAISO Estimated Settlement Quality Meter Data for metered Generation, metered Demand, and Proxy Demand Response Energy Management will be calculated using the same method as set forth in Section 11.1.4.

~~(a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on total Expected Energy and dispatch of that resource as calculated in the Real-Time Market and as modified by any applicable corrections to the Dispatch Operating Point for the resource.~~

~~(b) CAISO Estimated Settlement Quality Meter Data for metered 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 estimated metered demand by more than fifteen (15) percent. Total estimated metered demand is the sum of the value of Scheduling Coordinator submitted metered Demand, CAISO polled estimated Settlement quality~~

~~metered Demand, and Scheduled Demand for unsubmitted metered Demand at the fifth (5th) Business Day after the Trading Day (T+5B). CAISO Estimated Settlement Quantity Meter Demand for Participating Load will not be increased by fifteen (15) percent.~~
~~(c) CAISO will not estimate Settlement Quality Meter Data for Proxy Demand Resources~~

* * *

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. Publishing of Uninstructed Deviation Penalty results will not occur on the Initial Settlement Statement T+~~73~~B but rather will occur on the Recalculation Settlement Statement T+~~38~~~~B~~7B. The Uninstructed Deviation Penalty will be applied as follows:

- (a) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval. The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval in which the CAISO has not declared a staged System Emergency;
- (b) The Uninstructed Deviation Penalty will apply to pre-Dispatched Bids from Non-Dynamic System Resources identified, when such a pre-Dispatch Instruction is issued more than forty (40) minutes prior to the relevant Operating Hour, subject to the following conditions: (i) the Uninstructed Deviation Penalty will only apply to the pre-Dispatched amount of the Bid that is declined or not delivered, (ii) the Uninstructed Deviation Penalty will not apply to a portion of a pre-Dispatched Bid that is subsequently not delivered at the direction of a Balancing Authority,

including the CAISO, due to a curtailment of transmission capability or to prevent curtailment of native firm load occurring subsequent to issuing the pre-Dispatch Instruction, (iii) the Uninstructed Deviation Penalty will not apply to Uninstructed Imbalance Energy resulting from declining subsequent intra-hour Dispatch Instructions. Dynamically scheduled Dynamic System Resources, to the extent they deviate from their Day-Ahead Schedule plus any Dispatch Instructions, will be subject to the Uninstructed Deviation Penalty.

- (c) The Uninstructed Deviation Penalty will not apply to Load, Curtailable Demand, or Demand Response Services.
- (d) **[NOT USED]**
- (e) The Uninstructed Deviation Penalty will not apply to Regulatory Must-Run Generation or Participating Intermittent Resources that meet the scheduling obligations established in the Eligible Intermittent Resources Protocol in Appendix Q. No other applicable charges will be affected by this exemption. The Uninstructed Deviation Penalty also will not apply to Qualifying Facilities (QFs), including those that are dynamically scheduled, that have not executed and are not required pursuant to this CAISO Tariff to execute a Participating Generator Agreement (PGA) or Qualifying Facility Participating Generator Agreement.
- (f) All MSS resources designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net settlement election) are exempt from Uninstructed Deviation Penalties in this Section 11.23. All MSS resources not designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net Settlement election) are subject to Uninstructed Deviation Penalties in this Section 11.23.
- (g) The Uninstructed Deviation Penalty will apply to Generating Units providing Regulation and dynamically scheduled Dynamic System Resources providing Regulation to the extent that Uninstructed Deviations from such resources

exceed each resource's actual Regulation range plus the applicable Tolerance Band. Resources providing Regulation and generating within their relevant Regulating range (or outside their relevant Regulating range as a direct result of CAISO control or instruction) will be deemed to have zero (0) deviations for purposes of the Uninstructed Deviation Penalty.

- (h) The Uninstructed Deviation Penalty will be calculated and assessed for each resource individually, except as specified in Appendix R, which specifies when Uninstructed Deviations from individual resources may be aggregated.
- (i) The Uninstructed Deviation Penalty shall not apply to any Uninstructed Imbalance Energy resulting from compliance with a directive by the CAISO or the Reliability Coordinator.
- (j) **[NOT USED]**
- (k) The Uninstructed Deviation Penalty will not apply when the applicable LMP is negative or zero.
- (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 percent (100%) 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 pay for such Energy.
- (m) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to fifty percent (50%) of the corresponding Resource-Specific Settlement Interval LMP or, in the case of aggregated resources, the Settlement Interval Penalty Location Real-Time LMP.

- (n) The Uninstructed Deviation Penalty will not apply to deviations from Energy delivered as part of a scheduled test so long as the test has been scheduled by the Scheduling Coordinator with the CAISO or the CAISO has initiated the test for the purposes of validating unit performance.
- (o) The Uninstructed Deviation Penalty shall not apply to any excess Energy delivered from or any shortfall of Energy not delivered from an Exceptional Dispatch, involving a Generating Unit or a System Unit unless the CAISO and the supplier have agreed upon the time of, duration of, and amount of Energy to be delivered in the out-of-market transaction and the CAISO reflects the out-of-market transaction in its Real-Time Expected Energy calculations. The Uninstructed Deviation Penalty shall apply to Energy outside the Tolerance Band from out-of-market transactions with dynamically scheduled Dynamic System Resources to the extent the agreed-to Energy is not delivered or over-delivered, and to any Energy from Non-Dynamic System Resources to the extent the agreed-to Energy is not delivered if that over- or under-delivery was due to action taken by or not taken by the System Resource and not the result of action taken by a Balancing Authority due to a curtailment of firm transmission capability or to prevent curtailment of native firm load occurring subsequent to the out-of-market transaction.
- (p) The Uninstructed Deviation Penalty shall not apply to Generating Units and dynamically scheduled Dynamic System Resources with Uninstructed Imbalance Energy if the Generating Unit or dynamically scheduled Dynamic System Resource was physically incapable of delivering the expected Energy or if systems malfunctions prevent receipt of Dispatch Instructions, provided that the Generating Unit or dynamically scheduled Dynamic System Resource had notified the CAISO within thirty (30) minutes of the onset of an event that prevents the resource from performing its obligations. A Generating Unit or dynamically scheduled Dynamic System Resource must notify CAISO operations

staff of its reasons for failing to deliver the Expected Energy in accordance with Section 9.3.10.6 and must provide information to the CAISO that verifies the reason the resource failed to comply with the Dispatch Instruction within forty-eight (48) hours of the Operating Hour in which the instruction is issued.

- (q) Adjustments to any Generating Unit, Curtailable Demand and System Resource Day-Ahead Schedules or HASP Intertie Schedules made in accordance with the terms of TRTC Instructions for Existing Contracts or TORs shall not be subject to Uninstructed Deviation Penalties. Valid changes to ETC Self-Schedules or TOR Self-Schedules submitted after the close of the HASP or the RTM shall not be subject to Uninstructed Deviation Penalties.
- (r) Any changes made to Schedules prior to the CAISO issuing HASP Intertie Schedules shall not be subject to Uninstructed Deviation Penalties.
- (s) Uninstructed Deviation Penalties shall not be charged to any deviation from a Dispatch Instruction that does not comply with the requirements set forth in this CAISO Tariff.
- (t) Amounts collected as Uninstructed Deviation Penalties shall first be assigned to reduce the portion of above-LMP costs that would otherwise be assigned pro rata to all Scheduling Coordinators in that Settlement Interval. Any remaining portion of amounts collected as Uninstructed Deviation Penalties after satisfying these sequential commitments shall be treated in accordance with Section 11.29.9.6.3.
- (u) Condition 2 RMR Units shall be exempt from Uninstructed Deviation Penalties.
- (v) The Uninstructed Deviation Penalty shall not apply to positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit from the time the Generating Unit synchronizes to the grid to the earlier of (1) the Settlement Interval in which the Generating Unit produces a quantity of Energy that represents an average rate of delivery over such Settlement Interval in excess of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band, or (2) the first Settlement Interval after the

expiration of a period of time that begins at the end of the Settlement Interval in which the Generating Unit synchronizes to the grid and ends after the Generating Unit's maximum Start-Up Time as specified in the Master File. The Uninstructed Deviation Penalty shall not apply to any positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit for a duration equal to the minimum of two Settlement Intervals or the time specified in the Master File for the Generating Unit to disconnect from the grid after reaching its Minimum Operating Limit following either (1) the last Settlement Interval of an hour in which the Generating Unit had a non-zero Day-Ahead Schedule or (2) the Settlement Interval in which the Generating Unit is expected to reach its Minimum Operating Limit based on the applicable Ramp Rate when the CAISO instructed the Generating Unit to Shut-Down. The amount of Uninstructed Imbalance Energy exempted from the Uninstructed Deviation Penalty shall not exceed the amount of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band. This exception from the application of the Uninstructed Deviation Penalty does not apply to Dynamic System Resources.

