

Section	Party	Comment	ISO Response	Round of Comments
	CalWEA/CaIRENEW	<p>2. The tariff should indicate that the duration of the protective measures will be evaluated in the Spring of 2015 and may be extended, as required by the CAISO Governing Board.</p> <p>One of CalWEA's and CaIRENEW's primary concerns with CAISO's protective measures throughout this process has been the proposed three year term thereof. With this short duration, the utilities will be able to just wait out the three years and then subject the generators to the increased risks that the protective measures were designed to address. This would give the utilities undue leverage in any contract negotiations designed to revise existing contracts to address the underlying issues.</p> <p>When CalWEA presented this concern to the CAISO Governing Board at its September 12, 2013, meeting, the Governing Board declined to extend the term of the protective measures at that time, but did require that the term of the protective measures be re-evaluated and potentially extended in the Spring of 2015. With an explicit re-evaluation on the calendar, if the utilities do not negotiate in good faith with affected generators, they run the risk that CAISO will extend the protective measures. This evaluation requirement and extension option was duly noted in the resolution on Motion Number 2013-09-G2. Because of its importance, the tariff language should be modified to indicate that CAISO will re-evaluate, and potentially extend, the duration of the Protective Measures in the Spring of 2015 as required by the CAISO Governing Board at its September 12, 2013 meeting.</p>	This is not a rate, term or condition of service that needs be filed with the Commission. The ISO has already made its commitment with the Board of Governors.	PIRP Language
	PG&E	We request the CAISO further review definitions and ensure that tariff references are correct. We have provided a few examples where further discussion and evaluation are warranted. We also request the CAISO double check to ensure they are working off the latest version of the Tariff and that any sections represented contains the latest language filed to FERC and approved for Fall Release (e.g. AS Buyback) and other Spring related filings (e.g. BCR, RIMPR).	The ISO will clarify the language for the final posting.	Revised Draft
	PG&E	<p>PG&E remains opposed to PIRP Protective Measures as it believes that the CAISO should focus on the efficiency of its markets and not engage in contract interference. Prior to execution parties to any bilateral agreement weigh the benefits and burdens of the contract and the PIRP Protective Measures that the CAISO have proposed needlessly interfere with the assessments made by counterparties prior to a contract's execution.</p> <p>Each PG&E renewable contract is structured so it can continue to function under the CAISO's 764 proposal. Many of these contracts specifically address what will happen if CAISO Tariff revisions affect the settlement of Participating Intermittent</p>	The tariff reflects the policy as approved by the board.	PIRP Language

		Resources. The CAISO should not insert itself retroactively into this decision making process.		
	PG&E	In addition, PG&E is opposed to the inclusion of language addressing the integration of PIRP Protective Measures with inter-SC trades. If the CAISO wishes to include language addressing this topic in the tariff there should be a robust discussion during a stakeholder process that addresses the challenge of incorporating PIRP Protective Measures for resources that use inter-SC trades.	The adjustment for inter-SC trades for resources under PIRP protective measures was to ensure the ISO applied the policy as approved by the board. Lacking such an adjustment the resource or counterparty can be adversely impacted by the measures themselves, which was not the intent.	PIRP Language
	PG&E	PG&E believes the CAISO should separate the proposed tariff into two separate filings with the Federal Energy Regulatory Commission (FERC). The first filing should contain the portion of the Order 764 Market Changes that are for compliance with the original FERC order. Separately, the CAISO should file tariff language that addresses the market design changes and enhancements beyond compliance. In particular, PG&E suggests that tariff language addressing the reinstatement of convergence bidding on the interties and the Participating Intermittent Resource Protective Measures be separated from the compliance filing.	The ISO's Order 764 compliance filing will delineate clearly between tariff revisions that are necessary for Order 764 compliance, as opposed to tariff revisions needed to implement the broader market reforms the ISO also seeks to implement. The ISO does not believe, however, that formally splitting this initiative into two separate tariff filings is practical.	Initial Draft
	Powerex	As with any undertaking of this magnitude, various inadvertent errors or oversights should be expected to occur. As an example of matters falling into this category, Powerex has noted that some deletions of the term "HASP" in favor of the term "FMM" (such as in Section 11.1(e)) instead should be "RTM," since the RTM will cover both HASP and the FMM going forward. If FMM replaces HASP in these Tariff provisions, then the RTM will be excluded inappropriately (and we believe unintentionally). Another type of correction in this category is that some sections are out of numerical order (for example, Section 11.10.1.3 appears after Section 11.10.2 and Section 31.8 appears before Section 31.3.1.1).	In each case where the ISO replaced the term "HASP" with either "FMM" or "RTM" the change was the product of a conscious decision. In some cases, the ISO may have made an incorrect decision and the terminology will be reviewed.	Revised Draft
	Powerex	In Order No. 764, the Commission directed each public utility transmission provider to revise its Tariff to provide all transmission customers the option of submitting and modifying transmission schedules at 15-minute intervals. The Commission specifically declined to adopt additional enhancements that	All of the proposed tariff amendments will be filed pursuant to FPA, § 205.	Revised Draft

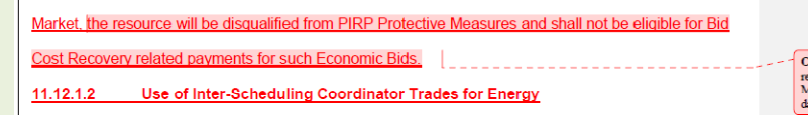
		<p>commenters suggested, including intra-hour imbalance settlement, an intra-hour transmission product, increasing the frequency of resource commitment through sub-hourly dispatch, the formation of intra-hour imbalance markets, and other market enhancements although, with a sufficient showing, the Commission indicated it would entertain alternative proposals on compliance that are consistent with or superior to the intra-hour scheduling requirements of Order No. 764 and otherwise are just and reasonable.</p> <p>In light of the issuance of Order No. 764, CAISO opted not to separately revise its tariff based on several then-active stakeholder processes including the Intertie Pricing and Settlement initiative and the Dual Pricing initiative. It instead decided to roll those stakeholder processes into this initiative. Therefore, to the extent that CAISO is proposing tariff changes beyond those that are intended to comply with Order No. 764 in its November 2013 FERC filing, it should invoke and meet the requirements of Federal Power Act Section 205 or 206, as appropriate, rather than styling such changes as a compliance filing.</p>		
	SDG&E	Please add tariff language that states for a PIRP modified resource (VER internal to the CAISO), the resource's bid PMAX value will reflect the forecast for the FMM optimization run.	The ISO will look to include this in the filed tariff language.	Revised Draft
	Six Cities	In addition, typographical errors are identified on the attached marked-up pages	The ISO acknowledges the drafting errors and will correct them for the final posting.	Revised Draft
	WAPA	Section references ---Section 16.9.1 references Section 33.3 and 33.7; these references do not appear to exist in this document. Section 30.7 references Section 34.1.4 and Section 34.1.2.2; these references do not appear to exist in this document. Section 31.7 references Section 27.4.1; this reference does not appear to exist in this document. The FMM Appendix is not listed either.	The correct cross references will be provided in the second draft tariff posting.	
11.1	Powerex	11.1 Settlement Principles	These are not defined terms in the proposed tariff language.	Revised Draft

	<p>The CAISO shall calculate, account for and settle payments and charges with Business Associates in accordance with the following principles:</p> <p>(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;</p> <p>(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;</p> <p>(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</p> <p>(e) Day-Ahead Schedules, RUC Awards and AS Awards shall be settled at the relevant LMP, RUC Price, and ASMPs, respectively. FMM- RTM Schedules shall be settled at the relevant FMM- RTM LMP at the relevant Scheduling Point. FMM RTM AS Awards shall be settled at the relevant FMM RTM ASMP. All Dispatch Instructions shall be deemed delivered and settled at relevant Real-Time Market prices. Deviations from</p>	<p>Although these involve concatenation of defined terms, they are not sufficiently precise in this context.</p>	
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		Dispatch Instructions shall be settled as Uninstructed Deviations.		
11.10.1.2	Powerex	<p>11.10.1.2 Ancillary Services Provided in FMM <u>RTM</u></p> <p>The FMM <u>RTM</u> optimization establishes Ancillary Services Awards and prices for Ancillary Services. The CAISO pays Scheduling Coordinators that supply Ancillary Services from HASP Block Intertie Schedules an amount equal to the product of the simple average of the ASMPs computed for the four FMM intervals for each Ancillary Service as described in Section 27.1.2, and the quantity of the capacity awarded for the Ancillary Service in the Settlement Period. The CAISO charges Scheduling Coordinators that receive an Ancillary Service Award or have qualified Self-Provided Ancillary Services at a Scheduling Point in the FMM the simple average of the fifteen (15) minute Marginal Cost of Congestion over the applicable Trading Hour as described in Section 11.10.1.2.1.</p>	The ISO believes the reference to "FMM" is correct.	Revised Draft
11.10.1.3	Powerex	<p>11.10.1.3 Ancillary Services Provided in <u>Real-Time FMM</u></p> <p>Suppliers of Ancillary Services from resources awarded in FMM are paid a price equal to one-quarter of the fifteen (15) minute ASMP (in \$/MW/h) in each fifteen (15) minute interval of the applicable Trading Hour in which the capacity is procured for each Ancillary Service times the amount of the capacity awarded (MW) for the Ancillary Service in the relevant Ancillary Services Region for the applicable trading hour in which the capacity is procured. For each Ancillary Service, the ASMP is calculated as set forth in Section 27.1.2. Suppliers of Self-Provided Ancillary Services in the Real-Time Market are not eligible to receive payment using the ASMP; rather to the extent the self-provision is qualified it will be valued at the user rate for the relevant service (i.e., will either reduce the Ancillary Services Obligation or receive the user rate if it exceeds the Scheduling Coordinator's Ancillary Service Obligation) as described in Sections 11.10.2, 11.10.3 and 11.10.4.</p>	The ISO will make this edit.	Revised Draft

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11.10.2	PG&E	<p>11.10.2 Settlements for User Charges for Ancillary Service</p> <p>For consistency, please remove any references to HASP. "... any, by which (i) the total payments to Scheduling Coordinators pursuant to this Section 11.10.2 for the Day-Ahead Market, HASP, and the Real-Time Market, exceed (ii) the total amounts charged to Scheduling Coordinators pursuant to this Section 11.10.2, for the Day-Ahead Market and the Real-Time Market. If total amounts charged to Scheduling Coordinators exceed the total payments to Scheduling Coordinators, each Scheduling Coordinator will be refunded its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve."</p>	The ISO will clarify the language for the final posting.	Revised Draft
11.12.1.1	PG&E	<p>Section 11.12.1.1: <i>"...If the Scheduling Coordinator submits an Economic Bid to the Real-Time Market, the resource will be disqualified from PIRP Protective Measures and shall not be eligible for Bid Cost Recovery related payments for such Economic Bids."</i></p> <p>Scheduling Coordinators should either be unable to submit economic bids for resources receiving PIRP Protective Measures or resources should be unable to receive PIRP Protective Measures for the settlement intervals in question, not both.</p> <p>PG&E recommends that the CAISO remove the last sentence of Section 11.12.1.1 for three reasons:</p> <ol style="list-style-type: none"> 1. During the stakeholder process the CAISO agreed that there would be no continuous opting-in and opting-out of PIRP Protective Measures. The last sentence of Section 11.12.1.1 would allow resources to submit economic bids to opt-out and to self-schedule to opt-in. The current language is at odds with what was decided during the stakeholder process. 2. Given that to be eligible for PIRP Protective Measures a resource must either be 1) contractually unable to curtail or 2) physically unable to curtail, resources receiving PIRP Protective Measures are contractually or physically unable to respond to real-time market dispatch from the CAISO. Therefore, by definition, these resources should not be submitting economic bids. The CAISO should not provide this as an option and instead should provide a software check that rejects economic bids for resources with PIRP Protective Measures, 3. The CAISO should not implement a market feature that would allow resources that receive a special settlement carve out to take advantage of that carve out when it benefits the resource and to disregard it when it doesn't. Resources that are physically or contractually unable to curtail should be unable to curtail at all 	<p>While the resource cannot opt out, if the resource submits an economic bid while under the measures, the resource is possibly misrepresenting whether or not the resource truly should have qualified. Necessary actions will need to be taken to rectify this issue and the resource cannot be left to continue to benefit from its actions. This is consistent with the overall policy the policy that resources cannot take advantage of special scheduling rules afforded to VER resources.</p> <p>The ISO's software will not have the ability to block such bids. But the ISO will monitor to ensure these resources do not abuse their privilege.</p>	PIRP Language

		times, not just when it suits the resource.		
11.12.1.1	PG&E	<p>PIRP Protective Settlement</p> <p>PG&E feels that the language proposed under section 11.12.1.1 extends beyond the Hourly Settlement process designated in the section heading and would suggest separating the proposed language into two (2) sections to better detail the process. Any notes or details in square brackets are for informational or clarification purposes only and are not intended to be included in the final tariff language:</p> <p>11.12.1.1 Hourly Settlement [Charge Code 6470]</p> <p><i>“Scheduling Coordinators that represent Participating Intermittent Resources that have been qualified for PIRP Protective Measures pursuant to Section 4.8.3 will be subject to the following Settlement requirements. The CAISO will first settle the market outcomes for the Participating Intermittent Resources subject to PIRP Protective Measures consistent with the rules specified in Section 11. Each day, the CAISO will calculate the PIRP Protective Measures Real-Time settlement as the product of the ninety (90) minute MWh amounts, for each hour, multiplied by the simple average of the RTD LMP for the applicable Trading Hour.”</i></p>	This section was modified to address the changes.	PIRP Language
11.12.1.1	SCE		Provided clarifications.	PIRP Language
11.12.1.1	Viasyn	<p>Section 11.12.1.1 Hourly Settlement</p> <p>We request that the CAISO clarify the last sentence of this section, which disqualifies a resource from PIRP Protective Measures if the Scheduling Coordinator submits an economic bid in the Real-Time Market. Does the CAISO intend that the resource be disqualified for only the hour in which an economic bid is submitted, or that the resource be disqualified for the remainder of the term of the measures? It appears that the CAISO intends the latter case, as providing these resources with the hourly option to provide economic bids is not in the spirit of the proposal, however the second portion of the sentence which references ineligibility to receive “Bid Cost Recovery related payments” introduces additional confusion. If the submission of economic bids disqualifies the resource from protective measures for the remainder of the term, which implies that the requirements</p>	The ISO will provide the clarification that the resource will be disqualified for the rest of the term if it submits an economic bid or self-schedule.	PIRP Language

		of the affidavit have been met, the resource should be treated as any other PIR/EIR. We appreciate any clarity that the CAISO can provide on the intent of this sentence. We recommend that the sentence be modified to state that any economic bids submitted are invalid, with a separate clause identifying the step to be taken to be explicitly removed from protective measures.		
11.12.1.2	PG&E	11.12.1.2 Monthly Settlement [Charge Code 711] <i>“At the end of the month, the CAISO will calculate the PIRP Protective Measures monthly resettlement, which it will based on the Participating Intermittent Resource’s deviation from the forecast established for the Participating Intermittent Resource for each applicable Trading Hour. For each month the CAISO will calculate the PIRP Protective Measures Settlement Amount as the product of (a) the monthly netted MWh quantities under PIRP Protective Measures, which is the sum of the hourly differences between the ninety (90) minute MWh amounts and the Participating Intermittent Resource’s 5-minute metered MWhs, and (b) the resource’s monthly weighted average RTD LMP, where the weights are the metered Generation quantities associated with each RTD LMP. The provisions in this Section 11.12.1 and in Section 11.12.2 will be in effect as of the day this Section becomes effective and the CAISO will implement these measures no later than twelve months after the effective date of this section. If the Scheduling Coordinator submits an Economic Bid to the Real-Time Market, the resource will be disqualified from PIRP Protective Measures and shall not be eligible for Bid Cost Recovery related payments for such Economic Bids.”</i>	Clarifications provided.	PIRP Language
11.12.3.3	CalWEA/C alRENEW	4. The proposed tariff language should be clarified in two simple, but important, respects. Section 11.12.3.3 should be modified to make clear that Participating Intermittent Resources Export Fee will not newly be subject to the export fee simply because they have elected PIRP Protective Measures. The current language of this section is not clear in this respect. The language of Section 11.12.3.3 should read as follows: “A Participating Intermittent Resources Export Fee will be levied to Participating Intermittent Resources that have elected for PIRP Protective Measures, and are not otherwise exempt, in accordance with Section 5.3 of Appendix Q and Schedule 4 of Appendix F.”	We accept the first of these two requests. The second request is confusing. The fee applies if they export. If they do not export it does not apply. It does not apply to any other PIRPs because they do not have protective measures. We do not see what additional changes are needed.	PIRP Language
11.2.4.6	Powerex	Section 11.2.4.6. Adjustment of CRR Revenue Related to Virtual Awards Implicit in the discussion here is that reductions made voluntarily by a CRR Holder/Convergence Bidding Entity or a Scheduling Coordinator representing the CRR Holder may precipitate an	The comment raises issues regarding existing principles embedded within the CRR/virtual bidding clawback rule. The ISO is merely making conforming changes to this section. Substantive change to the rule is beyond the scope of this filing.	Revised Draft