- (w) UDP shall not apply to deviations by a Generating Unit that are attributable to any automatic response to a system disturbance, including a response to correct frequency decay, in accordance with Applicable Reliability Criteria for the duration of the system disturbance, and for an additional five (5) minutes when a Generating Unit's deviation is in the same direction as the mitigating frequency response.
- (x) The Uninstructed Deviation Penalty shall not apply in the event that a malfunction in a CAISO system application causes an infeasible Dispatch Instruction to be communicated or prevents timely communication of a Dispatch Instruction or a SLIC malfunction prevents a resource from reporting an event that affects the resource's ability to deliver Energy.

- (y) The Uninstructed Deviation Penalty shall not apply to a failure to comply with a manual Dispatch Instruction that is not confirmed by a Dispatch Instruction transmitted through the CAISO's Automated Dispatch System.
- (z) The Uninstructed Deviation Penalty shall not apply if a Dispatch Instruction is validated after the start time of the instruction from the Settlement Interval in which the Dispatch Instruction was first effective to the earliest Settlement Interval, inclusive, in which the resource is able to respond to the Dispatch Instruction.

* * *

11.5.3 Unaccounted For Energy (UFE)

For each Settlement Interval, the CAISO will calculate UFE for each utility Service Area for which the IOU or Local Publicly Owned Electric Utility has requested separate UFE calculation and has met the requirements applicable to a CAISO Metered Entity. The UFE will be settled as Imbalance Energy at the Settlement Interval Locational Marginal Price calculated for each utility Service Area for which UFE is calculated separately. UFE attributable to meter measurement errors, load profile errors, Energy theft, and distribution loss deviations will be allocated to each Scheduling Coordinator based on the ratio of its metered CAISO Demand within the relevant utility Service Area for which UFE is calculated separately to total metered CAISO Demand within that utility Service Area. UFE charges will not be estimated or included on Initial Settlement Statement T+3B.

* * *

11.29 Billing And Payment Process

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 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.

The components of the Grid Management Charge will be included in an Initial Settlement Statement T+~~73~~B, 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+~~73~~B and the Recalculation Settlement Statements.

11.29.2 Time-Frame For Payments Or Charges

Payments or charges for the items referred to in Section 11.1.2 (except for the charges payable under long-term contracts) for each Trading Day in each calendar month shall be made ~~five (5)~~four (4) Business Days after issuance of the Invoices and Payment Advices issued in accordance with Section 11.29.10. Payments for FERC Annual Charges will be made in accordance with Section 11.19.

* * *

11.29.5 General Principles For Production Of Settlement Statements

11.29.5.1 Basis of Settlement

The basis of each Settlement Statement shall be the debiting or crediting of an account in the name of the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO in the general ledger set up by the CAISO to reflect all transactions, charges or payments settled by the CAISO.

11.29.5.2 Right to Dispute

All Scheduling Coordinators, CRR Holders, Black Start Generators or Participating TOs shall have the right to dispute any item or calculation set forth in any ~~Initial Settlement Statement T+7B, Recalculation Settlement Statement T+7B or~~ Recalculation Settlement Statement T+38B, or Incremental Changes in Recalculation Settlement Statements T+76B, T+18M, and T+35M in accordance with this CAISO Tariff, but not those set forth in ~~Initial Settlement Statement T+3B or~~ Recalculation Settlement Statement T+36M.

* * *

11.29.7.1 Timing of the Settlements Process

The CAISO will publish: (i) Initial Settlement Statements T+3B on the third Business Day from the relevant Trading Day (T+3B), (ii) Initial Recalculation Settlement Statements T+7B on the seventh Business Day from the relevant Trading Day (T+7B), (iii) Recalculation Settlement Statements on the thirty-eighth Business Day from the relevant Trading Day (T+38B), (iv) Recalculation Settlement Statements on the seventy-sixth Business Day after the Trading Day (T+76B), (v) Recalculation Settlement Statements on the Business Day eighteen (18) calendar months from the relevant Trading Day (T+18M) if necessary, (vi) Recalculation Settlement Statements on the Business Day thirty-five (35) calendar months from the relevant Trading Day (T+35M) if necessary, (vii) Recalculation Settlement Statements on the Business Day thirty-six (36) calendar months from the relevant Trading Day (T+36M) if necessary, and (viii) any other Recalculation Settlement Statement authorized under Section 11.29.7.3. The CAISO will issue a notice to the market if a Recalculation Settlement Statement T+18M, Recalculation Settlement Statement T+35M, Recalculation Settlement Statement T+36M, or any additional Recalculation Settlement Statement is required for a Trading Day. The CAISO will notify affected Market Participants regarding failed or late publication of any Settlement Statements specified above and will rectify such failed or late publications pursuant to its procedure posted on the CAISO Website.

11.29.7.1.1 Initial Settlement Statement T+~~7~~3B

The CAISO shall provide to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for validation an Initial Settlement Statement T+~~7~~3B for each Trading Day within ~~seven~~ (7)three (3) Business Days of the relevant Trading Day, covering all Settlement Periods in that Trading Day. Each Initial Settlement Statement T+~~7~~3B will be solely based on produced using available Settlement Quality Meter Data (either actual or estimated) and CAISO Estimated Settlement Quality Meter Data in accordance with Section 11.1.4. The Initial Settlement Statement T+~~7~~3B will include the following:

- (a) the amount payable or receivable by the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge referred to in Section 11 for each Settlement Period in the relevant Trading Day;

- (b) the total amount payable or receivable by that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for all Settlement Periods in that Trading Day after the amounts payable and the amounts receivable under (a) have been netted off pursuant to Section 11.29;
~~and~~
- (c) the components of each charge in each Settlement Period except for information contained in the Imbalance Energy report referred to in this Section 11.29.7.1.1;
and
- (d) a breakdown of the components of the Imbalance Energy charge (the Imbalance Energy report).

11.29.7.1.2 Recalculation Settlement Statements

The CAISO shall provide to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO Recalculation Settlement Statements in accordance with the CAISO Tariff and the CAISO Payments Calendar. Recalculation Settlement Statements shall be in a format similar to that of the Initial Settlement Statement T+73B and shall include the same granularity of information provided in the Initial Settlement Statement T+73B as amended following the validation procedure.

* * *

11.29.7.2 Basis for Billing and Payment

The Initial Settlement Statement T+73B and any Recalculation Settlement Statement shall constitute the basis for billing in accordance with this CAISO Tariff. The Initial Settlement Statement T+73B shall constitute the basis for billing for all charges in the first instance. The Recalculation Settlement Statements ~~T+7B and~~ T+38B shall constitute the basis for billing for adjustments to charges set forth in the Initial Settlement Statement T+73B. Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall pay any net debit and shall be entitled to receive any net credit shown in an Invoice or Payment Advice on the Payment Date, whether or not there is any dispute regarding the amount of the debit or credit.

* * *

11.29.7.3 Additional Recalculation Settlement Statements

The CAISO shall issue no Recalculation Settlement Statements other than ~~to~~Recalculation Settlement Statements T+7B, Recalculation Settlement Statements T+38B, Recalculation Settlement Statements T+76B, Recalculation Settlement Statements T+18M, Recalculation Settlement Statements T+35M, and Recalculation Settlement Statements T+36M, unless directed by the CAISO Governing Board or pursuant to a FERC order.

* * *

11.29.8.2 Review of Initial Settlement Statement T+3B

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall have the opportunity to review the terms of the Initial Settlement Statement T+3B that it receives. Because this settlement statement is solely based on CAISO Estimated Settlement Quality Meter Data and is not subject to dispute or exception, the Initial Settlement Statement T+3B shall be deemed financially binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates.

11.29.8.23 Validation of ~~Initial Settlement Statement T+7B and~~ Recalculation Settlement Statements ~~T+38B~~

11.29.8.23.1 Validation of ~~Initial~~Recalculation Settlement Statement T+7B

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall have the opportunity to review the terms of the ~~Initial~~Recalculation Settlement Statement T+7B that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall be deemed to have validated each ~~Initial~~Recalculation Settlement Statement T+7B unless it has raised a dispute or reported an exception within fourteen (14) Business Days from the date of issuance. Once validated, a ~~an~~ ~~Initial~~Recalculation Settlement Statement T+7B shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, except to the extent that the CAISO performs a Recalculation Settlement Statement.

The notice of dispute, if any, shall state clearly the Trading Day, the issue date of the ~~Initial~~Recalculation Settlement Statement T+7B, the item disputed, the reasons for the dispute, and the amount claimed (if appropriate) and shall be accompanied with all available evidence reasonably required to support the claim.

11.29.8.23.2 Validation of Recalculation Settlement Statement T+38B

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall have the opportunity to review the terms of the Recalculation Settlement Statement T+38B that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall be deemed to have validated each Recalculation Settlement Statement T+38B unless it has raised a dispute or reported an exception within eighteen (18) Business Days from the date of issuance. Once validated, a Recalculation Settlement Statement T+38B shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, except to the extent that the CAISO performs a subsequent Recalculation Settlement Statement.

The notice of dispute, if any, shall state clearly the Trading Day, the issue date of the Recalculation Settlement Statement T+38B, the item disputed, the reasons for the dispute, and the amount claimed (if appropriate) and shall be accompanied with all available evidence reasonably required to support the claim.

11.29.8.3.3 Validation of Additional Recalculation Settlement Statements

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall have the opportunity to review the Incremental Changes, including the CAISO's implementation of a prior accepted dispute, that appear on or are omitted from any Recalculation Settlement Statement T+76B, Recalculation Settlement Statement T+18M or Recalculation Settlement Statement T+35M that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall be deemed to have validated the Incremental Changes on each Recalculation Settlement Statement unless it has raised a dispute or reported an exception regarding those Incremental Changes within time periods set forth in Sections 11.29.8.4.1 through 11.29.8.4.6 from the date of issuance. Once validated, the Incremental Changes on a Recalculation Settlement Statement T+76B , Recalculation Settlement Statement T+18M, or Recalculation Settlement Statement T+35M shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, except to the extent that the CAISO performs an additional Recalculation Settlement Statement pursuant to Section 11.29.7.3.

The notice of dispute shall state clearly the Trading Day, the issue date of the Recalculation Settlement Statement, the item disputed, the reasons for the dispute, and the amount claimed (if appropriate) and

shall be accompanied with all available evidence reasonably required to support the claim. ~~The only~~
~~Recalculation Settlement Statement that cannot be disputed is~~No disputes or exceptions are permitted for
any items reflected on Recalculation Settlement Statement T+36M.

* * *

11.29.8.4.1 Dispute of Initial Settlement Statement T+3B Not Permitted

Because Initial Settlement Statement T+3B is solely based on CAISO Estimated Settlement Quality Meter
Data, which will be reconciled to actual data on subsequent Recalculation Settlement Statements, no
disputes or exceptions shall be permitted for any terms reflected on this settlement statement.

11.29.8.4.12 Dispute of ~~Initial~~Recalculation Settlement Statement T+7B

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit a dispute that identifies discrepancies or errors for any item in an ~~an Initial~~ Recalculation Settlement Statement T+7B, except for CAISO or Scheduling Coordinator Estimated Settlement Quality Meter Data, no later than fourteen (14) Business Days from the publication date of ~~an Initial~~ the Recalculation Settlement Statement T+7B. Valid disputes regarding data appearing on an ~~an Initial~~ Recalculation Settlement Statement T+7B 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 regarding data appearing on an ~~an Initial~~ Recalculation Settlement Statement T+7B, it may initiate a good faith negotiation of the dispute with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.23 Dispute of Recalculation Settlement Statement T+38B

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit a dispute that identifies discrepancies or errors for any item in a Recalculation Settlement Statement T+38B no later than eighteen (18) Business Days from the publication date of the Recalculation Settlement Statement T+38B. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+38B 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 regarding data appearing on a Recalculation Settlement Statement

T+38B, it may initiate a good faith negotiation of the dispute with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.34 Dispute of Recalculation Settlement Statement T+76B

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit disputes regarding Incremental Changes in a Recalculation Settlement Statement T+76B, including the CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+76B, no later than twelve (12) months from the relevant Trading Day (T+12M). A dispute shall only be based on Incremental Changes between Recalculation Settlement Statement T+38B and Recalculation Settlement Statement T+76B. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+76B will be reflected on 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 regarding data appearing on a Recalculation Settlement Statement T+76B, it may initiate good faith negotiation of the dispute with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.45 Dispute of Recalculation Settlement Statement T+18M

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit disputes regarding Incremental Changes, including the CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+18M no later than nineteen (19) months from the relevant Trading Day (T+19M). A dispute shall only be based on Incremental Changes between Recalculation Settlement Statement T+76B and Recalculation Settlement Statement T+18M. Valid Disputes regarding data appearing on a Recalculation Settlement Statement T+18M will be reflected on a later Recalculation Settlement Statement. If a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO disagrees with the CAISO's resolution of a dispute regarding data appearing on a Recalculation Settlement Statement T+18M, it may initiate a good faith negotiation with the CAISO no later than thirty (30) days after the date of the CAISO's response to the dispute.

11.29.8.4.56 Dispute of Recalculation Settlement Statement T+35M

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may submit disputes regarding Incremental Changes in a Recalculation Settlement Statement T+35M, including the

CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+35M, no later than seven (7) calendar days from the publication date of a Recalculation Settlement Statement T+35M. A dispute shall only be based on (i) Incremental Changes between Recalculation Settlement Statement T+18M and Recalculation Settlement Statement T+35M, (ii) Meter Data issues identified through the audit process, or (iii) any good faith negotiation or dispute resolution settlement. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+35M will be reflected on the Recalculation Settlement Statement T+36M. If a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO disagrees with the CAISO's resolution of a dispute regarding data appearing on a Recalculation Settlement Statement T+35M, it may pursue the dispute only through the dispute resolution process set forth in Section 13.

11.29.8.4.67 Dispute of Recalculation Settlement Statement T+36M

Recalculation Settlement Statement T+36M shall not be subject to either a dispute by a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO, or adjustment by CAISO, except as directed by the CAISO Governing Board or by an order of FERC. Nothing herein shall be construed to restrict the right of the CAISO or any Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO's to seek redress from FERC in accordance with the Federal Power Act.

11.29.8.4.78 Recurring Disputes or Exceptions

A Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may request the CAISO to treat as recurring a dispute or exception raised in accordance with Sections 11.29.8.1 and 11.29.8.23 above, if a dispute or exception would apply to ~~subsequent Initial Settlement Statements T+7B and subsequent~~ Recalculation Settlement Statements for subsequent Trading Days as permitted by Section 11.29.8.34. A request for recurring treatment may be made for any valid reason provided that ~~subsequent Initial Settlement Statements T+7B and~~ Recalculation Settlement Statements for subsequent Trading Days would be affected, including, but not limited to, that the disputed calculation will recur, or that a disagreement as to policy will affect calculations in subsequent ~~Initial Settlement Statement T+7B and~~ Recalculation Settlement Statements. If a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO wishes to request that the CAISO treat a dispute as recurring, it shall, in the notice, clearly indicate that it requests such treatment and set forth in detail the reasons that support such

treatment. To the extent possible, the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall state the types of charges and dates to which the dispute will apply, and provide estimates of the amounts that will likely be claimed on each date.

The CAISO shall make a determination on such a request within five (5) Business Days of receipt. To preserve its right to dispute an item, a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO must continue to raise a dispute or report an exception until it is notified by the CAISO that the CAISO agrees to treat the dispute or exception as recurring. If the CAISO grants a request to treat a dispute or exception as recurring, the dispute raised or exception reported by the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall be deemed to apply to every subsequent ~~Initial Settlement Statement T+7B and~~ Recalculation Settlement Statement provided to the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO from the date that the CAISO grants the request for recurrent treatment until: a) ninety (90) days have elapsed, unless the CAISO indicates a different expiration date on its response to the request, in which case the expiration date shall be as stated by the CAISO in its response or b) the dispute or exception is resolved, whichever is shorter. The CAISO may deny a request that the CAISO treat a dispute as recurring for any valid reason, including because the request is not adequately specific as to the basis for recurring treatment or the subsequent calculations that will be affected.