		adjustment of CRR revenue related to virtual awards, and not those that occur on an involuntary basis, by direction of the CAISO. Rather than being implicit, the Tariff should be clear that the CRR reductions will occur in response to actions taken voluntarily by the market participant. To add this clarity, Powerex proposes that the following insert be added before both of the “reduces”: “(as opposed to the CAISO).” This change is shown in the attached redline.		
11.2.4.6	Powerex	<p>11.2.4.6 Adjustment of CRR Revenue Related to Virtual Awards</p> <p>In accordance with this Section 11.2.4.6, the CAISO will adjust the revenue from the CRRs of a CRR Holder that is also a Convergence Bidding Entity whenever either of the following creates a significant impact on the value of the CRRs in the DAM held by that entity: the CRR Holder/Convergence Bidding Entity engages in virtual bidding; or the CRR Holder/Convergence Bidding Entity <u>(as opposed to the CAISO)</u> reduces in the RTM an import or export awarded in a Day-Ahead Schedule. As set forth in Section 11.32, the CAISO will also adjust the revenue from the CRRs of a CRR Holder (regardless of whether the CRR Holder is also a Convergence Bidding Entity) where the Scheduling Coordinator representing that CRR Holder <u>(as opposed to the CAISO)</u> reduces in the RTM an import or export awarded in a Day-Ahead Schedule.</p> <p>(a) For purposes of this Section 11.2.4.6 and the definition of Flow Impact, any reduction by a Scheduling Coordinator submitting Schedules on behalf of an entity that is a CRR Holder to an import or export Schedule in the RTM will be treated as a Virtual Award. For each CRR Holder subject to this Section 11.2.4.6, for each hour, and for each Transmission Constraint binding in the IFM or RTM the CAISO will calculate the Flow Impact of the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder, excluding Virtual Awards at LAPs and generation Trading Hubs.</p> <p>(b) The CAISO will determine the peak and off-peak hours of the</p>	The comment objects to existing policy embedded within the CRR/virtual bidding clawback rule which this filing was not intended to change. The ISO is merely making conforming changes to this section. Substantive change to the rule is beyond the scope of this filing.	Revised Draft

		<p>day in which Congestion on the Transmission Constraint was significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. Congestion on the Transmission Constraint will be deemed to have been significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder if the Flow Impact passes two criteria. First, the Flow Impact must be in the direction to increase the value of the CRR Holder's CRR portfolio. Second, the Flow Impact must exceed the threshold percentage of the flow limit for the Transmission Constraint. The threshold percentage is ten (10) percent of the flow limit for each Transmission Constraint.</p> <p>(c) For each peak or off-peak hour that passes both criteria in Section 11.2.4.6(b), the CAISO will compare the Transmission Constraint's impact on the Day-Ahead Market value of the CRR Holder's CRR portfolio with the Transmission Constraint's impact on the Real-Time Market value of the CRR Holder's CRR portfolio, as applicable.</p> <p>(d) The CAISO will adjust the peak or off-peak period revenue from the CRR Holder's CRRs in the event that, over the peak or off-peak period of a day, the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the Real-Time Market value of the CRR Holder's CRR portfolio, as applicable. The amount of the peak period adjustment will be the amount by which the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the Real-Time Market value of the CRR Holder's CRR portfolio for the peak-period hours that passed both criteria in Section 11.2.4.6(b), as applicable. The amount of the off-peak period adjustment will be the amount by which the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the Real-Time Market value of the CRR Holder's CRR portfolio for the off-peak</p>		
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		<p>period hours that passed both criteria in Section 11.2.4.6(b), as applicable.</p> <p>All adjustments of CRR revenue calculated pursuant to this Section 11.2.4.6 will be added to the CRR Balancing Account.</p>		
11.21.1	PG&E	<p>11.21.1 CAISO Demand and Exports</p> <p>It appears that the existing tariff language lacks reference to an applicable tariff section. Specifically, the sentence, “If the CAISO corrects an LMP in the upward direction pursuant to Section 35 that impacts Demand in the Day-Ahead Market and the FMM such that either a portion of or the entire cleared CAISO Demand or export Economic Bid curve becomes uneconomic, then the CAISO will calculate and apply the Price Correction Derived LMP for settlement of CAISO Demand and exports in Section 11.2.1.2, 11.2.3, 11.2.1.4 and 11.4.1.” should have section 11.5.9.1 added to the list of tariff sections for which a price correction derived LMP would be utilized for settlement.</p>	Section 11.5.9 is being deleted. This material is addressed in section 11.5.1	Revised Draft
11.21.1	Powerex	<p>11.21.1 CAISO Demand and Exports</p> <p>If the CAISO corrects an LMP in the upward direction pursuant to Section 35 that impacts Demand in the Day-Ahead Market and the FMM such that either a portion of or the entire cleared CAISO Demand or export Economic Bid curve becomes uneconomic, then the CAISO will calculate and apply the Price Correction Derived LMP for settlement of CAISO Demand and exports in Section 11.2.1.2, 11.2.3, 11.2.1.4 and 11.4.1. The CAISO shall not calculate and apply a Price Correction Derived LMP for settlement of exports that are part of a Schedule that results from Bids submitted in violation of Section 30.5.5. The CAISO will calculate a Price Correction Derived LMP for each affected CAISO Demand and exports as follows: the total cleared MWhs of CAISO Demand or exports in the Day-Ahead Schedule <u>or</u> <u>HASP Block Intertie Schedule</u> or FMM Schedule, as applicable, multiplied by the corrected LMP, minus the make-whole payment amount, all of which is divided by the total cleared MWhs of CAISO Demand or export in the Day-Ahead Schedule or HASP</p>	By definition, HASP Intertie Block Schedules become FMM Schedules, subject to any needed operational/reliability adjustments to the quantity of the schedule. It is thus not necessary to add a specific reference to the HASP Intertie Block Schedules.	Revised Draft

		<p>Block Intertie Schedule or FMM Schedule, as applicable. The make-whole payment amount will be calculated on an hourly basis determined by the area between the Scheduling Coordinator’s CAISO Demand or Export Bid curve and the corrected LMP, which is calculated as the MWhs for each of the cleared bid segments in the Day-Ahead Schedule or HASP Intertie Schedule for the affected resource, multiplied by the maximum of zero or the corrected LMP minus the bid segment price. For the purpose of this calculation, the CAISO will not factor in a make-whole payment amount for Self-Scheduled CAISO Demand or exports. Any non-zero amounts in revenue collected as a result of the application of the Price Correction Derived LMP will be captured through the calculation of the IFM Congestion Charge reflected in Section 11.2.4.1 and the allocation of non-zero amounts of the sum of Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted for Energy in accordance with Section 11.5.4.</p>		
11.21.1.3	PG&E	<p>11.12.1.23 Use of Inter-Scheduling Coordinator Trades for Energy</p> <p>Note – This section’s number has been changed because of PG&E’s proposed edit to the draft tariff’s Section 11.12.1.1.</p> <p>As stated in the introduction, PG&E is opposed to inclusion of this language at this time.</p> <p>Should the CAISO ultimately implement this separate Inter-SC Trade settlement process for trades with resources operating under the PIRP Protective Measures then we would recommend that these calculations be done under a new, distinct charge code so that the financial processes can be quickly and easily separated. If the CAISO maintains language in Section 11.12.1.1, this will be especially important for any trades with the qualifying VER in intervals where they do not qualify for special protections under the PIRP Protective Measures framework.</p>	See note above on same question.	PIRP Language
11.31	PG&E	<p>11.31 Intertie Schedules Decline Charges</p> <p>This section contains four typos of the same nature. In four instances, the CAISO has changed the order of words in the phrase “Decline Potential Charge” and incorrectly states, “Potential Decline Charge”. All four incorrect instances appear in sections b and c and should be corrected in the revised tariff.</p>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft

11.31	Powerex	<p>Section 11.31 Intertie Schedules Decline Charges</p> <p>Subsection (c). CAISO has proposed to impose Decline Potential Charges as to Variable Energy Resources in this subsection depending upon whether the resource has over-forecasted on a net basis over the month instead of adopting other recommendations that were proposed in the stakeholder process, such as the financial impact of the difference between the forecast and actual production. To the extent monthly MW netting is to be used as a basis for the imposition of Decline Potential Charges, as has been proposed, Powerex believes it is important that CAISO make clear that this does not mean that a Variable Energy Resource that has a positive net production relative to its forecast over a month necessarily has met the Tariff requirements by virtue of its net positive monthly status and its avoidance of Decline Potential Charges.</p> <p>For example, if such a resource engages in profiteering by submitting an hour-ahead forecast that is higher than its expected metered output during hours when congestion is anticipated, and that is lower than its expected output during other hours, CAISO may determine such activity is inappropriate even though such entity may not have a systemic deviation from its forecast on a monthly net basis. That is, if a strategy is employed by which a Variable Energy Resource submits an advisory schedule that exceeds its actual financially binding schedule during the most lucrative time periods to gain financial benefit, the failure to impose a Decline Potential Charge should not be interpreted to mean that such strategy will not be investigated and potentially found inappropriate as an exercise of gaming to benefit from temporal differences in the value of energy over the month.</p> <p>Powerex notes that this comment was echoed by the CAISO Division of Market Monitoring (“DMM”) in its March 13, 2013 Comments on FERC Order 764 Market Changes Revised Straw Proposal in which DMM commented that, in addition to “reserv[ing] the right to cancel a variable energy resource’s ability to use their forecast,” CAISO should “commit to monitoring for</p>	The posted tariff language appropriately reflects Board-approved policy.	Revised Draft
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		<p>any gaming and/or systematic errors in these forecasts. Moreover we recommend the ISO create a tariff provision that gives the ISO the authority to revoke a specific resource or entity's ability to submit its own forecasts should the ISO determine the resource has submitted inaccurate forecasts. We also recommend the ISO consider minor revisions to its incentive structure for preventing intertie VERs from inflating hour-ahead forecasts.”</p> <p>Unless such profit-seeking activity that is unrelated to legitimate forecasting variables is foreclosed, the costs will be borne by load and other intertie participants. Accordingly, it should be made clear that the failure to impose a Decline Potential Charge based on a monthly netting approach is not the equivalent of a determination that net positive entities are in compliance with all Tariff obligations.</p>		
11.31	Powerex	<p>11.31 Intertie Schedules Decline Charges</p> <p>The Decline Potential Charge – Imports shall apply to the following intertie and internal schedules:</p> <p>a. Any HASP Block Intertie Schedule for an Energy import when the HASP Block Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge – Exports shall apply to any HASP Block Intertie Schedule for an Energy export when the HASP Block Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge will not apply if the decline is made after the applicable E-tag deadline, as defined in Section 30.6.2 <u>but will be subject to Uninstructed Imbalance Energy, as defined in Section 11.5.2.</u></p> <p>b. Imports and exports accepted in an HASP Block Intertie Schedule that are incremental to Day-Ahead Schedules are</p>	(1) All dynamic VERs and all interval VERs that wish to provide their own forecast; (2) BPMs are subject to change so as a matter of tariff administration, the ISO typically does not include citations to specific BPMs in the tariff; (3) all units that wish to rely on their own forecast must be certified to do so; (4) it will be developed through the standard BPM change process in 2014.	Revised Draft

		<p>subject to the Decline Potential Charge to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge will not apply if the decline is made after the applicable E-tag deadline, as defined in Section 30.6.2 <u>but will be subject to Uninstructed Imbalance Energy, as defined in Section 11.5.2.</u> To the extent the incremental import or export is curtailed through the FMM, for the 15-minute FMM interval in which the resource follows the CAISO instructions will not be subject to Decline Potential Charge.</p> <p>c. Imports from Variable Energy Resource using their own forecast are subject to the Decline Potential Charge to the extent the resource over-forecasts over the month. For each hour, the CAISO compares maximum 15-minute FMM binding schedule (that is submitted 37.5 minutes prior to flow) to the maximum 15-minute advisory schedule from the Hour-Ahead Scheduling Process to accept Self-Schedule Intertie Blocks (based upon the hourly forecast received 75 minutes prior to flow) and calculates the differences between the two. These hourly differences are summed over the month. If the maximum advisory schedule exceeds the actual financially bidding schedule by the threshold over the course of the month, the Decline Potential Charge applies.</p> <p>d. For any Settlement Interval, the Decline Potential Charge – Imports or Decline Potential Charge – Exports, as the case may be, shall equal the MWh quantity of the import or export not delivered multiplied by the greater of \$10/MWh or fifty percent (50%) of the FMM LMP. The Decline Potential Charge – Imports and Decline Potential Charge – Exports will be calculated for each HASP Block Intertie Schedule or VER Self-Schedule that is not delivered, provided that only the Decline Monthly Charge – Imports and Decline Monthly Charge – Exports shall be payable by the Scheduling Coordinator as described in Section 11.31.1.</p>		
11.31	Six Cities	Section 11.31 c In the next to last line of this sub-section, there is a non-specific reference to “the threshold.” For clarity, please consider a specific cross-reference to the thresholds described in	The ISO acknowledges the drafting error and will correct it for the final posting.	Revised Draft

		Sections 11.31.1 and 11.31.2.		
11.32	Powerex	<p>11.32 Measures to Address Intertie Scheduling Practices</p> <p>The CAISO will take the following actions regarding Schedules that clear the Day-Ahead Market at the Interties and that are wholly or partially reversed in the FMMRTM:</p> <p>(i) The CAISO will charge the Scheduling Coordinator the positive difference between the Day-Ahead Market price and the FMM LMP applicable to any imports that clear the Day-Ahead Market and are reduced in the FMM-RTM for which the Scheduling Coordinator has failed to submit an E-Tag or E-Tags consistent with Section 30.6.2.</p> <p>(ii) The CAISO will charge the Scheduling Coordinator the positive difference between the FMM LMP and the Day-Ahead Market LMP applicable to any exports that clear the Day-Ahead Market and are reduced in the HASPRTM for which the Scheduling Coordinator has failed to submit an E-Tag or E-Tags consistent with Section 30.6.2.</p> <p>(iii) The CAISO will treat any reduction by a Scheduling Coordinator to a Day-Ahead import or export Schedule in the HASP-OR-FMMRTM as a Virtual Award for purposes of adjusting CRR Revenue pursuant to Section 11.2.4.6 if the Scheduling Coordinator submits Schedules on behalf of or is a CRR Holder.</p> <p>(iv) For any import Schedule that clears the Day-Ahead Market which a Scheduling Coordinator reduces in the HASPRTM, such reduced quantities will be subject to the allocation of Net RTM Bid Cost Uplift as set forth in Section 11.8.6.6.</p> <p>(v) The provisions of this Section 11.32 will not apply to Schedules that clear the Day-Ahead Market at the Scheduling Points and that a Scheduling Coordinator wholly or partially reverses in the HASP-or-the-FMMRTM to the extent such Schedules are valid and balanced ETC, TOR, or Converted Rights Self-Schedules in the Day-Ahead Market.</p>	Typically the transmission profile would not be greater than the energy profile but if a market participant wishes to procure additional external transmission and submits a corresponding E-tag, then that shouldn't be disallowed.	Revised Draft

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11.4.2	WAPA	11.4.2 Due to our pseudo-tie arrangement with our WNML SC, we have “dynamic schedules”, but need to verify with the CAISO that for CAISO settlements purposes, these schedules will continue to be treated and priced as non-dynamic.	The proposed tariff language in question is not meant to impact this pseudo-tie arrangement.	Initial Draft
11.5.2	Powerex	<p>11.5.2 Uninstructed Imbalance Energy</p> <p>Scheduling Coordinators shall be paid or charged a UIE Settlement Amount for each LAP, PNode or Scheduling Point for which the CAISO calculates a UIE quantity for each Settlement Interval. UIE quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the UIE for such entities is settled similarly to how UIE for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for UIE every five minutes based on the resource’s Dispatch Instruction. For all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources and all Participating Load and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its UIE MWh quantity and the applicable RTD LMP. The UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its UIE quantity and its Real-Time Settlement Interval MSS Price.</p>	The ISO acknowledges the drafting error and will correct it for the final posting.	Revised Draft
11.5.2.2	PG&E	<p>11.5.2.2 Hourly Real-Time Demand Settlement</p> <p>Please provide the source for the basis of using “gross deviations” in the emphasized portion of this section: “The Default or Custom Hourly Real-Time LAP Price will be bounded by the maximum positive LMP and the lowest negative LMP for the applicable Trading Hour from those relevant intervals. <i>If the</i></p>	The draft final proposal established that the weighted average price would be have upper and lower bounds. This provision describes what happens when those boundaries are exceeded, which the ISO views as an implementation detail. The logic of using gross deviations when the boundaries are exceeded is that the use of net deviations is what would trigger the price to exceed the boundary in the first place. Moving to gross deviations prevents that issue from	Revised Draft

		<i>calculated price exceeds the upper boundary or is below the lower boundary, then the price instead will be calculated based on weighted average price with the weightings based on gross deviations (absolute value of each deviation).</i>	recurring.	
11.5.2.2	WAPA	11.5.2.2 It is stated here that “the weighting of the average is calculated based on the deviation of...” It is not clear whether the weighting is the absolute value (i.e., taking the positive value of a negative number) or the algebraic value of the deviation. The clarification is important because it affects the price significantly. It is good that the price will be bounded by the maximum positive LMP and the lowest negative LMP for the hour. The deviation may also need to be bounded just in case the CAISO forecast of load or load distribution factors between the FMM and the RTD are significantly different.	The second draft tariff posting will provide more precise language on how the weighted average is calculated.	Initial Draft
11.5.9	PG&E	11.5.9 Settlement of Scheduling Points in Real-Time Market In reviewing 11.5.9, it seems the definition of Non-Dynamic System Resource needs to be more specific. The term was not included in the latest revision. “The CAISO shall settle both incremental and decremental Energy at the relevant Scheduling Points for Non-Dynamic System Resources scheduled in the FMM based on the FMM LMP in accordance with Sections 11.5.9.1, 11.5.9.2 and 11.32.”	Section 11.5.9 is being deleted. This material is addressed in section 11.5.1	Revised Draft
11.5.9	Powerex	11.5.9 Settlement Of Scheduling Points in Real-Time Market The CAISO shall settle both incremental and decremental Energy at the relevant Scheduling Points for Non-Dynamic System Resources scheduled in the FMM based on the FMM LMP in accordance with Sections 11.5.9.1, 11.5.9.2 and 11.32.	Section 11.5.9 is being deleted. This material is addressed in section 11.5.1	Revised Draft
16.11	Powerex	16.11 Inter-Balancing Authority Area ETC Self-Schedule Bid Changes Changes to ETC Self-Schedules that occur during the CAISO’s Real-Time Market that involve changes to CAISO Balancing	Typically the transmission profile would not be greater than the energy profile but if a market participant wishes to procure additional external transmission and submits a corresponding E-tag, then that shouldn’t be disallowed.	Revised Draft

		<p>Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to ETC Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the Existing Rights. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of any such changes to external import/export in submitted ETC Self-Schedules. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted ETC Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Responsible PTO. The CAISO will manually adjust or update the HASP Block Intertie Schedule, HASP Block AS Awards and/or FMM Intertie Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net ETC Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the Real-Time LMP.</p>		
16.9.1	WAPA	<p>16.9.1 Western has a number of ETCs and Agreements in place negotiated and coordinated with the CAISO. Throughout this FERC Order 764 as with all other CAISO initiatives, no CAISO proposed actions shall lessen existing rights, and current agreements shall be honored.</p>	<p>This tariff amendment is not intended to alter existing rights.</p>	Initial Draft
17.6	Powerex	<p>17.6 Inter-Balancing Authority Area TOR Self-Schedule Bid Changes</p> <p>Changes to TOR Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to TOR</p>	<p>An Intertie resource submitting a FMM Economic Bid potentially could receive an award in FMM greater than its HASP advisory award. The resource may not wish to procure external transmission so close to the FMM interval. Section 30.6.2.5 allows them to avoid being put in this scenario essentially by allowing the resource to sets its HASP advisory award as a cap on its binding FMM Schedule.</p>	Revised Draft

		<p>Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the TOR. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of any such changes to external import/export in submitted TOR Self-Schedules. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted TOR Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Non-Participating TO. The CAISO will manually adjust or update the HASP Block Intertie Schedule, HASP Block AS Award, and/or FMM Intertie Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net TOR Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the Real-Time LMP.</p>		
27	Powerex	<p>27 CAISO Markets And Processes</p> <p>In the Day-Ahead and Real-Time time frames the CAISO operates a series of procedures and markets that together comprise the CAISO Markets Processes. In the Day-Ahead time frame, the CAISO conducts the Market Power Mitigation (MPM) process, the Integrated Forward Market (IFM) and the Residual Unit Commitment (RUC) process. In the Real-Time time frame, the CAISO does the following: 1) accepts the Economic Bids and Self-Schedules used in the Real-Time Market procedures, 2) conducts the MPM process for the RTM, 3) accepts and awards HASP Block Intertie Schedules for Energy and Ancillary Services, 4) provides HASP Advisory Schedules for Energy and Ancillary Services for Bids that do not create a HASP Block Intertie Schedule, 5) conducts the Short-Term Unit Commitment (STUC), 6) conducts the Fifteen Minute Market (FMM), and 7) conducts</p>	<p>At one point the ISO considered the approach Powerex mentions but the tariff language reflects the Board-approved policy that was included in the Draft Final Proposal. Further, the methodology is the same as was used when Intertie virtual bidding previously was permitted.</p>	Revised Draft

		<p>the five-minute Real-Time Dispatch (RTD). The CAISO Markets Processes utilize transmission and Security Constrained Unit Commitment and dispatch algorithms in conjunction with a Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 to optimally commit, schedule and Dispatch resources and determine marginal prices for Energy, Ancillary Services and RUC Capacity. Congestion Revenue Rights are available and entitle holders of such instruments to a stream of hourly payments or charges associated with revenue the CAISO collects or pays from the Marginal Cost of Congestion component of hourly Day-Ahead LMPs. Through the operation of the CAISO Markets Processes the CAISO develops Day-Ahead Schedules, Day-Ahead AS Awards and RUC Schedules, HASP Block Intertie Schedules for Energy and AS Awards, HASP Advisory Schedules, FMM Energy Schedules, and FMM Ancillary Services Awards, Real-Time AS Awards and Dispatch Instructions to ensure that sufficient supply resources are available in Real-Time to balance Supply and Demand and operate in accordance with Reliability Criteria.</p>		
27.1.2.1	Powerex	<p>27.1.2.1 Ancillary Service Marginal Prices – Sufficient Supply</p> <p>As provided in Section 8.3, Ancillary Services are procured and awarded through the IFM and the FMM, and the CAISO also accepts and awards HASP Block Intertie Schedules for Ancillary services in HASP. The IFM calculates hourly Day-Ahead Ancillary Service Awards and establishes Ancillary Service Marginal Prices (ASMPs) for the accepted Regulation Up, Regulation Down, Spinning Reserve and Non-Spinning Reserve Bids. The IFM co-optimizes Energy and Ancillary Services subject to resource, network and regional constraints. In the HASP, the CAISO accepts and awards Ancillary Services from HASP Block Intertie Schedules for the next Trading Hour as described in Section 33.7<u>34.2</u>. The CAISO calculates the price for the settlement of Ancillary Services accepted and awarded in HASP based on the FMM ASMP as described herein and further described in Section 33.8<u>34.3</u>. The FMM process that is performed every fifteen (15) minutes establishes fifteen (15)</p>	The ISO has included the correct cross-references.	Revised Draft

		<p>minute Ancillary Service Schedules, Awards, and prices for the upcoming quarter of the given Trading Hour. ASMPs are determined by first calculating Shadow Prices of Ancillary Services for each Ancillary Service type and the applicable Ancillary Services Regions. The Ancillary Services Shadow Prices are produced as a result of the co-optimization of Energy and Ancillary Services through the IFM and the Real-Time Market, subject to resource, network, and requirement constraints. The Ancillary Services Shadow Prices represent the marginal cost of the relevant binding regional constraints at the optimal solution, or the reduction of the combined Energy and Ancillary Service procurement cost associated with a marginal relaxation of that constraint. If the constraint for an Ancillary Services Region is not binding, the corresponding Ancillary Services Shadow Price in the Ancillary Services Region is zero (0). During periods in which supply is sufficient, the ASMP for a particular Ancillary Service type and Ancillary Services Region is then the sum of the Ancillary Services Shadow Prices for the specific type of Ancillary Service and all the other types of Ancillary Services for which the subject Ancillary Service can substitute, as described in Section 8.2.3.5, for the given Ancillary Service Region and all the other Ancillary Service Regions that include that given Ancillary Service Region. During periods in which supply is insufficient, the ASMP for a particular Ancillary Service type and Ancillary Services Region will reflect the Scarcity Reserve Demand Curve Values set forth in Section 27.1.2.3.</p>		
27.1.2.2	Powerex	<p>27.1.2.2 Opportunity Cost in ASMP</p> <p>The Ancillary Services Shadow Price, which, as described above, is a result of the Energy and Ancillary Service co-optimization, includes the foregone opportunity cost of the marginal resource, if any, for not providing Energy or other types of Ancillary Services the marginal resource is capable of providing in the relevant market. The ASMPs determined by the IFM or FMM optimization process for each resource whose Ancillary Service Bid is accepted will be no lower than the sum of (i) the Ancillary Service</p>	<p>Although this comment deals with existing tariff language, the sentence in question would no longer appear in the tariff.</p>	Revised Draft

		<p>capacity Bid price submitted for that resource, and (ii) the foregone opportunity cost of Energy in the IFM or FMM for that resource. The foregone opportunity cost of Energy for this purpose is measured as the positive difference between the IFM or FMM LMP at the resource's Pricing Node and the resource's Energy Bid price. If the resource's Energy Bid price is higher than the LMP, the opportunity cost measured for this calculation is \$0. If a resource has submitted an Ancillary Service Bid but no Energy Bid and is under an obligation to offer Energy in the Day-Ahead Market (e.g. a non-hydro Resource Adequacy Resource), its Default Energy Bid will be used, and its opportunity cost will be calculated accordingly. If a resource has submitted an Ancillary Service Bid but no Energy Bid and is not under an obligation to offer Energy in the Day-Ahead Market, its Energy opportunity cost measured for this calculation is \$0 since it cannot be dispatched for Energy. For Self-Scheduled Hourly Block Bids for Ancillary Services awarded in HASP, the opportunity cost measured for this purpose is \$0 because, as provided in Section 34.2.3, the CAISO cannot Schedule Energy in HASP from the Energy Bid under the same Resource ID as the submitted Ancillary Service Bid.</p>		
27.4.1	Powerex	<p>27.4.1 Security Constrained Unit Commitment</p> <p>The CAISO uses SCUC to run the MPM process associated with the DAM and the RTM. SCUC is conducted over multiple varying intervals to commit and schedule resources as follows: (1) in the Day-Ahead time frame, to meet Demand reflected in Bids submitted in the Day-Ahead Market and considered in the MPM process and IFM, and to procure AS in the IFM; (2) to meet the CAISO Forecast of CAISO Demand in the RUC, HASP, STUC and FMM, and in the MPM process utilized in the HASP and RTM; and (3) to procure any incremental AS in the HASP and FMM. In the Day-Ahead MPM, IFM and RUC processes, the SCUC commits resources over the twenty-four (24) hourly intervals of the next Trading Day. In the FMM, which runs every fifteen (15) minutes and commits resources for the RTM, the SCUC optimizes over a number of 15-minute intervals</p>	The reference has been struck from the tariff.	Revised Draft

		<p>corresponding to the Trading Hours for which the Real-Time Markets have closed. The Trading Hours for which the Real-Time Markets have closed consist of (a) the Trading Hour in which the applicable run is conducted and (b) all the fifteen-minute intervals of the entire subsequent Trading Hour. In the HASP, which runs once per hour, the SCUC: 1) accepts and awards HASP Block Intertie Schedules for Energy and Ancillary Services, respectively; 2) provides HASP Advisory Schedules to Economic Hourly Block Bids with Intra-Hour Option that will change for economic reasons at most once in the Trading Hour; and 3) provides HASP Advisory Schedules to all other participants in the RTM. In the STUC, which runs once an hour, the SCUC commits resources over the last fifteen (15) minutes of the imminent Trading Hour and the entire next four Trading Hours. The CAISO will commit Extremely Long Start Resources, for which commitment in the DAM does not provide sufficient time to Start-Up and be available to supply Energy during the next Trading Day as provided in Section 31.7.</p>		
27.4.1	WAPA	<p>Section 27.4.1 references Section 31.7 yet there is no Section 31.7 in this document. Is there a separate section for 31.7? Or was it not referenced due to no changes to that portion?</p>	<p>Prior to final posting the ISO will endeavor to confirm cross-references.</p>	Revised Draft
27.5.1.1	Powerex	<p>27.5.1.1 Base Market Model used in the CAISO Markets</p> <p>Based on the FNM the CAISO creates the Base Market Model, which is used as the basis for formulating, as described in section 27.5.6, the individual market models used in each of the CAISO Markets to establish, enforce, and manage the Transmission Constraints associated with network facilities. The Base Market Model is derived from the FNM by (1) introducing locations for modeling Intertie Schedules; and (2) introducing market resources that do not currently exist in the FNM due to their size and lack of visibility. In the Base Market Model, external Balancing Authority Areas and external transmission systems are modeled to the extent necessary to support the commercial requirements of the CAISO Markets. For those portions of the FNM that are external to the CAISO Balancing Authority Area,</p>	<p>By definition, HASP Intertie Block Schedules become FMM Schedules, subject to any needed operational/reliability adjustments to the quantity of the schedule. It is thus not necessary to add a specific reference to the HASP Intertie Block Schedules.</p>	Revised Draft

		<p>the Base Market Model may model the resistive component for accurate modeling of Transmission Losses, but accounts for losses in the external portions of the market model separately from Transmission Losses within the CAISO Balancing Authority Area. As a result, the Marginal Cost of Losses in the LMPs is not affected by external losses. For portions of the Base Market Model that are external to the CAISO Balancing Authority Area, the CAISO Markets only enforce Transmission Constraints that reflect limitations of the transmission facilities and Entitlements turned over to the Operational Control of the CAISO by a Participating Transmission Owner, or that affect Congestion Management within the CAISO Balancing Authority Area or on Interties. External connections are retained between Intertie branches within Transmission Interfaces. Certain external loops are modeled, which allows the CAISO to increase the accuracy of the Congestion Management process. Resources are modeled at the appropriate network Nodes.</p> <p>The pricing Location (PNode) of a Generating Unit generally coincides with the Node where the relevant revenue quality meter is connected or corrected, to reflect the point at which the Generating Unit is connected to the CAISO Controlled Grid. The Dispatch, Schedule, and LMP of a Generating Unit refers to a PNode, but the Energy injection is modeled in the Base Market Model for network analysis purposes at the corresponding Generating Unit's physical interconnection point), taking into account any losses in the non-CAISO Controlled Grid leading to the point where Energy is delivered to CAISO Controlled Grid. Based on the Base Market Model, the market models used in each of the CAISO markets incorporate physical characteristics needed for determining Transmission Losses and model Transmission Constraints within the CAISO Balancing Authority Area, which are then reflected in the Day-Ahead Schedules, AS Awards and RUC Awards, HASP Block Intertie Schedules, HASP Block AS Awards, FMM Schedules, Dispatch Instructions, and LMPs resulting from each CAISO Markets Process. The Dispatch, Schedule, and LMP of a Dynamic System Resource or</p>		
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		<p>Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area refer to a PNode, or Aggregated Pricing Node, if applicable, of the resource at its physical location in the external transmission system that are modeled in the Base Market Model, subject to the modeling of such Transmission Losses in the portions of the FNM and exclusion of such Transmission Losses' effects on the LMPs that are external to the CAISO Balancing Authority Area described in this Section 27.5.1.1. The LMP price thus associated with a Dynamic System Resource or Pseudo-Tie Generating Unit will be used for Settlement of Energy and will include the Marginal Cost of Congestion and Marginal Cost of Losses components of the LMP to that Dynamic System Resource or Pseudo-Tie Generating Unit point, excluding losses and congestion external to the CAISO Balancing Authority Area, in accordance with this Section 27.5.1.1. Further, in formulating the market models for the RTM processes, the Real-Time power flow parameters developed from the State Estimator are applied to the Base Market Model.</p>		
30.1.2	PG&E	<p>30.1.2 Real-Time Market</p> <p>The last sentence of the section contains both a typo and an incorrect word. The CAISIO should change the sentence from "Failure to provide the information within the stated time frame shall result in the Bids being declared invalid and ate rejected by the CAISO" to say, "Failure to provide the information within the stated <i>timeframe</i> shall result in the Bids being declared invalid and <i>being</i> rejected by the CAISO."</p>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft
30.5.1	PG&E	<p>30.5.1 General Bidding Rules</p> <p>Sub-section (s) is not clearly written. The CAISO should make clear in this section that Economic Hourly Block Bids are not eligible for BCR. If the CAISO does not wish to include this clarification in section 30.5.1, PG&E suggests the Appendix A Master Definition Supplement for Bid Cost Recovery (BCR) Eligible Resources have language added to clarify that Economic</p>	The ISO will clarify the language for the second draft tariff posting and amend the definition of "Bid Cost Recovery Eligible Resource."	Initial Draft