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 shall be as follows:

- (a) For a settlement statement dispute based on ~~an Initial~~ Recalculation Settlement Statement T+7B, Recalculation Settlement Statement T+38B, Recalculation Settlement Statement T+76B, or Recalculation Settlement Statement T+18M, ~~the~~ CAISO shall reach a determination to approve or deny the dispute, and provide electronic notice of the outcome to the Scheduling Coordinator that submitted the dispute, no later than twenty (20) 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 payments and/or charges, the CAISO in its notice to the disputing Scheduling

-Coordinator shall identify the subsequent recalculation settlement statement expected to include the adjustment.

- (b) For a settlement statement dispute based on Recalculation Settlement Statement T+35M, the CAISO shall reach a determination to approve or deny the dispute, and provide electronic notice of the outcome to the Scheduling Coordinator that submitted the dispute, no later than fourteen (14) days after the end of the dispute period for that settlement statement. Valid disputes regarding data appearing on Recalculation Settlement Statement T+35M will be reflected on Recalculation Settlement Statement T+36M.
- (c) 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 complex dispute. The CAISO will advise the disputing Scheduling Coordinator within twenty (20) Business Days after the end of the dispute period for that settlement statement if a dispute is a complex dispute. The CAISO shall make reasonable efforts to reach a determination to approve or deny a complex dispute resulting from (i) ~~an Initial Recalculation~~ Settlement Statement T+7B, Recalculation Settlement Statement T+38B, or Recalculation Settlement Statement T+76B, no later than fifteen (15) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+18M, and (ii) a Recalculation Settlement Statement T+18M, no later than thirty-three (33) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+35M.

* * *

11.29.10 Billing And Payment

The CAISO shall prepare and send to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO ~~an Invoice or Payment Advice on Wednesday of each week. two Invoices or Payment Advices for each billing period in each calendar month. There are two (2) billing periods in each calendar month. The first billing period is from the first to the fifteenth day of the month and second billing period is from the sixteenth to the last of day of the month. The CAISO will publish Invoices and Payment Advices for the first semi-monthly billing period in a month on the seventh Business Day after the Trading Day that is the fifteenth day of the month. The CAISO will publish Invoices and Payment Advices for the second semi-monthly billing period in a month on the seventh Business Day after the Trading Day that is the end of the month.~~ Each Invoice or Payment Advice will show amounts which are to be paid by or to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO, the Payment Date, being the date on which such amounts are 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 are to be paid. Revenues owed from a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO are expressed as a positive amount on an Invoice. Revenues owed to a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO are expressed as a negative amount on a Payment Advice. Payments or charges for the items referred to in an Invoice or Payment Advice (except for the charges payable under long-term contracts) for each Trading Day ~~in each calendar month~~ shall be made ~~five~~four (54) Business Days after the date on which the ~~semi-monthly~~ weekly Invoice or Payment Advice is issued. If the fourth Business Day after an Invoice or Payment Advice is issued falls on a CAISO holiday, then the Payment Date for the Invoice or Payment Advice shall be the next Business Day.

11.29.10.1 Billing Periods

Each Invoice or Payment Advice will include all of the Initial Settlement Statements T+3B published since the previous Invoice or Payment Advice was issued ~~one (1) semi-monthly billing period~~ and up to ~~five~~ six (6) other billing periods. The other billing periods correspond to the dates on which the Recalculation Settlement Statements are published. Any Invoice or Payment Advice for a billing period corresponding to a Recalculation Settlement Statement will be reflected on the next scheduled ~~semi-~~

~~monthly~~ Invoice or Payment Advice ~~for the end of the month~~. Each billing period will be represented separately on the Invoice or Payment Advice but the net Invoice or Payment Advice for a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO will reflect the entity's net financial obligations in all billing periods.

11.29.10.2 Interest

Interest will be applied to any Incremental Changes between Initial Settlement Statement T+3B and Recalculation Settlement Statement T+7B, and thereafter to any Incremental Changes between each subsequent Recalculation Settlement Statement through Recalculation Settlement Statement T+36M.

Interest will be calculated ~~separately for the billing period from the first to the fifteenth day of the month and for the billing period from the sixteenth to the last of day of the month~~ from the Payment Date for the Invoice or 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.

* * *

11.29.21.2 Evidence of Unpaid Amount

The CAISO shall, on request, certify in writing the amounts owed by a CAISO Debtor that remain unpaid and the CAISO Creditors to whom such amounts are owed and shall provide certified copies of the relevant Initial Settlement Statement T+~~73~~B and the Recalculation Settlement Statements, Invoices, Payment Advices, and other documentation on which the CAISO's certificate was based to the CAISO Debtor and the relevant CAISO Creditors. A CAISO certificate given under this Section 11.29.21.2 may be used as prima facie evidence of the amount due by a CAISO Debtor to CAISO Creditors in any legal proceedings.

* * *

11.29.23 Communications

The Initial Settlement Statement T+~~73~~B, any Recalculation Settlement Statement, and Invoices, and Payment Advices will be considered issued to CAISO Creditors or CAISO Debtors when released by the CAISO's secure communication system. Communications on a Payment Date relating to payment shall be made by the fastest practical means including by telephone. If there is a failure of a communication

system and it is not possible to communicate by electronic means, then the CAISO or CAISO Creditor or CAISO Debtor, as the case may be, shall communicate by facsimile but only if the recipient is first advised by telephone to expect the facsimile. Methods of communication between the CAISO and Market Participants may be varied by the CAISO giving not less than ten (10) days notice to Market Participants on the CAISO's secure communication system.

11.29.24 CAISO Payments Calendar

11.29.24.1 Preparation

In September of each year, the CAISO will prepare a draft CAISO Payments Calendar for the following calendar year showing for each Trading Day:

- (a) The date by which Scheduling Coordinators are required to provide Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for all their Scheduling Coordinator Metered Entities for each Settlement Period in the Trading Day;
- (b) The date on which the CAISO will issue Initial Settlement Statements T+73B and Invoices and Payment Advices to Scheduling Coordinators or CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- ~~(c) The date by which Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs are required to notify the CAISO of any disputes in relation to their Initial Settlement Statements T+7B pursuant to Section 11.29.8.2;~~
- ~~(c)~~ The date on which the CAISO will issue the Recalculation Settlement Statements T+7B, T+38B, T+76B, T+18M, T+35M, and T+36M, and Invoices and Payment Advices to Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- ~~(e)~~ The dates by which Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs are required to notify the CAISO of any disputes in relation to their Recalculation Settlement Statements T+7B, T+38B, T+76B, T+18M and T+35M.

- (fe) The date and time by which CAISO Debtors are required to have made payments into the CAISO Clearing Account in payment of Invoices for that Trading Day;
- (gf) The dates and times on which CAISO Creditors will receive payments from the CAISO Clearing Account of amounts owing to them for that Trading Day; and
- (hg) In relation to Reliability Must-Run Charges and RMR Payments, the details set out in paragraph 3 of Appendix N, Part J.

The CAISO will make a draft of the CAISO Payments Calendar available on the CAISO Website to Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners any of which may submit comments and objections to the CAISO within two weeks of the date of posting of the draft on the CAISO Website. No later than October 31st in each year, the CAISO will publish the final CAISO Payments Calendar for the following calendar year, after considering the comments and objections received from Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners. The final CAISO Payments Calendar will be posted on the CAISO Website, and will show for the period from 1 January to 31 December in the next succeeding year (both dates inclusive), the dates on which Settlement Statements shall be published by the CAISO and the Payment Dates on which the CAISO will pay the Participating TOs the Wheeling revenues allocated to them pursuant to Section 26.1.4.3.

* * *

12. Creditworthiness

12.1 Credit and Minimum Participation Requirements

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.

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) Annually provide, as specified in the applicable Business Practice Manual, the CAISO with a certified statement executed by an officer of the prospective or existing Market Participant certifying that the prospective or existing Market Participant.
 - (a) Has 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;
 - (b) Has appropriate 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
 - (c) Has satisfied any applicable CAISO training requirements including as specified in Sections 4.5.1.2.10.1 and 36.5.2.
- (ii) Satisfy the following capitalization requirements:
 - (a) 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 using one or more of the forms specified in Section 12.2 (a) through (e) 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.

- \$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.

- (b) The CAISO will review whether the prospective or existing Market Participant continues to satisfy the capitalization requirements set forth in Section 12.1(ii)(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.