		<p>Hourly Block Bids (neither in the form of Hourly Block nor Hourly Block with Schedule Change) are eligible for BCR.</p> <p>The third sentence in this section should state, “The Scheduling Coordinator must indicate in the Master File whether it is using its own forecast or the CAISO forecast for its resource...”</p>		
30.5.1	Powerex	<p>Section 30.5.1 General Bidding Rules</p> <p>Subsection (r). The last sentence of this subsection is unclear in several ways and should be replaced with less ambiguous terminology. As currently written, it reads “[i]n addition, the Scheduling Coordinator must complete the certification process defined in the CAISO Business Practice Manual to qualify as a VER using their own forecast.”</p> <p>First, Powerex believes CAISO intends to apply the certification requirement only to dynamically-scheduled Variable Energy Resources rather than imposing a new requirement that all Variable Energy Resources using their own forecast trigger a certification obligation. Yet, the current text does not limit the type of VER triggering the requirement except as to those using their own forecast.</p> <p>Second, the reference to “the CAISO Business Practice Manual” should be changed in favor of a reference to the specific business practice manual at issue. A visit to the url at http://bpmcm.caiso.com/Pages/BPMLibrary.aspx shows no less than nineteen posted business practice manuals. The intended relevant manual in this context likely is the “Scheduling Coordinator Certification and Termination” Business Practice Manual and should be more specifically identified.</p> <p>Third, even with that change, the text implies that the certification is only needed for a Scheduling Coordinator “to qualify as a VER <i>using their own forecast.</i>” Thus, it appears that a VER <i>not using its own forecast</i> would not need to complete the certification process. This exception is likely not intended but rather the result of a drafting issue. To the extent this is the case, the text should be revised to make clear that all dynamically-scheduled</p>	<p>(1) All dynamic VERs and all interval VERs that wish to provide their own forecast; (2) BPMs are subject to change so as a matter of tariff administration, the ISO typically does not include citations to specific BPMs in the tariff; (3) all units that wish to rely on their own forecast must be certified to do so; (4) it will be developed through the standard BPM change process in 2014.</p>	Revised Draft

		<p>resources trigger the certification requirement.</p> <p>Fourth, the currently-posted Scheduling Coordinator Certification and Termination Business Practice Manual is version 5. It contains processes for specific types of registration including categories such as demand response provider, convergence bidding, and CRR, but does not contain any specific mention of a VER registration or certification, although it does make mention of the need for the owner or operator of an Eligible Intermittent Resource to either become or obtain the services of a certified Scheduling Coordinator in order to make sales to the CAISO. Thus, the specific certification process that must be followed is not known by the vague reference to a Business Practice Manual. In sum, substantial additional clarity is required as to what the intended requirements are and to whom precisely they apply. Powerex is unable to submit redline suggestions in light of the lack of clarity as to the intended scope of the certification requirement.</p>		
30.5.1	Powerex	<p>30.5.1 General Bidding Rules</p> <p>(t) Scheduling Coordinators can submit Economic Hourly Block Bids with Intra-Hour Option. If accepted, such a Bid creates a binding Schedule in HASP that creates the same MW award for each of the four FMM intervals, except that the Schedule can be reoptimized through the FMM once during the Trading Hour. If reoptimized <u>once</u>, the Schedule cannot be changed for economic reasons reoptimized again during the Trading Hour. As specified in Section 11, a cleared Economic Hourly Block Bid with Intra-Hour Option is not eligible for Bid Cost Recovery.</p>	The ISO will clarify the language for the final posting.	Revised Draft
30.5.1	SCE	<p>30.5.1 (s):</p> <p>(s) Scheduling Coordinators can submit Economic Hourly Block Bids to be considered for a financially binding Schedule in HASP that creates the same MW award for each of the four FMM intervals.</p>	If accepted, an Economic Hourly Block Bid receives a fixed MWh schedule settled on the FMM price. To avoid confusion, the ISO will delete the word “financially.”	Revised Draft

30.6.2	PG&E	<p>30.6.2 E-Tag Rules and Treatment of Intertie Schedules</p> <p>A portion of this tariff section is inconsistent with policy development. In particular, the language stating, “If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the fifteen minute market (FMM) interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. <i>Where feasible</i>, the ISO will automatically update Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. However, it is ultimately the responsibility of the Scheduling Coordinator to ensure that the E-tag Energy profile reflects the delivered quantity.” (Emphasis added.)</p> <p>During policy development the CAISO stated that it would automate updates to energy schedules on e-tags for the 15-minute market awards within an hour.¹ The language proposed in tariff section 30.6.2 places the burden of update responsibility on each Scheduling Coordinator. This is inconsistent with the CAISO’s language during policy development where it was identified that the 2.5 minutes between 15-minute market awards and tagging deadline required automation.</p> <p>PG&E suggests the following alternate tariff language: “If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. The ISO will automatically update Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. However, it is ultimately the responsibility of the Scheduling Coordinator to ensure that the E-tag Energy profile reflects the delivered quantity. <i>In the event of an etag automation failure, Scheduling Coordinators will perform updates and will receive instruction to use the last advisory</i></p>	<p>To address PG&E’s concern, the ISO will add the following sentence: “In performing this service for a Scheduling Coordinator, the ISO is not assuming any responsibility for compliance with any E-tag requirements to which the Scheduling Coordinator is subject.”</p>	Revised Draft
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		<i>interval.</i> ” (Emphasis added to indicate suggested language.)		
30.6.2	PG&E	<p>30.6.2 E-Tag Rules and Treatment of Intertie Schedules</p> <p>PG&E does not agree with the language CAISO used in this section. In particular, the language stating, “If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Where feasible, the ISO will automatically update Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. However, it is ultimately the responsibility of the Scheduling Coordinator to ensure that the E-tag Energy profile reflects the delivered quantity.”</p> <p>During policy development the CAISO stated that it would automate updates to energy schedules on e-tags for the 15-minute market awards within an hour.¹ The language proposed in tariff section 30.6.2 places the burden of update responsibility on each Scheduling Coordinator. This is inconsistent with the CAISO’s language during policy development where it was identified that the 2.5 minutes between 15-minute market awards and tagging deadline required automation.</p> <p>PG&E suggests the following alternate tariff language:</p> <p>“If a Scheduling Coordinator receives an intra-hour Schedule change, the CAISO will provide the option of automatically updating the Schedule by twenty minutes before the start of the FMM interval to which the Schedule change applies. If the Scheduling Coordinator opts to update Schedules itself, it must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy</p>	<p>The ISO is not deviating from the Board-approved policy. Where feasible to do so, the ISO will update the Energy profiles automatically to reflect intra-hour schedule changes. Scheduling Coordinators can rely on the ISO to carry out this function, absent extenuating circumstances. Ultimate responsibility and authority over e-tagging will still rest with the Scheduling Coordinator as representative of the Purchasing/Selling Entity. For example, if the ISO updates the Energy profile to reflect an intra-hour schedule change, the Scheduling Coordinator afterwards can still amend the Energy profile from whatever the ISO submitted.</p>	Initial Draft

¹ FERC Order 764 Market Changes Addendum to Draft Final Proposal, page 16, http://www.caiso.com/Documents/Addendum-DraftFinalProposal-FERC_Order764MarketChanges.pdf

		profile reflects the change. Scheduling Coordinators that update e-tags themselves are responsible for ensuring the E-tag Energy profile reflects the delivered quantity. Scheduling Coordinators that allow the CAISO to update Energy Schedules will also be responsible for ensuring the E-tag Energy profile reflects the delivered quantity but, in the event that an E-tag is updated incorrectly by the CAISO, the CAISO will correct the E-tag in as soon a timeframe as possible.”		
30.6.2	SCE	<p>30.6.2 E-Tag Rules and Treatment of Intertie Schedules</p> <p>In addition to complying with all NERC/WECC E-Tagging requirements, Scheduling Coordinators must submit their E-tags consistent with the requirements specified in this Section 30.6.2. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Where feasible, the ISO will automatically will update Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. However, it is ultimatelyultimately the responsibilityresponsibility of the Scheduling Coordinator to ensure that the E-tag Energy profile reflects the delivered quantity. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.</p>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft
30.6.2.1	Powerex	<p>Section 30.6.2.1 Self-Scheduled Hourly Blocks</p> <p>This states that for a Self-Scheduled Hourly Block “the transmission profile must be greater than or equal to the Energy profile”. However, because the schedule for the hour cannot increase when a block bid for the hour is made, and hence transmission should not be tagged at a level greater than the cleared energy bid for such resources, “greater than or” should be deleted from this section. Only VER or economic bids that are subject to intra-hour change may have transmission profiles that are greater than the Energy profile. Accordingly, the “greater than” text is appropriate in Section 30.6.2.2 as to VER and in</p>	Typically the transmission profile would not be greater than the energy profile but if a market participant wishes to procure additional external transmission and submits a corresponding E-tag, then that shouldn’t be disallowed.	Revised Draft

		30.6.2.4 as to Economic Hourly Block Bids with Intra-Hour Option but is inappropriate as to Self-Scheduled Hourly Blocks and other Economic Hourly Block Bids.		
30.6.2.1	Powerex	<p>30.6.2.1 Self-Scheduled Hourly Blocks</p> <p>By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of Self-Scheduled Hourly Blocks. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Self-Scheduled Hourly Block. The CAISO may modify the Energy profile due to Reliability related curtailments.</p>	Typically the transmission profile would not be greater than the energy profile but if a market participant wishes to procure additional external transmission and submits a corresponding E-tag, then that shouldn't be disallowed.	Revised Draft
30.6.2.3	Powerex	<p>Section 30.6.2.3 Economic Hourly Block Bid</p> <p>See comment in Section 30.6.2.1 above.</p>	Typically the transmission profile would not be greater than the energy profile but if a market participant wishes to procure additional external transmission and submits a corresponding E-tag, then that shouldn't be disallowed.	Revised Draft
30.6.2.3	Powerex	<p>30.6.2.3 Economic Hourly Block Bid</p> <p>By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments.</p>	Typically the transmission profile would not be greater than the energy profile but if a market participant wishes to procure additional external transmission and submits a corresponding E-tag, then that shouldn't be disallowed.	Revised Draft
30.6.2.4	Powerex	<p>30.6.2.4 Economic Hourly Block Bid with Intra-Hour Option</p> <p>By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments. In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch once during the hour.</p>	Typically the transmission profile would not be greater than the energy profile but if a market participant wishes to procure additional external transmission and submits a corresponding E-tag, then that shouldn't be disallowed.	Revised Draft

30.6.2.5	Powerex	<p>Section 30.6.2.5 FMM Economic Bid</p> <p>Powerex believes that bids on the interties must be treated similarly to bids from generators and therefore, the transmission profile should be equal to the bid-in capacity and there should not be an option to effectively change a bid quantity after the bid deadline has passed, except for unforeseen physical circumstances such as transmission de-rates or a unit trip or de-rate. More specifically, intertie participants should not have the unique ability to reduce their quantity offered into the FMM as economic bids, after the HASP advisory awards.</p>	<p>An Intertie resource submitting a FMM Economic Bid potentially could receive an award in FMM greater than its HASP advisory award. The resource may not wish to procure external transmission so close to the FMM interval. Section 30.6.2.5 allows them to avoid being put in this scenario essentially by allowing the resource to set its HASP advisory award as a cap on its binding FMM Schedule.</p>	Revised Draft
30.6.2.5	SCE	<p>30.6.2.5. FMM Economic Bid</p> <p>By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of support of an FMM Economic Bid. The transmission profile must be greater than or equal to the maximum bid-in capacity for the Trading Hour, and the Energy profile must equal the MWs awarded for the first FMM interval of the Operating Hour.</p> <p>If the Scheduling Coordinator intends to limit its participation in the FMM to the quantity in the HASP advisory energy schedule (including zero), the Scheduling Coordinator may update its transmission profile to the maximum amount it wants to make available to the FMM prior to the start of the binding FMM optimization, which is approximately thirty-seven and a half minutes before the applicable Trading Hour. If the Scheduling Coordinator does not have a transmission profile greater than its advisory Energy schedule, the resource cannot be scheduled for Energy in the FMM for amounts greater than what is listed in the transmission profile. Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.</p>	<p>The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.</p> <p>The ISO will strike the word “approximately” and insert “no earlier than” in its place. The binding optimization may not start at exactly thirty-seven and a half minutes before the trading hour but it would start no earlier than that.</p>	Initial Draft
30.6.2.5	WAPA	<p>30.6.2.5 “If the Scheduling Coordinator does not have a transmission profile greater than its advisory Energy schedule....should read “greater than or equal to”...”</p>	<p>The ISO will make this change in the second draft tariff posting.</p>	Initial Draft
30.7.3.6.3.2	PG&E	<p>30.7.3.6.3.2 Position Limits on Interties</p>	<p>The ISO will clarify the language for the final posting.</p>	Revised Draft

		<p>The timeline identified by the CAISO for position limits on intertie virtual bids contains two incorrect points. In subsection d, the CAISO states that position limits will be increased to fifty (50) percent on the first day of the twenty-fourth month. This is incorrect. The CAISO should correct this section to reflect an increase in position limits on the first day of the twenty-fifth month.</p> <p>Subsection e contains a similar error. The CAISO indicates that position limits will cease to apply on the “first day of the twenty-ninth day”. This section should be corrected to state that position limits will cease to apply on the first day of the twenty-ninth month.</p>		
30.7.3.6.3.2	PG&E	<p>30.7.3.6.3.2 Position Limits at Interties</p> <p>This section contains two small, but important errors. First, in sub-section (d) the CAISO state that position limits would increase to 50% on the first day of the twenty-fourth month of the anniversary of the effective date of the tariff. This should be corrected to state, “Position limits of fifty (50) percent will apply during the time period beginning on the first day of the twenty-fifth month of the anniversary of the effective date of this tariff provision...”</p> <p>Sub-section (e) contains a typo. This section should be updated to state, “Position limits will cease to apply beginning on the first day of the twenty-ninth month following the effective date of this tariff provision.”</p> <p>(Emphasis only added in the corrected sentences to identify the proposed edits.)</p>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft
30.7.3.6.3.2	Powerex	<p>Section 30.7.3.6.3.2. Position Limits at Interties</p> <p>In the Revised Order No. 764 Draft Straw Proposal and in the Intertie Pricing and Settlement stakeholder initiative, CAISO proposed “that a total virtual intertie position limit be established</p>	At one point the ISO considered the approach Powerex mentions but the tariff language reflects the Board-approved policy that was included in the Draft Final Proposal. Further, the methodology is the same as was used when Intertie virtual bidding previously was	Revised Draft