Each prospective Market Participant that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be prohibited from participating in the CAISO Markets. Each prospective Market Participant taking part in the Scheduling Coordinator certification process pursuant to Section 4.5.1 or the Candidate CRR Holder application process pursuant to Section 4.10.1 that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be ineligible to become a

Market Participant or CRR Holder. Each existing Market Participant that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be out of compliance with the CAISO Tariff. Any failure of a Market Participant to satisfy the minimum participation requirements set forth in this Section 12.1 that is not cured within thirty (30) days of CAISO notification that a failure occurred will subject the Market Participant to CAISO enforcement actions as set forth in Section 12.5.

12.1.1 Unsecured Credit Limit

Each Market Participant requesting an Unsecured Credit Limit shall submit an application to the CAISO in the form specified on the CAISO Website. The CAISO shall determine the Unsecured Credit Limit for each Market Participant in accordance with the procedures set forth in the applicable Business Practice Manual. The maximum Unsecured Credit Limit for any Market Participant, and group of Market Participant Affiliates, shall be \$50 million. In accordance with the procedures described in the applicable Business Practice Manual, each Market Participant requesting or maintaining an Unsecured Credit Limit is required to submit to the CAISO or its agent financial statements and other information related to its overall financial health as directed by the CAISO. Each Market Participant is responsible for the timely submission of its latest financial statements as well as other information, including, but not limited to, information concerning all entities that are Affiliates or become Affiliates, that may be reasonably necessary for the CAISO to conduct its evaluation. The CAISO shall determine the Unsecured Credit Limit for each Market Participant as described in Sections 12.1.1.1, 12.1.1.1.1, and 12.1.1.1.2.

~~As a result of the CAISO's credit evaluation, a Market Participant may be given an Unsecured Credit Limit by the CAISO or denied an Unsecured Credit Limit with the CAISO. Following the initial application and the establishment of an Unsecured Credit limit, the CAISO will review each Market Participant's Unsecured Credit Limit on a quarterly basis, unless that entity does not prepare quarterly statements, in which case the review will occur on an annual basis, and no entity shall be required to submit a new application. In addition, the CAISO may review the Unsecured Credit Limit for any Market Participant whenever the CAISO becomes aware of information that could indicate a Material Change in Financial Condition. In the event the CAISO determines that the Unsecured Credit Limit of a Market Participant must be reduced as a result of a subsequent review due to a reason other than a Material Change in Financial Condition, the CAISO shall notify the Market Participant of the reduction, and shall, upon~~

request, also provide the Market Participant with a written explanation of why the reduction was made. In the event the CAISO determines that the Unsecured Credit Limit of a Market Participant must be reduced as a result of a subsequent review due to a Material Change in Financial Condition, the CAISO shall notify the Market Participant of the reduction in writing and shall provide the Market Participant with a written explanation of the reasons for the reduction, either in advance of the reduction if reasonably practicable or after the reduction was made if providing the written notification and explanation in advance is not reasonably practicable, as set forth in the applicable Business Practice Manual.

* * *

12.1.1.4 Determination of Unsecured Credit Limits for Affiliates

If any Market Participant requesting or maintaining an Unsecured Credit Limit is affiliated with one or more other entities subject to the credit requirements of this Section 12, the CAISO may consider the overall creditworthiness and financial condition of such Affiliates when determining the applicable

Unsecured Credit Limit. The ~~CAISO may determine that the~~ maximum Unsecured Credit Limit specified in Section 12.1.1 applies to the combined activity of such Affiliates. ~~In the event the CAISO determines that the maximum Unsecured Credit Limit applies to the combined activity of the Affiliates and the Market Participant, the CAISO shall inform the Market Participant in writing.~~

12.1.1.5 Notification of Material Change in Financial Condition

Each Market Participant shall notify the CAISO in writing of a Material Change in Financial Condition, within five (5) Business Days of when the Material Change in Financial Condition is known or reasonably should be known by the Market Participant. Examples of a Material Change in Financial Condition may include, but are not limited to:

- a) A credit agency or Moody's KMV 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 Net Worth or Net Assets for the Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

The provision to the CAISO of a copy of a Form 10-K, Form 10-Q, or Form 8-K filed with the U.S. Securities and Exchange Commission shall satisfy the requirement of notifying the CAISO of such Material Change in Financial Condition if such Material Change in Financial Condition is identified in the Form 10-K, Form 10-Q, or Form 8-K. Alternatively, the Market Participant may direct the CAISO to the location of the information on their company website or the website of the U.S. Securities & Exchange Commission.

* * *

12.1.2.1 Additional Procedures Regarding Certain Types of Financial Security

- (a) Unconditional and irrevocable guaranties: In those cases where a Market Participant is a subsidiary or Affiliate of another entity and would like to utilize the consolidated financial statements and other relevant information of that entity for obtaining credit, a signed corporate guaranty is required. A guarantor would be considered reasonably acceptable and a corresponding Financial Security Amount would be set based on the guarantor's credit evaluation according to the same procedures that apply to the credit evaluation of a Market Participant pursuant to Section 12.1.1.

- (b) Cash deposits standing to the credit of the CAISO in interest-bearing escrow accounts: Interest on a cash deposit standing to the credit of the CAISO in an interest-bearing escrow account will accrue to the Market Participant's benefit and will be added to the Market Participant's prepayment account on a monthly basis. Should a Market Participant become delinquent in payments, the Market Participant's outstanding account balance will be satisfied using deposited funds. The Market Participant must take care to replenish used funds to ensure that its Aggregate Credit Limit continues to exceed its Estimated Aggregate Liability.
- (c) Prepayments to the CAISO: Prepayments to the CAISO will be held in an interest-bearing account or another investment acceptable to the Market Participant and the CAISO, and interest on the investment will accrue at the rate as provided for in the investment. Interest will accrue to the Market Participant's benefit and will be added to the Market Participant's prepayment account on a monthly basis. Due to the additional administrative effort involved in tracking and posting interest on such prepayments, the use of this option is not encouraged.

* * *

12.1.3.1.1 Calculation of the EAL Amount

Except as described in Section 12.1.3.1.2, the CAISO shall use the method described in this Section 12.1.3.1.1 to calculate each Market Participant's Estimated Aggregate Liability (EAL). The Estimated Aggregate Liability represents the amount owed to the CAISO for all unpaid obligations, specifically, the obligations for the number of Trading Days outstanding at a given time based on the CAISO's Payments Calendar plus five (5) Trading Days based on the allowable period for Market Participants to respond to CAISO requests for additional Financial Security collateral (~~three-two~~ (32) Business Days), and other liabilities including the value of a Market Participant's CRR portfolio, if negative. The charges the CAISO shall use to calculate Estimated Aggregate Liability shall be charges described or referenced in the CAISO Tariff. The CAISO shall calculate the Estimated Aggregate Liability for each Market Participant by aggregating the following obligations, including CRR liabilities even though such liabilities are secured separately:

- (a) invoiced amounts, i.e., any published but unpaid amounts on Invoices;
- (b) published amounts, i.e., amounts for Trading Days for which Settlement Statements have been issued;
- (c) estimated amounts, i.e., amounts based on estimated Settlement amounts calculated by the Settlement system using estimated meter data, and other available operational data;
- (d) extrapolated amounts, i.e., amounts calculated for Trading Days for which neither actual nor estimated Settlement Statements have been issued;
- (e) CRR portfolio value, i.e., the prospective value of the CRR portfolio, if negative, as described in Section 12.6.3;
- (f) CRR Auction limit, i.e., the maximum credit limit for participation in a CRR Auction;
- (g) CRR Auction awards (prior to invoicing), i.e., amounts to cover winning offers at the completion of the CRR Auction but prior to invoicing;
- (h) Estimated Aggregate Liability adjustments resulting from Virtual Bid Submission Charges and the submission of Virtual Bids and/or receipt of Virtual Awards pursuant to Section 12.8;
- (i) past-due amounts, i.e., any unpaid or past due amounts on Invoices;
- (j) FERC Annual FERC Charges, i.e., FERC Annual Charges for a Market Participant that has elected to pay such amounts on an annual basis that are owed and outstanding and not already captured in any other component of Estimated Aggregate Liability;
- (k) WAC Charges, i.e., WAC amounts for the current year or future years as specified in Section 36.9.2;
- (l) Estimated Aggregate Liability adjustments, i.e., adjustments that may be necessary as a result of analysis performed as a result of Section 12.4.2; and

- (m) extraordinary adjustments, i.e., adjustments to Settlement amounts related to FERC proceedings, if known and estimated by the CAISO, as described in Section 12.1.3.1.3.

For a Market Participant that maintains multiple BAID numbers, the Estimated Aggregate Liability of the Market Participant as a legal entity shall be calculated by summing the Estimated Aggregate Liabilities for all such BAID numbers and comparing the sum of the Estimated Aggregate Liabilities to the Aggregate Credit Limit of the Market Participant. Market Participants may recommend changes to the liability estimates produced by the CAISO's Estimated Aggregate Liability calculation through the dispute procedures described in Section 12.4.2.

* * *

12.4 Calculation Of Ongoing Financial Security Requirements

Following the date on which a Market Participant commences trading, if the Market Participant's Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, the CAISO shall direct the Market Participant to post an additional Financial Security Amount within ~~three-two~~ (32) Business Days that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability. The CAISO shall also notify a Market Participant if at any time its Estimated Aggregate Liability exceeds ninety (90) percent ~~(90%)~~ of its Aggregate Credit Limit. For the purposes of calculating the Market Participant's Estimated Aggregate Liability, the CAISO shall include (1) outstanding charges for Trading Days for which Settlement data is available, and (2) an estimate of charges for Trading Days for which Settlement data is not yet available. To estimate charges for Trading Days for which Settlement data is not yet available, the CAISO will consider available historical Settlement data, and other available operational and market data as described in the applicable Business Practice Manual.

12.4.1 Resolution Of A CAISO Request For Additional Security Amount

A Market Participant has ~~three-two~~ (32) Business Days to resolve a CAISO request for additional Financial Security. Within the ~~three-two~~ (32) Business Days, the Market Participant must either demonstrate to the CAISO's satisfaction that the CAISO's Financial Security request is entirely or partially unnecessary, or post the required Financial Security Amount calculated by the CAISO. If the CAISO and

the Market Participant are unable to agree on the appropriate level of Financial Security during the ~~three~~ two (32) Business Day review period, the Market Participant must post the additional Financial Security and may continue with the dispute process described in Section 12.4.2. Any excess Financial Security Amounts will be returned to the Market Participant if the dispute process finds in favor of the Market Participant.

12.4.2 Dispute Process For A Request For Additional Security Amount

Market Participants may dispute the Estimated Aggregate Liability calculated by the CAISO and, as a result, the CAISO may reduce or cancel a requested Financial Security adjustment. The following steps are required for a Market Participant to dispute a Financial Security request resulting from the CAISO's calculation of Estimated Aggregate Liability:

- (1) Request by the Market Participant to review the CAISO calculation.
- (2) A reasonable and compelling situation presented, as determined by the Market Participant's CAISO client representative.
- (3) Documentation of facts and circumstances that evidence that the CAISO's calculation of Estimated Aggregate Liability results in an excessive and unwarranted Financial Security posting requirement.
- (4) Approval by the CAISO Manager and/or Director of Customer Services and Industry Affairs and approval by the CAISO Treasurer.
- (5) The CAISO may decline to adjust the initial Estimated Aggregate Liability, as calculated by the CAISO, if the Market Participant has had Financial Security shortfalls in the past twelve (12) months (i.e., it has been shown that the Market Participant's Aggregate Credit Limit at times during the preceding twelve (12) months has been insufficient to cover the Market Participant's Estimated Aggregate Liability).

In no such case shall a CAISO request for increased Financial Security remain outstanding for more than ~~three-two~~ two (32) Business Days. Either the above process is to be completed within ~~three-two~~ two (32) Business Days from the date of the CAISO request for additional Financial Security, or the Market Participant is to post additional Financial Security within the ~~three-two~~ two (32) Business Days and continue

this process, which may result in a return of posted Financial Security back to the Market Participant if the results of the dispute process are found to favor the Market Participant.

Factors for consideration in the event this dispute process is utilized include: weighing the risk of using the lower figure to the potential detriment of market creditors if the Market Participant is under-secured and defaults, against the desire not to impose additional potentially unwarranted costs on a Market Participant; equity and consistency of treatment of Market Participants in the dispute process; and the evidentiary value of the information provided by the Market Participant in the dispute process.

* * *

12.5.1 ~~Enforcement Actions Re~~ Under-Secured and Non-Compliant Market Participants

If a Market Participant's Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, or if a Market Participant fails to satisfy all of the minimum participation requirements set forth in Section 12.1 and does not cure that failure within thirty (30) days after notification of the failure by the CAISO, the CAISO may take any or all of the following actions:

- (a) The CAISO may withhold a pending payment distribution.
- (b) The CAISO may limit trading, which may include rejection of Bids, including Self-Schedules, rejection or cancellation of Inter-SC Trades in their entirety (i.e., both sides of the Inter-SC Trade) at any time, and/or limiting other CAISO Market activity, including limiting eligibility to participate in a CRR Allocation or CRR Auction. In such case, the CAISO shall notify the Market Participant of its action and the Market Participant shall not be entitled to participate in the CAISO Markets or CRR Auctions or submit further Bids, including Self-Schedules, or otherwise participate in the CAISO Markets until the Market Participant posts an additional Financial Security Amount that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability.
- (c) The CAISO may require the Market Participant to post an additional Financial Security Amount in lieu of an Unsecured Credit Limit for a period of time.

- (d) The CAISO may restrict, suspend, or terminate the Market Participant's CRR Entity Agreement or any other service agreement.
- (e) The CAISO may resell the CRR Holder's CRRs in whole or in part, including any Long Term CRRs, in a subsequent CRR Auction or bilateral transaction, as appropriate.
- (f) The CAISO will not implement the transfer of a CRR if the transferee or transferor has an Estimated Aggregate Liability in excess of its Aggregate Credit Limit.

In addition, the CAISO may restrict or suspend a Market Participant's right to submit further Bids, including Self-Schedules, or require the Market Participant to increase its Financial Security Amount if at any time such Market Participant's potential additional liability for Imbalance Energy and other CAISO charges is determined by the CAISO to be excessive by comparison with the likely cost of the amount of Energy reflected in Bids or Self-Schedules submitted by the Market Participant.

12.5.2 ~~Enforcement Actions For~~ Late Posting Of Financial Security

Each Market Participant that is late in posting Financial Security within ~~three-two (32)~~ Business Days as required by Section 12.4 will be subject to the following enforcement actions:

- (a) After each of the first two (2) times during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security within ~~three-two (32)~~ Business Days as required by Section 12.4, the CAISO will send the delinquent Market Participant a warning notice.
- (b) After the third time during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security, the CAISO may require the Market Participant to post an additional Financial Security Amount that is as high as the highest level of the Market Participant's Estimated Aggregate Liability during the preceding twelve (12) months. The CAISO will hold such additional Financial Security Amount for no fewer than twelve (12) months following the month in which the Market Participant's third delinquency occurs, and the CAISO may then return to the Market Participant all or a portion of such additional Financial Security Amount if, during the intervening time, the

Market Participant has timely posted all further additional Financial Security Amounts requested by the CAISO and has timely paid all of the amounts set forth in the Invoices from the CAISO.

- (c) After the third time and each subsequent time during a rolling twelve (12) month period beginning no earlier than April 7, 2010 that a Market Participant is late in posting additional Financial Security, the CAISO will assess a penalty to the Market Participant equal to the greater of \$1,000 or two (2) percent ~~(2%)~~ of the additional Financial Security Amount that the Market Participant has been late in posting, up to a maximum amount of \$20,000 per each late posting for which the CAISO assesses a penalty pursuant to this Section 12.5.2(c). This penalty will be included in the next Invoice to the Market Participant. Penalty amounts collected by the CAISO pursuant to this Section 12.5.2(c) will be treated as set forth in Section 11.29.9.6.4.
- (d) After the fourth and any subsequent times during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security, the CAISO may extend the time period that it holds all or a portion of the additional Financial Security Amount resulting from the Market Participant's third delinquency during a rolling twelve (12) month period as described in Section 12.5.2(b).
- (e) After the fifth time during a rolling twelve (12) month period beginning no earlier than April 7, 2010 that a Market Participant is late in posting additional Financial Security, the CAISO may, notwithstanding any other provision of the CAISO Tariff, (i) suspend any and all rights of the Market Participant under the CAISO Tariff, effective immediately after the CAISO sends written notice of the suspension to the Market Participant, and (ii) terminate any agreement entered into between the CAISO and the Market Participant that allows the Market Participant to participate in the CAISO Markets, effective upon the date the CAISO sends written notice of the termination to the Market Participant or upon the date established in accordance with FERC rules if FERC rules require the CAISO to file the notice of termination with FERC. If the CAISO sends a notice of suspension or termination to a Market Participant pursuant to this Section 12.5.2(e), the Market

Participant will not have the right to prevent such suspension or termination by curing its late posting of additional Financial Security. The CAISO will, following termination of an agreement pursuant to this Section 12.5.2(e) and within thirty (30) days of being satisfied that no sums remain owing by the Market Participant under the CAISO Tariff, return or release to the Market Participant, as appropriate, any money or credit support provided by such Market Participant to the CAISO under Section 12.