		<p>at 10 percent of the largest intertie across all interties scheduling points for each scheduling coordinator” for at least six months after the reinstatement of convergence bidding on the interties. CAISO explained that this was appropriate because it would permit sufficient hedging across most ties. Powerex supported this approach because the protection afforded by position limits is associated with the total limit rather than its imposition at individual interties. In Powerex’s view, intertie-specific limits hinder the ability of market participants to respond to and eliminate price anomalies. The proposal to implement position limits on an aggregate basis across all interties will greatly reduce the potential for undesirable price outcomes on specific interties.</p> <p>CAISO has departed from this approach in the current version of the Tariff, alleging that the costs associated with the implementation of such an approach outweigh the benefits. It instead has proposed to employ location-specific position limits at each intertie. CAISO has not justified its change in position through its vague reference to costs exceeding benefits of making a change. The benefits of the imposition of position limits across all interties instead of at individual interties is substantial.</p>	permitted.	
30.7.3.6.3.2	Powerex	<p>30.7.3.6.3.2 Position Limits at Interties</p> <p>d) Position limits of fifty (50) percent will apply during the time period beginning on the first day of the twenty-fourth <u>fifth</u> month following the effective date of this tariff provision through the last day of the twenty-eighth month following the effective date of this tariff provision.</p>	At one point the ISO considered the approach Powerex mentions but the tariff language reflects the Board-approved policy that was included in the Draft Final Proposal. Further, the methodology is the same as was used when Intertie virtual bidding previously was permitted.	Revised Draft
30.7.3.6.3.2	SCE	<p>30.7.3.6.3.2 (e):</p> <p>e) Position limits will cease to apply beginning on the first day of the twenty-ninth month <u>day</u> following the effective date of this tariff provision.</p>	The ISO will clarify the language for the final posting.	Revised Draft
30.7.3.6.3.2	SCE	<p>30.7.3.6.3.2 Position Limits at Interties</p> <p>For an Intertie, the locational limits will be equal to a percentage of the Operating Transfer Capability of the Intertie. The</p>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft

		<p>percentages used to calculate the position limits of each Convergence Bidding Entity at Interties will be the following percentages of the published locational limits:</p> <p>a) Position limits of zero (0) percent will apply during the time period beginning as of the effective date of this tariff provision through the last day of the twelfth month following the effective date of this section 30.7.3.6.3.2.</p> <p>b) Position limits of five (5) percent will apply during the time period beginning as of the first day of the thirteenth month following the effective date of this tariff provision through the last day of the twentieth month following the effective date of this tariff provision.</p> <p>c) Position limits of twenty-five (25) percent will apply during the time period beginning on the first day of the twentieth month of the anniversary of following the effective date of this tariff provision through the last day of the twenty-fourth month following the effective date of this tariff provision.</p> <p>d) Position limits of fifty (50) percent will apply during the time period beginning on the first day of the twenty-fourth month of the anniversary of following the effective date of this tariff provision through the last day of the twenty-eighth month following the effective date of this tariff provision.</p> <p>e) Position limits will cease to apply beginning on the first day of the twenty-ninth day following day following the effective date of this tariff provision.</p> <p>The CAISO will enforce the locational limits for Interties at Bid submission and at Market Close for Virtual Bids. The CAISO will utilize the 9:00 AM Operating Transfer Capability for Bids submitted after 9:00 AM until the close of the Day-Ahead Market for the next Trading Day.</p>		
30.7.3.6.3.2	WAPA	It appears there are still overlapping time periods in 30.7.3.6.3.2 regarding Position Limits at Interties. In paragraph c, "Position limits of twenty-five (25) percent will apply during the time period	The ISO will clarify the language for the final posting.	Revised Draft

		beginning on the first day of the twenty-first month.... through the last day of the twentyfourth month... In paragraph d, "Position limits of fifty (50) percent will apply during the time period beginning on the first day of the twenty-fourth month..." Position limits of 25 percent went through the last day of month 24, but position limits of 50 percent begin with the first day of month 24. Also in paragraph e, it appears "twenty-ninth day" should read "twenty-ninth month".		
30.7.3.6.3.2	WAPA	<p>30.7.3.6.3.2 Position Limits at Interties It appears that the time periods overlap in paragraphs b, c, and d. Paragraph b are the 5 percent limits from the first day of the thirteenth month through the last day of the twentieth month....in paragraph c, the 25 percent limits start at the first day of the twentieth month through the last day of the twenty-fourth month...and then in paragraph d, the 50 percent limits go from the first day of the twenty-fourth month through the last day of the twenty-eighth month...</p> <p>The twentieth month and the twenty-fourth month overlap when discussing the first and last days of those months, moving from the different percent limits. Also, in paragraph e, it appears that "twenty-nonth" should read "twenty-ninth".</p>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft
31.8	Powerex	<p>Section 31.8 [Missing Heading in Proposed Tariff]</p> <p>As evidenced by its missing heading, and its appearance out of order before Section 31.3.1.1, this provision may have been inserted prior to being fully considered. The text of this provision deviates from the clarity contained in the proposal made by CAISO in the April 24, 2013 Addendum to Draft Final Proposal at pp. 26-27 and otherwise is insufficiently detailed to warrant inclusion as Tariff language. CAISO should revisit this text in favor of a clear proposal such as is contained in the April 24th document.</p>	This is the section where this material was located when Intertie virtual bidding previously was permitted. The ISO will add a heading.	Revised Draft
31.8	Powerex	<p>31.8</p> <p>Within the IFM optimization, the CAISO enforces a constraint at</p>	The ISO will clarify the language for the final posting.	Revised Draft

		each Intertie Scheduling Point such that Physical and virtual imports net of physical and virtual exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. The Shadow Price of this IFM constraint is incorporated into the pricing run LMPs <u>for both physical and virtual awards</u> . Within the RUC process, the CAISO enforces a constraint at each Intertie Scheduling Point such that physical imports net of physical exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. This RUC constraint determines what Day-Ahead Schedules can have an E-Tag submitted Day-Ahead. Day-Ahead Schedules which are precluded from submitting an E-Tag Day-Ahead on this basis are exempt from the charges described in Section 11.32.		
31.8	SCE	31.8: Is this misnumbered or out of order? Also, should have a descriptive heading.	This is the section where this material was located when Intertie virtual bidding previously was permitted. To help orient market participants, the ISO will add a heading.	Revised Draft
31.8	SCE	31.8 [This section number seems out of order / inconsistent] Within the IFM optimization, the CAISO enforces two (2) constraints at each Intertie Scheduling Point so that Virtual Bids do not result in net interchange schedules violating scheduling limits unless the bidding prohibition set forth in Section 30.8 applies. The first constraint is that physical imports net of physical exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. The second constraint is that physical and virtual imports net of physical and virtual exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. Although both constraints are enforced in both scheduling and pricing runs, only the second constraint Shadow Price is incorporated into the pricing run LMPs.	The ISO recognizes that the draft tariff language did not fully reflect the policy in the draft final proposal. The second draft tariff posting will include more appropriate language.	Initial Draft
31.8	WAPA	31.8 We understand there may be some outstanding concerns with the virtual and physical schedules as portrayed in this section. Please provide some examples of the consequences of	The ISO recognizes that the draft tariff language did not fully reflect the policy in the draft final proposal. The second draft tariff posting will include more appropriate language.	Initial Draft

		physical scheduling with these intertie constraints.		
34	CDWR	<p>Section 34 – lines 12 – 13</p> <p>processes: 1) accepting Self-Schedule Hourly Blocks for Energy and Ancillary Services, 2) accepting VER Self-Schedules for Energy, 3) optimizing Economic Hourly Block Bids for Energy</p> <p>It seems like there are steps missing in between (2) and (3). Steps (1) and (2) accept the respective self-scheduled bids. But then in steps (3) and (4), HASP optimizes the respective economic hourly block bids. In between steps (2) and (3), there should be two additional steps to accept the economic hourly block bids for energy and AS and the economic hourly block bids with an intra-hour option. If steps are added, the last sentence in this same paragraph should also be updated.</p>	The ISO will clarify the language for the final posting.	Revised Draft
34	CDWR	<p>Section 34 – line 16</p> <p>and 5) providing purely advisory FMM Energy schedules and Ancillary Services awards and</p> <p>Using “FMM” makes it sound like the FMM provides advisory schedules and awards, which is not the case. Proposed language:</p> <p>and 5) providing purely advisory 15-min Energy schedules and Ancillary Services awards and</p>	The ISO will clarify the language for the final posting.	Revised Draft
34	CDWR	<p>Section 34 – 6th paragraphs, last sentence (near the bottom of pg 133)</p> <p>Dispatch Instructions. In any given Trading Hour, the STUC may commit resources for the third fifteen-minute interval of the current Trading Hour and extending into the next four (4) Trading Hours.</p> <p>Time conflicts with time noted in section 34.3, which says 3 hours. Time should be confirmed and should be the same in both sections.</p>	The ISO will clarify the language for the final posting.	Revised Draft
34	PG&E	34. Real-Time Market	Although presented differently, the substance of the two sections	Initial Draft

		<p>The proposed tariff in this section is inconsistent with proposed tariff section 34.2 “The HASP – Schedules Without Prices”. In section 34 the CAISO describes four processes, then states, “These four processes taken together constitute the HASP.” But in section 34.2 the CAISO describes a five step process that constitutes HASP.</p> <p>PG&E proposes that the CAISO update section 34 to be exactly consistent with section 34.2 as section 34.2 provides greater detail and clarity as to the exact processes that constitute HASP.</p> <p>When defining the Short-Term Unit Commitment, the CAISO identifies that STUC will run “near the top of the hour.” This is unclear. The exact timeframe when STUC will be run must be defined and identified in this sentence.</p>	<p>should be consistent. Nevertheless, to avoid the possibility of confusion, the ISO has streamlined the language between the two sections.</p> <p>The definition of STUC is existing tariff language. To provide clarity going forward, however, the ISO will replace the phrase “near the top of the hour” with the phrase “at approximately 47.5 minutes before the applicable Trading Hour.”</p> <p>Unlike the start of the FMM optimization, as described in section 30.6.2.5, the STUC may start before the given time. Therefore in this case, the word “approximately” is appropriate.</p>	
34	Powerex	<p>Section 34. Real-Time Market</p> <p>The proposed Tariff change includes a statement that “In Real-Time, resources are required to follow Real-Time Dispatch Instructions.” Powerex has two comments related to the inclusion of this language. First, this statement is too broad to be accurate, as the CAISO has indicated in this stakeholder process that intertie schedules that do not perform are merely required to settle financially at the applicable LMP process, implying intertie awards are not <i>physically</i> binding but rather <i>financially</i> binding only. The CAISO also has a practice of allowing “prospective real-time supply” to participate as physical intertie supply in its IFM market, again indicating that the CAISO does not require physical commitment behind its physical bids and offers on the interties. Powerex recognizes that, at other times, the CAISO has indicated that it has an expectation of physical performance on the interties to maintain reliability. While it is unclear the extent, if any, to which the CAISO expects physical commitment or performance on intertie awards, the CAISO’s communication to date, including in this stakeholder process, is not consistent with a strict requirement to follow Real-Time Dispatch Instructions..</p>	<p>Although this comment deals with existing tariff language, the sentence in question would no longer appear in the tariff.</p>	Revised Draft

		Second, it is internally inconsistent and may lead to interpretation disputes to include such a requirement in this section when similar statements as to the need to follow the relevant market's rules are not included throughout in each subsection. Once the statement is made accurate, the appropriate location for any such over-arching requirement is a general provision such as Expected Conduct of Market Participants in Section 37.3.1.1.		
34	Powerex	<p>34. Real-Time Market</p> <p>The RTM is the market conducted by the CAISO during any given Operating Day in which Scheduling Coordinators may provide Real-Time Imbalance Energy and Ancillary Services. The Real-Time Market consists of processes that occur both before the Trading Hour and during the Trading Hour.</p> <p>The CAISO conducts the following RTM processes related to inputs that are used in further RTM processes: 1) accepts Economic Bids and Self-Schedules for the Real-Time Market up to seventy-five minutes prior to the applicable Trading Hour, 2) validates Economic Bids and Self-Schedules submitted to the RTM, 3) performs the MPM procedure with respect to the Bids that are submitted to the RTM.</p> <p>The CAISO conducts the following RTM processes that provide a Schedule (either advisory or financially binding) but with a settlement price to be determined through subsequent market processes: 1) accepting Self-Schedule Hourly Blocks for Energy and Ancillary Services, 2) accepting VER Self-Schedules for Energy, 3) optimizing Economic Hourly Block Bids for Energy and Ancillary Services, 4) optimizing Economic Hourly Block Bids with Intra-Hour Option for Energy and providing an hourly schedule that can be changed at most once in the Trading Hour, and 5) providing purely advisory FMM Energy schedules and Ancillary Services awards and binding unit commitment for all other resources participating in the RTM. These five processes taken together constitute the HASP.</p> <p>The CAISO conducts the following RTM processes that provide a</p>	Although this comment deals with existing tariff language, the sentence in question would no longer appear in the tariff.	Revised Draft

		<p>financially binding Schedule and a financially binding settlement price: 1) the Fifteen-Minute Market (FMM), 2) the Short-Term Unit Commitment (STUC), and 3) the Real-Time Dispatch (RTD).</p> <p>The FMM runs every fifteen (15) minutes and utilizes the SCUC optimization to commit Fast Start and some Short Start Units and to procure any needed AS on a fifteen-minute basis. In any given Trading Hour, the FMM may commit resources in the four to seven subsequent fifteen-minute intervals, depending on when during the hour the run occurs. Not all resources committed in a given Short-Term Unit Commitment (STUC) or FMM run will necessarily receive CAISO commitment instructions immediately, because during the Trading Day the CAISO may issue a commitment instruction to a resource only at the latest possible time that allows the resource to be ready to provide Energy when it is expected to be needed.</p> <p>STUC runs once per hour at approximately 47.5 minutes before the applicable Trading Hour and utilizes the SCUC optimization to commit Medium Start, Short Start and Fast Start Units to meet the CAISO Demand Forecast. The CAISO shall dispatch all resources, including Participating Load and Proxy Demand Resource, pursuant to submitted Bids or pursuant to the provisions below on Exceptional Dispatch. In Real-Time, resources are required to follow Real-Time Dispatch Instructions. In any given Trading Hour, the STUC may commit resources for the third fifteen-minute interval of the current Trading Hour and extending into the next four (4) Trading Hours.</p> <p>The RTD uses a Security Constrained Economic Dispatch (SCED) algorithm every five minutes throughout the Trading Hour to determine optimal Dispatch Instructions to balance Supply and Demand. Updates to the Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 used in the RTM optimization include current estimates of real-time unscheduled flow at the Interties. In any given five-minute interval, the RTD optimization looks ahead over multiple five-minute intervals, but the CAISO issues Dispatch Instructions only for the next target</p>		
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		<p>five- minute interval. The <u>HASP</u>, FMM, STUC and RTD processes of the RTM use the same Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 used in the DAM and the HASP, subject to any necessary updates of the Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 pursuant to changes in grid conditions after the DAM has run. In the case of Multi-Stage Generating Resources, the RTM procedures will optimize Transition Costs in addition to the Start-Up and Minimum Load Costs. If a Scheduling Coordinator submits a Self-Schedule or a Submission to Self-Provide Ancillary Services for a given MSG Configuration in a given Trading Hour, all of the RTM processes will consider the Start-Up Cost, Minimum Load Cost, and Transition Cost associated with any Economic Bids for other MSG Configurations as incremental costs between the other MSG Configurations and the self-scheduled MSG Configuration. In such cases, incremental costs are the additional costs incurred to transition or operate in an MSG Configuration in addition to the costs associated with the self-scheduled MSG Configuration.</p>		
34.1	CDWR	<p>Section 34.2 This section should be updated to reflect any changes made to section 34.</p>	Prior to final posting the ISO will endeavor to confirm internal consistency.	Revised Draft
34.1	WAPA	<p>34.1 Unless there is change from the DAM schedules through to the RTM, there should be no requirement to re-submit our schedules. The DAM schedules with the associated TOR and ETC information and designations should roll through to the RTM.</p>	This situation is covered in section 34.1.3	Initial Draft
34.1.2	Powerex	<p>Section 34.1.2. Submission of Bids For the RTM Similar to the comment above relating to Section 34, there is a statement in this subsection “provided that the Bid is otherwise submitted in a valid manner.” This too is a more appropriate type of insertion to a general provision as opposed to in a specific subsection. Importantly, its inclusion in one section and not</p>	The reference has been struck from the tariff.	Revised Draft

		another could imply unintentionally and inappropriately that other provisions' applicability are not similarly dependent on the validity of the underlying action.		
34.1.2	Powerex	<p>34.1.2 Submission Of Bids For The RTM</p> <p>Scheduling Coordinators may submit Bids, including Self-Schedules, for Supply that will be used for the RTM processes. Bids can be: (1) an Economic Bid for a Schedule in the FMM and RTM; (2) a Self-Schedule for acceptance to the FMM and RTM; (3) a Self-Schedule Hourly Block; (4) a Variable Energy Resource Self-Schedule; (5) an Economic Hourly Block Bid; or (6) an Economic Hourly Block Bid with Intra-Hour Option. Scheduling Coordinators may submit such Economic Bids and Self-Schedules starting from the time Day-Ahead Schedules are posted until seventy-five (75) minutes prior to each applicable Trading Hour in the Real-Time. This includes Self-Schedules by Participating Load that is modeled using the Pumped-Storage Hydro Unit. Scheduling Coordinators may not submit Bids, including Self-Schedules, for CAISO Demand in the HASP or any portion of the RTM. Scheduling Coordinators may submit Bids, including Self-Schedules, for exports at Scheduling Points in the RTM, provided that the Bid is otherwise submitted in a valid manner. The rules for submitted Bids specified in Section 30 apply to Bids submitted to the RTM.</p>	The reference has been struck from the tariff.	Revised Draft
34.1.3	Powerex	<p>Section 34.1.3 Real-Time Validation of Schedules and Bids</p> <p>There is no apparent change associated with the FMM that would precipitate the inclusion of a new validation rule for the RTM, making this change seemingly inappropriate to be made in a compliance filing context at the Federal Energy Regulatory Commission. Moreover, this provision is sufficiently vague that it is unclear when and how CAISO intends to proceed. In particular, the language that CAISO will generate a Self-Schedule to "fill in any gaps between any Self-Schedule Bid and any Economic Bid components" should be replaced with more descriptive text such as 'insert a Generated Bid in the event of a volumetric shortfall in an entity's bids relative to its obligations associated with a RUC</p>	The ISO intended to use the term "Generated Bid."	Revised Draft

		Award .”		
34.1.3	Powerex	<p>34.1.3 Real-Time Validation of Schedules and Bids</p> <p>After the Market Close of the HASP and the RTM the CAISO performs a validation process consistent with the provisions set forth in Section 30.7 and the following additional rules. The CAISO will generate a Self-Schedule <u>insert a Generated Bid in the event of a volumetric shortfall in an entity's bids relative to its obligations associated with a to cover any RUC Award or Day-Ahead-Schedule</u> in the absence of any Self-Schedule or Economic Bid components, or to fill in any gaps between any Self-Schedule Bid and any Economic Bid components to cover a RUC Award or Day-Ahead-Schedule for use in the RTM. Schedules and Bids submitted to HASP and the RTM to supply Energy and Ancillary Services will be considered in the various HASP and RTM processes, including the MPM process, the HASP optimization, the STUC, the FMM and the RTD.</p>	The ISO intended to use the term "Generated Bid."	Revised Draft
34.1.3	WAPA	Section 34.1.3 and 34.1.4 reference Section 30.7 although there is no 30.7 heading in the document. Is there a separate Section 30.7? Or was it not referenced due to no changes to that portion?	Prior to final posting the ISO will endeavor to confirm cross-references.	Revised Draft
34.1.4	Powerex	<p>Section 34.1.4. Mitigating the Bid Sets Used in the RTM Optimization Processes</p> <p>This provision concedes that certain types of bids are not subject to Bid mitigation in one location, but thereafter is written in a way that implies that all bids are subject to mitigation. This language should be tightened. For instance, the text that states “if a Bid is not mitigated in the first fifteen (15) minute interval, it is subject to mitigation in subsequent fifteen (15) minute intervals” is misleading and incorrect as written. It requires the addition of text such as “and is otherwise subject to Bid mitigation” immediately before the second clause in order to make the statement true.</p>	Changed the sentence in question to say "If a Bid is not mitigated in the first fifteen (15) minute interval, the CAISO will still mitigate that Bid in subsequent fifteen (15) minute intervals of the Trading Hour if the MPM runs for the subsequent intervals determine that mitigation is needed."	Revised Draft
34.1.4	Powerex	<p>34.1.4 Mitigating the Bid Sets Used in the RTM Optimization Processes</p> <p>After the Market Close of the RTM, after the CAISO has validated</p>	Changed the sentence in question to say "If a Bid is not mitigated in the first fifteen (15) minute interval, the CAISO will still mitigate that Bid in subsequent fifteen (15) minute intervals of the Trading Hour if the MPM runs for the subsequent intervals determine that mitigation	Revised Draft

	<p>the Bids pursuant to Section 30.7 and Section 34.1.2.2, and prior to conducting any other RTM processes, the CAISO conducts a MPM process. The results are used in the RTM optimization processes. Bids on behalf of Demand Response Resources, Participating Load, and Non-Generator Resources are considered in the MPM process but are not subject to Bid mitigation. The MPM process produces results for each fifteen (15) minute interval of the Trading Hour and thus may produce up to four mitigated Bids for any given resource for the Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Sections 31.2.2 and 31.2.3 above.</p> <p>If a Bid is mitigated in the MPM process for the first fifteen (15) minute interval for a Trading Hour, the mitigated Bid will be utilized for all market applications for that first fifteen (15) minute interval. If a Bid is not mitigated in the first fifteen (15) minute interval, it is subject to mitigation in subsequent fifteen (15) minute intervals of the Trading Hour as determined in the MPM runs for the subsequent intervals <u>and is otherwise subject to Bid mitigation</u>. For each Trading Hour, any Bid mitigated in a prior fifteen (15) minute interval of that Trading Hour will continue to be mitigated in subsequent intervals of that Trading Hour and may be further mitigated as determined in the MPM runs for any subsequent fifteen (15) minute interval. A single mitigated Bid for the entire Trading Hour is calculated using the minimum Bid price of the four mitigated Bid curves at each Bid quantity level.</p> <p>For RMR Units, RMR Proxy Bids resulting from the MPM process will be utilized in all RTM optimization processes for each Trading Hour. For a Condition 1 RMR Unit, the use of RMR Proxy Bids is determined based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.2 above. If a Condition 2 RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's</p>	<p>is needed."</p>	
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		<p>Maximum Net Dependable Capacity will be considered in the MPM process. For both Condition 1 and Condition 2 RMR Units, when mitigation is triggered, a single RMR Proxy Bid for the entire Trading Hour is calculated using the same methodology described above for non-RMR Units. For a Condition 1 RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero, and that MPM process dispatches a Condition 1 RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the RMR Unit's Location, the resource will be flagged as an RMR dispatch if it is dispatched at a level higher than the dispatch level determined by the Competitive LMP. Both Condition 1 and Condition 2 RMR Units may be issued manual RMR dispatches at any time to address local reliability needs or to resolve non-competitive constraints.</p>		
34.1.5	SCE	<p>34.1.5 Eligible Intermittent Resources Forecast</p> <p>For Elible<u>Eligible</u> Intermittent Resources that have elected to use the resource's own forecast as specified in Section 4, the responsible Scheduling Coordinator must submit to the CAISO their forecast the ISO for the binding interval at 37.5 minutes prior to flow (the start of the market optimization for the binding interval). If no forecast is provided, the CAISO will use the resource telemetry for dispatch. The ISO will use the forecast data received 37.5 minutes prior to start of the applicable FMM optimization run.</p> <p>For Participing<u>Participating</u> Intermittent Resources that have elected Protective Measures, ninety (90) minutes prior the applicable Trading Hour the responsible Scheduling Coordinator must submit to the Real-time Market an hourly Self-Schedule of MWhs that is equal to the MWhs specified in the independent forecast provided under the Participating Intermittent Resource Program.</p>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft
34.1.5	SDG&E	Section 34.1.5 includes language that states that if the VER has chosen to use the CAISO forecast for its forecasting	This is part of the Board-approved policy and the ISO will look to	Revised Draft

		requirements, then the CAISO will populate the VER forecast for the binding interval 37.5 minutes prior to flow (the start of the market optimization for the binding interval).	include it in the filed tariff language.	
34.11.2	Powerex	<p>34.11.2 Decreasing Supply</p> <p>The scheduling priorities as defined in the RTM optimization to meet the need for decreasing Supply as reflected from higher to lower priority are as follows:</p> <p>(a) Non-Participating Load increase;</p> <p>(b) Reliability Must Run (RMR) Schedule (Day-Ahead manual pre-dispatch or Manual RMR Dispatches or Dispatches that are flagged as RMR Dispatches following the MPM-RRD process);</p> <p>(c) Transmission Ownership Right (TOR) Self-Schedule;</p> <p>(d) Existing Rights (ETC) Self-Schedule;</p> <p>(ef) Regulatory Must-Run and Regulatory Must-Take (RMT) Self-Schedule;</p> <p>(fg) Participating Load increase;</p> <p>(gh) Day-Ahead Supply Schedule; and</p> <p>(hi) Self-Schedule Hourly Block.</p> <p>These dispatch priorities as defined in the RTM optimization may be superseded by operator actions and procedures as necessary to ensure reliable operations.</p>	The ISO acknowledges the drafting error and will correct it for the final posting.	Revised Draft
34.2.1	Powerex	<p>Section 34.2.1 The HASP Optimization</p> <p>This section adds a provision that “HASP optimization also factors in forecasted unscheduled flow at the Interties.” This discussion is insufficiently concrete as a Tariff provision as there is no understanding as to how such unscheduled flow will be factored in. CAISO should not factor anything subjective into the HASP optimization process without a detailed description in the Tariff of the conditions and methods in which such factoring will be employed. In order to provide the market transparency</p>	This provision reflects accepted tariff language and no changes are necessary.	Revised Draft

		necessary to permit market participants to make sound business decisions, market rules must put participants on notice of how the optimization process will work with specificity. Moreover, rather than being permitted to make opaque optimization decisions, CAISO should commit to post any proposed forecast of unscheduled flow at the Interties on OASIS prior to the HASP and before the timeline for bid submission, and then should be required to implement the forecast into the optimization process as posted. In addition, section 34.3 is inconsistent with the text in Section 34.2.1, in that it states that forecasted unscheduled flow “may” be factored into the optimization at the Interties for the FMM. If forecasted unscheduled flow at the Interties are factored in the HASP, it is inappropriate to state that such flows only may be factored in the FMM, both of which are part of the RTM.		
34.2.2	CDWR	<p>Section 34.2.2 – lines 1 – 2</p> <p>The HASP optimization does not adjust submitted Self-Schedules or Self-Provided Hourly Blocks, or Self-Scheduled Variable Energy Resources unless it is not possible to balance Supply and the</p> <p>HASP optimization does not adjust (a) self-schedules, (b) self-provided hourly blocks, or (c) self-scheduled VERs unless...</p> <p>Based on the first summary page of these tariff changes, there are six type of RTM bids.</p> <p><i>Bids to RTM can take the following form:</i></p> <ul style="list-style-type: none"> <i>(1) Economic Bids (for internal and Intertie transactions)</i> <i>(2) Self-Schedule (for internal and Intertie transactions)</i> <i>(3) Self-Schedule Hourly Block (for Intertie transactions only)</i> <i>(4) VER Self-Schedule (for VERs outside the ISO BAA)</i> <i>(5) Economic Hourly Block Bid (for Intertie transactions only)</i> <i>(6) Economic Hourly Block Bid with Intra-Hour Option (for Intertie transactions only)</i> 	Resources can self-schedule in FMM on a 15-minute basis such that different intervals have different quantities. This is part of the FMM.	Revised Draft

		<p>Is it correct to say that (2) = (a), (3) = (b), and (4) = (c)?</p> <p>Is yes, shouldn't the acceptance of self-schedules, (2), be listed as a process in HASP, in section 34 (this is part of the same list referenced in comment #2)?</p>		
34.2.5	WAPA	<p>In section 34.2.5, it stipulates the CAISO can abort the HASP and perform all remaining RTM processes. What happens to hourly block bids in this case? Do they revert back to the DAM? On one of the stakeholder calls, we received a verbal answer that the bids will revert back to the IFM and a BRQ was quoted. Can this be inserted into the tariff language?</p>	The ISO will insert this into the tariff.	Revised Draft
34.2.5	WAPA	<p>34.2.5 This section stipulates that the CAISO can abort the HASP and perform all remaining RTM processes. What happens to hourly block bids in this case? Do they revert back to the DAM?</p>	In this case, the ISO falls back to the RUC schedule. This is described in more detail in the BRS, BRQ0029.	Initial Draft
34.20.1	PG&E	<p>34.20.1 General Principles</p> <p>PG&E questions the usage of the term of "hourly pre-dispatch" and needs clarification on the correct tariff section. Section 11.5.2 has no relation to section 34.20.1, as identified in the section below.</p> <p>"Instructed and Uninstructed Imbalance Energy shall be paid or charged the applicable FMM or RTD LMP except for hourly pre-dispatched Instructed Imbalance Energy, which shall be settled as set forth in Section 11.5.2."</p>	The ISO will clarify the language for the final posting.	Revised Draft
34.3	Powerex	<p>Section 34.3 Fifteen Minute Market</p> <p>This section explains that the FMM uses SCUC to, among other things, "(2) determine <i>financially binding</i> FMM Schedules. . . " and (3) determine <i>financially and operationally binding</i> Ancillary Services Awards. . . " (emphasis added). CAISO needs to be clear and consistent as to whether interchange transactions are financial only or if they create any physical performance obligation. If there is a physical performance obligation it needs to be clearly explained. The implications of the exclusion of</p>	Unclear what additional clarity is needed.	Revised Draft

		<p>operationally binding as to the FMM appear to be that the FMM obligation can be bought back (through economic dispatch in the 5-minute optimization process, or perhaps through economic decision not to perform). However, the reason why the AS market would be operationally binding and the FMM would not similarly be is not made clear and should be better understood by stakeholders. Later in the text there is a reference to a “binding fifteen-minute interval” that does not specify how it is binding and would benefit from the inclusion of “financially” if that is what is intended. <i>See also</i> the comment regarding the inconsistency with Section 34.2.1 relayed above.</p> <p>In this section, there should be additional clarity on the relationship between the HASP and FMM and when FMM results are expected to be published.</p>		
34.3	Powerex	<p>34.3 Fifteen-Minute Market</p> <p>The FMM uses SCUC and is run every fifteen (15) minutes to: (1) make commitment decisions for Fast Start and Short Start Units having Start-Up Times within the applicable time periods described below in this section; (2) determine financially binding FMM Schedules and corresponding LMPs; (3) determine financially and operationally binding Ancillary Services Awards and corresponding ASMPs for the next fifteen-minute interval; (4) determine LAP LMPs that are the basis for settling Demand; and (5) receive and process all Variable Energy Resources forecasts (as selected by CAISO) and establish the Upper Economic Limit for the resource with an Economic Bid or Self-Schedule for the FMM. The FMM optimization may factor in forecasted unscheduled flow at the Interties.</p> <p>In any FMM interval (which consists of fifteen minutes) that falls within a time period in which a Multi-Stage Generating Resource is transitioning from one MSG Configuration to another MSG Configuration, the CAISO: (1) will not award any incremental Ancillary Services; (2) will disqualify any Day-Ahead Ancillary Services Awards; (3) will disqualify Day-Ahead qualified Submissions to Self-Provide Ancillary Services Award, and (4)</p>	Unclear what additional clarity is needed.	Revised Draft