- (f) Any time that a Market Participant is late in posting additional Financial Security, the CAISO may also take other enforcement actions as described in this Section 12 and in the applicable Business Practice Manual, if deemed necessary by the CAISO to protect the financial integrity of the CAISO Markets.

* * *

12.6.2 Credit Requirements For CRR Auctions

To establish available credit for participating in any CRR Auction, each CRR Holder or Candidate CRR Holder must ~~satisfy the credit requirements set forth in Section 12.1 and have an Unsecured Credit Limit or have provided provide~~ Financial Security ~~using one or more of the forms identified in Section 12.2 (a) through (e) to secure the right to participate in the ISO's CRR Auctions as set forth below in a form consistent with Section 12.1.2.~~ In order to participate in an annual CRR Auction, the CRR Holder or Candidate CRR Holder must have ~~an Aggregate Credit Limit that exceeds its Estimated Aggregate Liability by~~ Financial Security using one or more of the forms identified in Section 12.2 (a) through (e) in an amount that is the greater of \$500,000 or the sum of the maximum credit exposures of all of the CRR Holder's or Candidate CRR Holder's bids for CRRs submitted in the annual CRR Auction. In order to participate in a monthly CRR Auction, the CRR Holder or Candidate CRR Holder must have ~~an Aggregate Credit Limit that exceeds its Estimated Aggregate Liability by~~ Financial Security using one or more of the forms identified in Section 12.2 (a) through (e) in an amount that is the greater of \$100,000 or the sum of the maximum credit exposures of all of the CRR Holder's or Candidate CRR Holder's bids for CRRs submitted in the monthly CRR Auction. The maximum credit exposure of a positively valued CRR bid is the maximum value of the CRR Holder's or Candidate CRR Holder's bid quantity (MW) multiplied by the sum of the bid price corresponding to the bid quantity and the Credit Margin of the CRR within the range of the minimum and maximum bid quantities submitted by the CRR Holder or Candidate CRR

Holder. The maximum credit exposure of a negatively valued CRR bid is the maximum bid quantity (MW) submitted by the CRR Holder or Candidate CRR Holder multiplied by the Credit Margin of the CRR. A CRR Holder or Candidate CRR Holder that fails to satisfy this requirement shall not be permitted to participate in the relevant CRR Auction, or shall have bids exceeding its available Financial Security as defined in this section~~Aggregate Credit Limit~~ for participation in the CRR Auction, in accordance with the above formula, rejected by the CAISO on a last-in, first-out basis. The CAISO will retain the CRR Auction proceeds for negatively valued CRRs and will apply them to credit requirements of the applicable CRR Holder.

* * *

12.6.3.1 Credit Requirements Generally

- (a) Each CRR Holder, whether it obtains CRRs through a CRR Allocation or a CRR Auction, must maintain ~~an Aggregate Credit Limit in excess of its Estimated Aggregate Liability~~Financial Security utilizing one or more of the forms specified in Section 12.2 (a) through (e) that meets or exceeds ~~including~~ the credit requirement of the CRR portfolio determined as described in this Section 12.6.3.
- (b) Each CRR Holder shall be required to ensure that its ~~Aggregate Credit Limit~~Financial Security is sufficient to satisfy the credit requirements described in this Section 12.6.3. Except as provided in this paragraph, CRRs are evaluated on a portfolio basis as follows. If a CRR Holder owns more than one (1) CRR, such CRR Holder shall be subject to an overall credit requirement that is equal to the sum of the individual credit requirements applicable to each of the CRRs held by such CRR Holder, which is ~~calculated~~ after the MW associated with any Offsetting CRRs are netted out. If this sum is positive, the amount will be added to the CRR Holder's Estimated Aggregate Liability. However, if the sum is negative, the CRR Holder's Estimated Aggregate Liability shall not be reduced. If a CRR Holder holds one (1) or more CRRs obtained through a CRR Allocation and also holds one (1) or more CRRs obtained through a CRR Auction, the individual credit requirements applicable to any of the CRRs obtained through a

CRR Allocation may not be netted against the individual credit requirements applicable to any of the CRRs obtained through a CRR Auction in determining such CRR Holder's Estimated Aggregate Liability.

- (c) The CAISO shall reevaluate the credit requirements for holding CRRs, and shall adjust the credit requirements accordingly, not less than monthly. 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, or more frequently than monthly if necessary if the CAISO finds that actual or anticipated market conditions indicate that CRR credit requirements may be inadequate to cover the financial risk of the CRRs. The CAISO may also adjust the credit requirements for holding Long Term CRRs annually to reflect the changes in auction prices of one-year CRRs in annual auctions and changes in the Historical Expected Values for CRRs, and to reflect updates to Credit Margins based on actual Locational Marginal Price data derived from market operations. Whenever the CAISO requests additional Financial Security from a Market Participant as a result of a change in CRR value that is not related to an adjustment due to the monthly CRR Auction Price or an adjustment related to Historical Expected Value, the CAISO will provide a written explanation of the reason for that request. Any additional Financial Security must be in one or more of the forms specified in Section 12.2 (a) through (e).
- (d) In cases where the ownership of a CRR is to be transferred through either the Secondary Registration System or through Load Migration, the CAISO shall evaluate and adjust the credit requirements for both the current owner of the CRR and the prospective owner of the CRR as appropriate prior to the transfer. If additional Financial Security is required from either the current or prospective owner, the transfer will not be completed until such Financial Security has been provided to and accepted by the CAISO. CRRs transferred through the

Secondary Registration System will be treated like auctioned CRRs for the purpose of calculating the credit requirements for holding the CRRs, regardless of whether the CRRs were originally allocated or purchased at auction or acquired through the Secondary Registration System. CRRs assigned to Load-gaining or Load-losing Load Serving Entities as a result of Load Migration will be treated like allocated CRRs for the purpose of calculating the credit requirements for holding the CRRs. Any additional Financial Security must be in one or more of the forms specified in Section 12.2 (a) through (e).

* * *

12.6.3.4 Calculation of Credit Margin

The Credit Margin (\$/MW) for a CRR is equal to (i) the Expected Congestion Revenue minus (ii) the Fifth Percentile Congestion Revenue of such CRR. Both values will be based on the probability distribution of Congestion revenue of such CRR calculated using historical Locational Marginal Price data, when available, and proxy values, including data taken from Locational Marginal Price studies conducted by the CAISO, until such time as historical Locational Marginal Price data is available, with the details of such calculation published in a Business Practice Manual. The CAISO may reassess its determinations regarding the Credit Margin determination at any time and shall require additional Financial Security if the reassessment results in an increase in a CRR Holder's CRR credit requirements that are not covered by the CRR Holder's Financial Security. Holder's Estimated Aggregate Liability that is not covered by a CRR Holder's Aggregate Credit Limit (consisting of the CRR Holder's Unsecured Credit Limit and/or Financial Security). Any additional Financial Security must be in one or more of the forms specified in Section 12.2 (a) through (e)

* * *

13.5.2 Timing Of Adjustments

Upon determination that an award is payable by or to the CAISO pursuant to good faith negotiations or the CAISO ADR Procedures, the CAISO shall calculate the amounts payable to and receivable from the party, Market Participants, and Scheduling Coordinators, as soon as reasonably practical, and shall show any required adjustments as a debit or a credit in a subsequent Initial Recalculation Settlement Statement

T+7B or, in the case of an amount payable by the CAISO to a party, as soon as the CAISO and that party may agree.