		<p>will disqualify Submissions to Self-Provide Ancillary Services in RTM. For Multi-Stage Generating Resources the FMM will issue a binding Transition Instruction separately from the binding Start-Up or Shut Down instructions.</p> <p>The FMM will clear against the CAISO Forecast of CAISO Demand. The FMM issues Energy Schedules and Ancillary Services Awards by twenty-two and a half minutes prior to the binding Comment [A5]: See comments in overview</p> <p>Comment [A6]: See comment in overview under fifteen-minute interval.</p> <p>The FMM can also be run with the Contingency Flag activated, in which case the FMM can commit Contingency Only Operating Reserves. If FMM is run without the Contingency Flag activated, it cannot commit Contingency Only Operating Reserves. FMM is run at the following time intervals: (1) at approximately 67.5 minutes prior to the next Trading Hour, in conjunction with the HASP run, for T-30 minutes to T+60 minutes; (2) at approximately 7.5 minutes into the current hour for T-15 minutes to T+60 minutes; (3) at approximately 22.5 minutes into the current hour for T to T+60 minutes; and (4) at approximately 37.5 minutes into the current hour for T+15 to T+60 minutes where T is the beginning of the next Trade Hour. The HASP is a special FMM run that is performed at approximately 67.5 minutes prior to the next Trading Hour and has the additional responsibility of pre-dispatching Energy and awarding Ancillary Services for HASP Block Intertie Schedules. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the FMM process taking into consideration the impacts of the derate or outage on the available MSG Configurations. Each particular FMM market optimization produces binding settlement prices for Energy and AS for the first FMM interval approximately twenty-two and a half (22.5) minutes before the first FMM interval in the</p>		
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		FMM horizon but the optimization considers the advisory results from subsequent market intervals within the FMM horizon. Hourly Intertie Schedules and Hourly AS Awards are settled in accordance with Section 11.5.9 and 11.10.1.2, respectively. In the event that a RTM run fails, the CAISO reverts to the advisory results for the same interval from the previous RTM market run.		
34.3	Powerex	<p>34.3 Fifteen-Minute Market</p> <p>The FMM uses SCUC and is run every fifteen (15) minutes to: (1) make commitment decisions for Fast Start and Short Start Units having Start-Up Times within the applicable time periods described below in this section; (2) determine financially binding FMM Schedules and corresponding LMPs; (3) determine financially and operationally binding Ancillary Services Awards and corresponding ASMPs for the next fifteen-minute interval; (4) determine LAP LMPs that are the basis for settling Demand; and (5) receive and process all Variable Energy Resources forecasts (as selected by CAISO) and establish the Upper Economic Limit for the resource with an Economic Bid or Self-Schedule for the FMM. The FMM optimization may factor in forecasted unscheduled flow at the Interties.</p> <p>In any FMM interval (which consists of fifteen minutes) that falls within a time period in which a Multi-Stage Generating Resource is transitioning from one MSG Configuration to another MSG Configuration, the CAISO: (1) will not award any incremental Ancillary Services; (2) will disqualify any Day-Ahead Ancillary Services Awards; (3) will disqualify Day-Ahead qualified Submissions to Self-Provide Ancillary Services Award, and (4) will disqualify Submissions to Self-Provide Ancillary Services in RTM. For Multi-Stage Generating Resources the FMM will issue a binding Transition Instruction separately from the binding Start-Up or Shut Down instructions.</p> <p>The FMM will clear against the CAISO Forecast of CAISO Demand. The FMM issues Energy Schedules and Ancillary Services Awards by twenty-two and a half minutes prior to the</p>	The issue of conduct related to VER forecasting is addressed, in part, through section 4.8.2.1.1 which would permit the ISO to terminate a resource from providing its own forecast under certain circumstances.	Revised Draft

		<p>binding Comment [A5]: See comments in overview</p> <p>Comment [A6]: See comment in overview under fifteen-minute interval.</p> <p>The FMM can also be run with the Contingency Flag activated, in which case the FMM can commit Contingency Only Operating Reserves. If FMM is run without the Contingency Flag activated, it cannot commit Contingency Only Operating Reserves. FMM is run at the following time intervals: (1) at approximately 67.5 minutes prior to the next Trading Hour, in conjunction with the HASP run, for T-30 minutes to T+60 minutes; (2) at approximately 7.5 minutes into the current hour for T-15 minutes to T+60 minutes; (3) at approximately 22.5 minutes into the current hour for T to T+60 minutes; and (4) at approximately 37.5 minutes into the current hour for T+15 to T+60 minutes where T is the beginning of the next Trade Hour. The HASP is a special FMM run that is performed at approximately 67.5 minutes before each <u>prior to the next</u> Trading Hour and has the additional responsibility of pre-dispatching Energy and awarding Ancillary Services for HASP Block Intertie Schedules. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the FMM process taking into consideration the impacts of the derate or outage on the available MSG Configurations. Each particular FMM market optimization produces binding settlement prices for Energy and AS for the first FMM interval <u>approximately twenty-two and a half (22.5) minutes before the first FMM interval</u> in the FMM horizon but the optimization considers the advisory results from subsequent market intervals within the FMM horizon. Hourly Intertie Schedules and Hourly AS Awards are settled in accordance with Section 44.4 <u>11.5.9</u> and 11.10.1.2, respectively. In the event that a FMM-RTM run fails, the CAISO reverts to the advisory results for the same interval from the previous FMM-RTM market run.</p>		
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34.3	WAPA	34.3 If the FMM fails, for example at the top of the hour, will the market then revert to Advisory results? For example, if there is a fail at the top of Hour 13, will the market only look at the Advisory results for the top of HE 12, or will the market look at the entire block numbers for HE 12?	The market will revert to the advisory results.	Initial Draft
34.3.2	CDWR	<p>Section 34.3.2 – lines 1 – 2</p> <p>If the CAISO determines that additional Ancillary Services are required, other than those procured in the IFM, HASP, the FMM will procure Ancillary Services on a fifteen (15) minute basis as</p> <p>Recommend the following for clarity:</p> <p>If the CAISO determines that additional Ancillary Services are required, other than those procured in the IFM or HASP, the FMM will procure Ancillary Services on a fifteen (15) minute basis as</p>	The ISO intended to strike the term "HASP" from this section and refer generally to ancillary services procured in the RTM.	Revised Draft
34.3.2	Powerex	<p>34.3.2 Real-Time Ancillary Services Procurement</p> <p>If the CAISO determines that additional Ancillary Services are required, other than those procured in the IFM and HASP, the FMM will procure Ancillary Services on a fifteen (15) minute basis as necessary to meet reliability requirements and will determine Real-Time Ancillary Service interval ASMPs for such AS for the next Commitment Period. All Operating Reserves procured in the RTM are considered Contingency Only Operating Reserves. Any Ancillary Service awarded in FMM will be taken as fixed for the three (3) five (5) minute RTD intervals of its target fifteen (15) minute interval. In the FMM, all resources certified and capable of providing Operating Reserves that have submitted Real-Time Energy Bids shall also submit applicable Spinning or Non-Spinning Reserves Bids, respectively, depending on whether the resource is online or offline. The CAISO will utilize the FMM to procure Operating Reserves to restore its Operating Reserve requirements in cases when: (1) Operating Reserves awarded in IFM, HASP or FMM-RTM have been dispatched to provide Energy, (2) resource(s) awarded to provide Operating Reserves</p>	The ISO intended to strike the term "HASP" from this section and refer generally to ancillary services procured in the RTM.	Revised Draft

		<p>in the IFM, HASP or FMM-RTM are no longer capable of providing such awarded Operating Reserves, or (3) the Operator determines that additional Operating Reserves are necessary to maintain Operating Reserves within NERC and WECC reliability standards, and any requirements of the NRC. The CAISO will utilize the FMM to procure additional Regulation capacity in Real-Time in cases when: (1) resource(s) awarded to provide Regulation in the IFM, HASP or FMMRTM are no longer capable of providing such awarded Regulation, or (2) the Operator determines that additional Regulation is necessary to maintain sufficient control consistent with NERC and WECC reliability standards, and any requirements of the NRC and Good Utility Practice. The FMM will produce fifteen (15) minute ASMPs for the four (4) binding fifteen (15) minute intervals for the applicable Trading Hour. These fifteen (15) minute ASMPs are then used for the Settlement of the fifteen (15) minute AS Awards. The FMM run will also produce fifteen (15) minute Shadow Prices for each of the Interties for the four (4) fifteen (15) minute intervals for the applicable Trading Hour. These fifteen (15) minute Shadow Prices are then used to charge for Intertie Real-Time AS Award providers for Congestion on the Interties. FMM AS Awards are settled in accordance with 11.10.1.3.</p>		
39.7	CDWR	<p>Section 39.7 – lines 3 – 4</p> <p>power mitigation processes are described in Section 31.2 for the DAM and Sections 34.1.2.3 and 34.3.3 for the RTM.</p> <p>The two sections referenced above do not exist. Should 34.1.2.3 be 34.1.3?</p>	Prior to final posting the ISO will endeavor to confirm cross-references.	Revised Draft
4.8.1	PG&E	<p>4.8.1 Bidding and Settlement</p> <p>Section 4.8.1: “...Scheduling Coordinators shall not submit Economic Bids or Self-Schedules for Participating Intermittent Resources that are subject to PIRP Protective Measures.”</p> <p>In this section the tariff language states that resources receiving PIRP Protective Measures will not submit</p> <p>Economic Bids or Self-Schedules. PG&E believes that the CAISO intended to indicate that resources will not submit Economic Bids into the market. PG&E</p>	Clarification made.	PIRP Language

		<p>proposes the following edit:</p> <p>Section 4.8.1: “...Scheduling Coordinators shall not submit Economic Bids or Self-Schedules for Participating Intermittent Resources that are subject to PIRP Protective Measures.”</p> <p>After this correction is made the CAISO needs to address the disconnect between the last sentence of each Section 4.8.1 and Section 11.12.1.1. Section 11.12.1.1 states that Scheduling Coordinators that submit economic bids for resources receiving PIRP Protective Measures will make those resources ineligible for PIRP Protective Measures and other benefits for the intervals in which the Scheduling Coordinator submitted economic bids.</p>		
4.8.2	PG&E	<p>4.8.2 Forecast Requirements</p> <p>Although section 4.8.2 was removed from this version of the draft tariff, PG&E requests clarification in the next version of tariff as to whether or not LSEs using CAISO’s eligible intermittent resource (EIR) forecast are allowed to switch from the CAISO’s forecast to their own. Further discussion of what the limitations or requirements associated with changing used forecasts will be of value.</p>	Yes they can if the resource is certified to provide own forecast.	Revised Draft
4.8.2.1.1	CalWEA/CaIRENEW	<p>1. Intermittent resources should not be prevented from implementing reasonable risk-mitigation strategies in connection with scheduling in CAISO’s markets.</p> <p>Section 4.8.2.1.1 allows an Eligible Intermittent Resource (“EIR”) to submit generation forecasts to CAISO based upon the resource’s own forecast, as opposed to the forecast developed by CAISO’s forecasting contractor, after the resource completes a CAISO certification process. It goes on to provide that this permission may be revoked if CAISO determines that the forecast is either (i) “materially less accurate than the forecast provided by the CAISO on a regular basis” or (ii) “if CAISO has a reasonable basis to believe that the resource is engaged in strategic forecasting for purposes other than accuracy.” If a resource is decertified, it must employ the forecasts developed by CAISO’s forecasting contractor.</p> <p>CalWEA and CaIRENEW agree that forecasts submitted to CAISO by EIRs should be as accurate as possible and that, if an EIR’s forecast is routinely less accurate than CAISO’s or if the resource is engaging in improper forecasting, CAISO should revoke the EIR’s ability to use its own forecast. Although it is not entirely clear from the draft tariff language, however, CalWEA and CaIRENEW understand that CAISO expects EIRs to submit schedules in the CAISO markets in accordance with either the CAISO’s forecast or the EIRs’ own CAISO-certified forecast and that if an EIR’s generation routinely deviates from the applicable forecast, CAISO may take remedial measures, including possibly scheduling the resource using CAISO’s own forecast. CalWEA and CaIRENEW understand that</p>	This request undermines the policy as developed through the stakeholder process and as approved by the board. The ISO included these requirements to ensure that parties could not manipulate the ISO markets through the submission of schedules that were less than their forecast. CalWEA is now asking to eliminate the single most important safeguard to protect the ISO market against such behavior. We do not agree to this change.	PIRP Language

		<p>CAISO's concern is that EIRs not be permitted to take advantage of the modified scheduling windows allowed in the Order 764 market to arbitrage or "game" market prices in an unfair manner.</p> <p>CalWEA and CalRENEW agree that EIRs should not be able to engage in unfair gaming or arbitrage using the new scheduling opportunities. However, EIRs should not be prevented from scheduling in such a way so as to mitigate their exposure to deviation charges, so long as they do so in a reasonable manner, one that neither unduly benefits the EIR nor harms any other market participants. This kind of scheduling may be considered "strategic," and may not follow a practice of scheduling precisely in accordance with their forecast, but it is not improper and should not be prevented.</p> <p>For example, recognizing that even the best forecast is going to be inaccurate, an EIR may desire to schedule somewhat less generation in the CAISO market than its generation forecast may predict in order to minimize the chance that the EIR will generate less than its schedule and be subject to imbalance payment obligations. So long as the EIR consistently follows such a strategy, irrespective of prevailing market prices, CAISO should not be concerned that the EIR is pursuing any gaming or unfair arbitrage strategy. No other resource would be prevented from pursuing such a "strategic" scheduling strategy and there is no valid reason to prevent EIRs from doing so as well.</p> <p>CalWEA and CalRENEW acknowledge that it may not always be easy to tell a legitimate scheduling strategy from one that should be impermissible. However, this does not mean that CAISO should simply prevent all types of strategic scheduling by EIRs, which CAISO will do if it requires all EIRs to schedule precisely in accordance with their, or CAISO's, forecasted generation. CAISO's Division of Market Monitoring ("DMM") should be empowered to determine if an EIR is engaged in strategic scheduling and, if so, whether such scheduling should be impermissible. The key, however, is to ensure that the tariff confers this discretion to the DMM and does not simply prevent all "strategic" scheduling.</p> <p>Thus, to the extent that Section 4.8.2.1.1 is, in fact, designed to control EIRs' scheduling practices and not just their forecasting, the criteria under which CAISO may take remedial measures should permit legitimate scheduling strategies, such as a strategy designed to mitigate imbalance risk, so long as the employment of the strategy does not confer illegitimate benefits to the EIR or harm to other market participants. Alternatively, recognizing that all forecasts are imperfect, CAISO should clarify Section 4.8.2.1.1 to allow forecasts from EIRs that cover a reasonable range of potential generation (say 10% higher or lower than the mean) and permit EIRs to schedule within this range without fear of remedial action.</p>		
4.8.2.1.1	CalWEA/C alRENEW	3. The tariff should state clearly that certified Participating Intermittent Resources may choose, after notifying CAISO, to utilize their own forecasts for scheduling purposes for any period of time, and that at all times such resources are scheduling their generation as Participating Intermittent Resources.	The ISO has provided proposed language to address this issue. Further stating that the resource would be scheduling their generation as PIRs conflates the tariff terms as they apply to each party in such a manner that it would be difficult discern exactly what scheduling	PIRP Language

		<p>As mentioned above, Section 4.8.2.1.1 of the draft tariff establishes that EIRs may submit schedules based upon either the forecast produced by CAISO's independent forecasting expert or the generator's own forecast. By referring to EIRs, however, the tariff language creates a potential ambiguity as to whether a generator using its own forecast remains a Participating Intermittent Resource and is scheduling as such. Because most, if not all, existing contracts require intermittent resources to be Participating Intermittent Resources and to submit schedules as Participating Intermittent Resources, the tariff should be clarified to specify that an EIR that goes through the required certification process to become a Participating Intermittent Resource does not lose its Participating Intermittent Resource status because it uses its own CAISO-certified forecast for scheduling purposes. This is entirely consistent with how the market works today and there is no reason not to be explicit about this in the future.</p> <p>Similarly, Participating Intermittent Resources that use a CAISO-certified forecast of its own should also be considered to be scheduling as a Participating Intermittent Resource. Because the PIR's forecast methodology will be certified by CAISO, and the forecast will be at least as accurate as the forecast created by CAISO's expert, such a resource should be considered to be scheduling as a Participating Intermittent Resource. Given the contractual requirements discussed above, this too should be clarified. Failure to make these clarifications could result in the preclusion of Eligible Intermittent Resources from using their own forecasts, as they could be accused of violating contract requirements to remain and schedule as Participating Intermittent Resources.</p>	practices the party must comply with. Furthermore, it is not evident how a contract would require the resource to use its own forecast when today all PIRPs must use the ISO forecast.	
4.8.3.1.1	MidAmerican	<p>MidAmerican's first comment is related to section 4.8.3.1.1. This section calls for the Scheduling Coordinator to complete the election for PIRP Protective Measures. Read literally, this section conditions a Participating Generator's ability to request PIRP Protective Measures on the willingness of the Scheduling Coordinator to submit a request. It does not appear that CAISO intended to so condition such a request, given that tariff language elsewhere in this draft outlines procedures for addressing disputes between the Participating Generator and Scheduling Coordinator related to the eligibility of a resource for such measures. MidAmerican suggests that this language be modified to allow the Participating Generator to submit the election, with notice to the Scheduling Coordinator. Language elsewhere in section 4.8.3.1 would also need to be revised for consistency.</p>	The ISO will clarify that the Participating Intermittent Resource or Participating Generator must submit the affidavit. It is not the ISO's intent to prevent the resource owner from making such a request subject to the scheduling coordinator's willingness to do so.	PIRP Language
4.8.3.1.1	PG&E	<p>4.8.3.1.1 Timing</p> <p>Scheduling Coordinators should not be responsible for submitting requests for PIRP Protective Measures on behalf of their resources. PG&E is currently the SC</p>	Clarifications made.	PIRP Language