* * *

37.8.10 Review Of Determination

A Market Participant that receives a Sanction may obtain immediate review of the CAISO's determination by directly appealing to FERC, in accordance with FERC's rules and procedures. In such case, the applicable Scheduling Coordinator shall also dispute the ~~Initial Recalculation~~ Settlement Statement T+7B containing the financial penalty, in accordance with Section 11. The ~~Initial Recalculation~~ Settlement Statement T+7B dispute and appeal to FERC must be made in accordance with the timeline for raising disputes specified in Section 11.29.8. The penalty will be tolled until FERC renders its decision on the appeal. The disposition by FERC of such appeal shall be final, and no separate dispute of such Sanction may be initiated under Section 13, except as provided in Section 37.9.3.4. For the purpose of applying the time limitations set forth in Section 37.10.1, a Sanction will be considered assessed when it is included on an ~~Initial Recalculation~~ Settlement Statement T+7B, whether or not the CAISO accepts a Scheduling Coordinator's dispute of such Initial Settlement Statement T+7B pending resolution of an appeal to FERC in accordance with this section or Section 37.9.3.3.

* * *

37.11.1 Method For Calculating Inaccurate Meter Data Penalty

There is no Sanction for the submission of inaccurate Meter Data used for an ~~Initial Recalculation~~ Settlement Statement T+ 7B. However, an error in submitted Meter Data that exists after forty three (43) calendar days after the Trading Day (T+43C) constitutes a Rule of Conduct violation. The level of the Sanction depends on whether the Scheduling Coordinator or the CAISO discovered the error. An increased penalty will apply for errors that are discovered by the CAISO.

Table A1 below shows how the level of the Sanction depends on the following factors: whether or not the Scheduling Coordinator finds the error; whether or not the Scheduling Coordinator owes the market, and whether or not the CAISO performs a re-run of the market or produces a Recalculation Settlement Statement. If the CAISO issues a Recalculation Settlement Statement or performs a re-run, then Settlement to all Scheduling Coordinators is recalculated, and the impact of such re-runs on charges

assessed will be considered. A penalty charge equal to thirty (30) percent of the estimated value of the Energy error will apply if the Scheduling Coordinator discovers the error or seventy-five (75) percent of the estimated value of the Energy error if the CAISO discovers the error. Penalty assessment and disposition of penalty proceeds will be administered as described in Section 37.9.1 and Section 37.9.4 respectively. A Sanction will not be imposed unless such Sanction is more than \$1,000 for at least one Trading Day during the period for which there was incomplete or inaccurate Meter Data.

Table A1 – Calculation of Inaccurate Meter Data Penalty When There Is A Recalculation Settlement Statement or re-run Case	Does SC Owe Market?	
Case 1: SC Identifies Inaccurate Meter Data	Yes	Penalty = (MWh x applicable price) x 0.30
Case 1: SC Identifies Inaccurate Meter Data	No	Penalty = (MWh x applicable price) x 0.30
Case 2: CAISO Identifies Inaccurate Meter Data	Yes	Penalty = (MWh x applicable price) x 0.75
Case 2: CAISO Identifies Inaccurate Meter Data	No	Penalty = (MWh x applicable price) x 0.75

Note to Table A1:

The applicable price will be the greater of: (1) the simple average of the relevant twelve (12) five-minute LMPs for each hour in which inaccurate Meter Data occurred; or (2) \$10/MWh. The LMP used will be the values posted on OASIS for each Trading Hour of the applicable Trading Day period.

2. Method for Calculating Inaccurate Meter Data Penalty When there is not a Recalculation Settlement Statement or re-run.

If the CAISO does not perform a Recalculation Settlement Statement or re-run, for cases of inaccurate Meter Data, Table A2 will be used to determine and allocate penalty and any market adjustment amount. The market adjustment approximates the financial impact on the market; however, it does not completely reflect all the Settlement consequences of inaccurately submitted Meter Data. The approximated value of the inaccurate Meter Data in question will be calculated and returned to the market based on the average of the pro rata share of Unaccounted for Energy (UFE) charged in the utility Service Area during the period of the inaccurate Meter Data event. The thirty (30) percent or seventy-five (75) percent penalty will be distributed as discussed in Section 37.9.4. For cases where the CAISO does not perform a Recalculation Settlement Statement or re-run and the Scheduling Coordinator does not owe the market, then no market adjustment will be performed and no penalty will be assessed.

TABLE A2- Calculation Of Inaccurate Meter Data Penalty When There Is Not a Recalculation Settlement Statement or re-run Case	Does SC Owe Market?	CAISO does not perform a Recalculation Settlement Statement or re-run
Case 1: SC Identifies Inaccurate Meter Data	Yes	Market Adjustment = (MWh x applicable price) Penalty = (MWh x applicable price)) x 0.30
Case 1: SC Identifies Inaccurate Meter Data	No	No market adjustment will be made

Case 2: CAISO Identifies Inaccurate Meter Data	Yes	Market Adjustment = (MWh x applicable price) Penalty = (MWh x applicable price) x 0.75
Case 2: CAISO Identifies Inaccurate Meter Data	No	No market adjustment will be made

Notes to Table A2:

The applicable price will be the greater of: (1) the simple average of the relevant twelve (12) five-minute LMPs for each hour in which inaccurate Meter Data occurred; or (2) \$10/MWh. The LMP used will be the value posted on OASIS for each Trading Hour of the applicable Trading Day.

A Sanction will be imposed only if the Sanction is more than \$1,000 for at least one Trading Day during the period for which there was incomplete or inaccurate Meter Data.

If the error is to the detriment of the responsible Scheduling Coordinator (e.g., under-reported Generation or over-reported Demand), and the CAISO does not produce a Recalculation Settlement Statement or perform a re-run, then no market adjustment will be made and no penalty will be assessed. If the CAISO produces a Recalculation Settlement Statement or performs a re-run after the error is corrected, then the Scheduling Coordinator will be given credit for the additional Energy through the normal Settlement process. If the Scheduling Coordinator is paid for an error due to a Recalculation Settlement Statement or re-run, then a Sanction will be assessed to assure that Recalculation Settlement Statements or re-runs do not diminish the incentive to correct such errors. This Sanction would be thirty (30) percent of the Energy value of the error if the Scheduling Coordinator discovers the error or seventy-five (75) percent estimated value of the error if the CAISO discovers the error.

If the error is to the detriment of the market, then a charge equal to thirty (30) percent or seventy-five (75) percent of the estimated value of the error, as appropriate, will be added to the charge for the Energy. If there is no Recalculation Settlement Statement or re-run, then the cost of Energy supplied by the CAISO (and inappropriately charged to the market as Unaccounted for Energy) must be recovered as well, and

the charge will be equal to one hundred thirty (130) percent or one hundred seventy-five (175) percent of the estimated value of the error, as appropriate.

* * *

Appendix A Master Definition Supplement

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- CAISO Estimated Settlement Quality Meter Data

Settlement Quality Meter Data estimated by the CAISO in accordance with Sections 10.3.6.42 and 11.1.5.

* * *

- Initial Settlement Statement T+3B

A Settlement Statement generated by the CAISO for the calculation of Settlements for a given Trading Day, which is published on the third Business Day from the relevant Trading Day (T+3B) and is prior to the Invoice or Payment Advice published for the relevant bill period.

* * *

- Initial Recalculation Settlement Statement T+7B

A Settlement Statement generated by the CAISO for the calculation of Settlements for a given Trading Day, which is published on the seventh Business Day from the relevant Trading Day (T+7B) and is prior to the Invoice or Payment Advice published for the relevant bill period.

* * *

- Recalculation Settlement Statement T+38B

The reissue of an Initial Settlement Statement T+73B by the CAISO on the thirty-eighth (38th) Business Day from the relevant Trading Day.

- Recalculation Settlement Statement T+76B

The reissue of an Initial Settlement Statement T+73B or a Recalculation Settlement Statement T+38B by the CAISO on the seventy-sixth (76th) Business Day from the relevant Trading Day (T+76B).

- Recalculation Settlement Statement T+18M

The reissue of an Initial Settlement Statement T+73B, a Recalculation Settlement Statement T+38B, or a Recalculation Settlement Statement T+76B on the Business Day eighteen (18) calendar months from the relevant Trading Day (T+18M).

- Recalculation Settlement Statement T+35M

The reissue of an Initial Settlement Statement T+73B, a Recalculation Settlement Statement T+38B, a Recalculation Settlement Statement T+76B, or a Recalculation Settlement Statement T+18M, on the Business Day thirty-five (35) calendar months from the relevant Trading Day (T+35M).

- Recalculation Settlement Statement T+36M

The reissue of an Initial Settlement Statement T+73B, a Recalculation Settlement Statement T+38B, a Recalculation Settlement Statement T+18M or a Recalculation Settlement Statement T+35M on the Business Day thirty-six (36) calendar months from the relevant Trading Day (T+36M).