		<p>for many of the renewable resources with which it has a bilateral agreement. As we have stated throughout the stakeholder process, PG&E's renewable contracts are structured so they can continue to function, and none of its counterparties should be eligible for PIRP Protective Measures. Therefore, it does not make sense that based on the current language PG&E would be responsible for the submission of a request for PIRP Protective Measures for a resource that believes it is eligible for PIRP Protective Measures. PG&E requests the language for this section be modified as follows:</p> <p><i><u>"Scheduling Coordinators for resources- Participating Intermittent Resources or Qualifying Facilities that wish to qualify for PIRP Protective Measures pursuant to Section 4.8.3.2 within the three-year transition period must complete their election or PIRP Protective Measures no later than thirty (30) days after the effective date of this Section 4.8.3."</u></i></p>		
4.8.3.1.2.1	PG&E	<p>While PG&E remains opposed to the idea of PIRP Protective Measures, PG&E comments below on the proposed tariff language addressing PIRP Protective Measures. PG&E believes that the CAISO must: 1) play a bigger role in verifying resources' requests for Protective Measures, 2) require resources to apply for PIRP Protective Measures and not Scheduling Coordinators and 3) clarify ambiguous settlement language.</p>	The ISO cannot conduct testing of facilities to ensure compliance with the requirements. However, we have included language that provides the ISO audit rights to verify the statements.	PIRP Language
4.8.3.1.2.1	PG&E	<p>4.8.3.1.2.1 Physical Limitations</p> <p>PG&E appreciates the CAISO's requirement that market participants who are seeking PIRP Protective Measures must submit a sworn affidavit stating that the resource meets the criteria specified in Section 4.8.3.2.1 (facility is exposed to real-time imbalance energy) and 4.8.3.2.2.1 (facility is unable to curtail) to be eligible for PIRP Protective Measures. However, in addition to this requirement, PG&E requests that the CAISO include language in the tariff that requires the CAISO to verify the content of the affidavit. Specifically, the CAISO should test the resource's operating characteristics to verify the affidavit by requiring the resource to demonstrate its inflexibility. Resources should not automatically be eligible to receive PIRP Protective Measures simply by submitting an affidavit.</p>	The ISO cannot conduct testing of facilities to ensure compliance with the requirements. However, we have included language that provides the ISO audit rights to verify the statements.	PIRP Language
4.8.3.1.2.2	CalWEA/C alRENEW	<p>4. The proposed tariff language should be clarified in two simple, but important, respects.</p> <p>The fifth sentence of proposed section 4.8.3.1.2.2, beginning with "In the event that the counterparty submits no additional affidavits within the thirty days," should be modified because the reference to "additional affidavits" does not follow from the process outlined in this section. The language should read as follows: "In the event that the counterparty submits no affidavit within the thirty days,"</p>	We accept the first of these two requests. The second request is confusing. The fee applies if they export. If they do not export it does not apply. It does not apply to any other PIRPs because they do not have protective measures.	PIRP Language
4.8.3.1.2.2	MidAmeric an	<p>MidAmerican is also commenting on the requirement (in section 4.8.3.1.2.2) that parties agree to seek modifications to their</p>	Agree to remove the reference as the ISO does not wish to limit solutions to either the modification of an existing contract or the need	PIRP Language

		<p>power purchase agreements. MidAmerican agrees that it is reasonable to require parties seeking protective measures to pursue good faith efforts to address the contractual issues that prompted their request. It is quite possible that, upon continuing to make good faith efforts, the parties could identify a solution to their contractual issues that requires neither a modification to their current agreement nor a new power purchase agreement. The related tariff language should be limited to prescribing this outcome (addressing the contractual limitation).</p> <p>This language has a significant practical impact. Requiring the parties to submit affidavits in which they agree to modify their existing agreements could create a presumption that any outcome of their efforts is necessarily a modification to the original agreement or a new power purchase agreement. Modifications to power purchase agreements can be extremely difficult for the parties to achieve given the related approvals that will likely be required by regulators and financing arrangements. It follows that language which appears to require the parties to modify their agreements could have the perverse effect of actually making it more difficult for the parties to address contractual limitations.</p> <p>MidAmerican suggests that the CAISO respond to this comment by simply removing references to the means by which resolution might be reached, while continuing to require that the parties negotiate in good faith to achieve the desired outcome. This would accomplish the goal of binding the parties to pursue negotiations without unnecessarily limiting the means by which they might address the underlying issues.</p>	<p>to sign a new contract. It is fair to say that the parties may find a solution without having to do either.</p>	
4.8.3.1.2.2	PG&E	<p>4.8.3.1.2.2 Contractual Limitations</p> <p>PG&E has three comments on Section 4.8.3.1.2.2.</p> <p>1. Do not require affidavits from counterparties to a bilateral agreement with a participating resource</p> <p>All of PG&E's executed renewable contracts continue to function post FERC Order 764 market changes, though we may need to address certain provisions of the scheduling and settlement terms. PG&E should not have to execute an</p>	<p>The parties should be preparing now to determine whether or not they will be requesting protective measures. Therefore, 30 days should suffice.</p> <p>The party needs to attest that they will not impose economic consequences under the contract.</p> <p>The language has been modified to address these issues in part.</p>	PIRP Language

		<p>affidavit to protect the generators from market changes which, in most cases, were addressed in the PPA.</p> <p>If the CAISO requires such an affidavit, 30 days is not sufficient time to prepare such a legal document. PG&E requests 60 days be allowed for a counterparty to submit a sworn affidavit confirming or denying a resource’s request for special protections.</p> <p>2. If the affidavit system remains, remove the requirement that counterparties to a bilateral agreement with a participating resource must attest to the elimination of all contract risk for the resource</p> <p>PG&E does not support the statements required of a counterparty to a bilateral agreement to oppose a resource’s application for PIRP Protective Measures. More specifically, PG&E opposes the tariff language indicating that the counterparty’s affidavit must state:</p> <p><i>“...the Participating Intermittent Resource shall not suffer any economic or other repercussions under the contract were the resource to participate fully in the CAISO Market, including through the submission of Economic bid for economic curtailment.”</i></p> <p>This is an unreasonable standard. PG&E cannot unequivocally state that the resource will not be harmed by participation in the real-time market. Such a statement cannot be guaranteed. Such a guarantee is difficult for PG&E given that even the CAISO, when advertising the benefits of participation in the realtime market for intermittent resource, could only say that resources “generally will be paid more in the real-time market under FERC Order No. 764 market design than under the current market design and PIRP Settlement”¹. The CAISO’s own statement about market participation is not as strong as what it would require from counterparties to bilateral agreements. PG&E cannot in good faith guarantee that counterparties shall not suffer any economic or other repercussions.</p> <p>3. The CAISO needs to verify contract language and claw back payments from resources determined to be ineligible If the CAISO continues to require affidavits from a counterparty to a bilateral agreement with a participating resource, the CAISO must institute a verification system before any PIRP Protective Measures are awarded to the resource. It is unreasonable to provide a benefit to a resource that submits an affidavit without any kind of confirmation that the attestation is accurate. While PG&E remains opposed to the CAISO’s interference in our contracts, the CAISO through this provision has decided to do just that. As such the CAISO should take it upon itself to verify any such affidavit by a resource in effort to minimize PIRP Protection Measures that might be awarded to ineligible resources.</p> <p>In addition, PG&E requests that the CAISO institute a claw back provision for PIRP Protective Measures that were awarded to ineligible resources. If the affidavit process remains in effect and the CAISO adjusts its requirements so that affidavits by counterparties to a bilateral agreement with a participating resource</p>		
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		are reasonably able to submitted, parties to a contract will be able to resolve the contractual issue either through the agreement’s provisions or through Section 13 of the CAISO Tariff. If through this dispute process the resource is ultimately found to have been able to contractually curtail, it must return to the CAISO PIRP Protective Measures that it should not have received.		
4.8.3.1.2.2	SCE	What happens if they do not? Since the counterparty must take actions to confirm or deny the affidavit, what happens if the counterparty never gets the affidavit to be able to confirm or deny? Do they get a do-over and the clock starts again?	The proposed language addresses this concern. If the other party does not confirm or deny the request, they are acquiescing.	PIRP Language
4.8.3.1.2.2	SCE	Why both affidavits? The counterparty needs to state in an affidavit that the PIR or QF will engage in good faith negotiations or seek a new PPA? What authority would such a statement have?	The responsible parties should be able to assert that each will engage good faith negotiations.	PIRP Language
4.8.3.1.2.2	SCE	Again, does this apply if the counterparty never received the affidavit from the PIR/QF?	Propose to add language that states that if they fail to serve the counterparty and the counterparty succeeds on such a claim at the Federal Energy Regulatory Commission, the ISO will deny the PIRP Protective Measures.	PIRP Language
4.8.3.1.2.2	SCE	the criteria in Sections 4.8.3.2.1 and 4.8.3.2.2, the affidavit must also state that the Participating Intermittent Resource is not directly or indirectly subject to Real-Time Imbalance Energy Settlement shall not suffer any economic or other repercussions under the contract were the resource to participate fully in the CAISO Market, including through the submission of Economic bid for economic curtailment. The	The ISO accepted the prior language because it is more consistent with the intent of the measures. It is not clear that harm is limited to exposure to imbalance energy. The party may need protection in the event they are not exposed imbalance energy directly but can be indirectly.	PIRP Language
4.8.3.1.2.2	SCE	The term “any” is far too broad. If the contract has curtailment provisions that then does not pay for energy, and if 764 makes it more likely that they will be curtailed, then there will be economic repercussions. The intent was with regard to imbalance costs. The CAISO should stick to a limited scope here.	Please see the note above.	PIRP Language
4.8.3.1.2.2	SCE	Use of the word “term” could be interpreted to be the length of the contract. SCE suggests just deleting the word “terms” as the concern is what to do while the contract is in dispute.	Accepted change.	PIRP Language
4.8.3.1.2.2	SCE	Is this then subject to any form of refund if it is found to not be eligible? The cost is being paid by entities that are not party to the contract so it may not be in the best interest of parties to resolve the dispute timely.	There is no refund contemplated as among the load serving entities subject to the cost of the PIRP Protective Measures.	PIRP Language

4.8.3.1.2.2	SCE	Does the CAISO intend favoring one party, in a dispute, over another, without any recourse even if both parties in the end agree that the PIR does not qualify for Protective Measures?	No. Proposing language that if parties both ultimately agree that the contract does require PIRP Protective Measures the ISO will undo the prior application of such measures.	PIRP Language
4.8.3.1.2.2	SCE	What if the parties disagree? The language implies that if there is a disagreement, then the PIR's interpretation wins. If that is the case, then why bother with the whole dispute and resolution process in the first place?	Proposing to modify the language to indicate that if the dispute resolution process yields the conclusion that the contract is not eligible.	PIRP Language
4.8.3.2.2.1	PG&E	4.8.3.2.2.1 Physical Limitation PG&E supports the CAISO's continued stance that Participating Intermittent Resources that only lack dispatch, control, and telemetry or metering are not eligible for PIRP Protective Measures.	Noted.	PIRP Language
6.5.4.1	Powerex	Section 6.5.4.1 Communications with Scheduling Coordinators Subsection 6.5.4.1.5 (and elsewhere in the Tariff) – various provisions include a time-frame of 40 minutes before the Trading Hour for the publication of schedules and other materials. Section 34.2.4, on the other hand, states that CAISO will publish HASP results no later than 45 minutes before the Trading Hour. Powerex believes the time- frames should be conformed such that 45 minutes is used consistently. These proposed changes are shown in the attached redline.	The ISO will conform the information release timeline for HASP.	Revised Draft
6.5.4.1.5	CDWR	Section 6.5.4.1.5 – 1st line No later than forty (40) minutes before the Trading Hour, on an hourly basis, the CAISO Time conflicts with time noted in section 34.2.4, which says 45 minutes. Time should be confirmed and should be the same in both sections.	The ISO will conform the information release timeline for HASP.	Revised Draft
6.5.4.1.5	Powerex	6.5.4.1.5 No later than forty-five (45) forty (40) minutes before the Trading Hour, on an hourly basis, the CAISO will publish via the secure communication system the following: (a) HASP Block Intertie Schedules; (b) HASP Advisory Schedules that involve an Intertie transaction;	The ISO will conform the information release timeline for HASP.	Revised Draft

		and (cb) HASP Block AS Awards		
6.5.4.1.5	WAPA	6.5.4.1.5 (b) HASP AS Awards and ASMPs. It is not clear when hourly AS Awards will be published and whether an hourly block AS Award will be published as an hourly quantity or in four 15-minute quantities. In other sections in the Tariff, it is mentioned only that ASMPs will be published after the FMM.	The ISO has clarified this language for the second draft tariff posting.	Initial Draft
6.5.4.1.6	Powerex	6.5.4.1.6 No later than forty-five (45) thirty (30) minutes before the Trading Hour, on an hourly basis, the CAISO will publish via the secure communication system the following: (a) HASP Advisory Schedules; (b) Final resource Bid mitigation results conducted pursuant to Section 34.1.4.	The ISO will conform the information release timeline for HASP.	Revised Draft
6.5.4.2.2	Powerex	6.5.4.2.2 No later than forty-five (45) forty (40) minutes before the Trading Hour, on an hourly basis, the CAISO will publish on OASIS the following: (a) Total HASP Schedules involving Interties (HASP Block Intertie Schedules, <u>HASP Block AS Awards</u> , and HASP Advisory Schedules that involve an Intertie transaction) for imports and exports by TAC Area and for the entire CAISO Balancing Authority Area; (c) HASP advisory LMPs by PNode and APNode;	This section deals with OASIS rather than the secure communication system so the timeline does not necessarily need to conform to the T-45 minutes deadline.	Revised Draft
7.6.1	Powerex	7.6.1 Actions For Maintaining Reliability Of CAISO Controlled Grid The CAISO shall obtain the control over Generating Units that it needs to control the CAISO Controlled Grid and maintain reliability by ensuring that sufficient Energy and Ancillary Services are procured through the CAISO Markets. When the CAISO responds to events or circumstances, it shall first use the generation control it is able to obtain from the Energy and Ancillary Services Bids it has received to respond to the	By definition, HASP Intertie Block Schedules become FMM Schedules, subject to any needed operational/reliability adjustments to the quantity of the schedule. It is thus not necessary to add a specific reference to the HASP Intertie Block Schedules.	Revised Draft

		<p>operating event and maintain reliability. Only when the CAISO has used the Energy and Ancillary Services that are available to it under such Energy and Ancillary Services Bids which prove to be effective in responding to the problem and the CAISO is still in need of additional control over Generating Units, shall the CAISO assume supervisory control over other Generating Units. It is expected that at this point, the operational circumstances will be so severe that a Real-Time system problem or emergency condition could be in existence or imminent.</p> <p>Each Participating Generator shall take, at the direction of the CAISO, such actions affecting such Generator as the CAISO determines to be necessary to maintain the reliability of the CAISO Controlled Grid. Such actions shall include (but are not limited to):</p> <p>(a) compliance with Dispatch Instructions including instructions to deliver Energy and Ancillary Services in Real-Time pursuant to the AS Awards, Day-Ahead Schedules and HASP Block Intertie Schedules, HASP Block AS Awards, FMM Schedules, and FMM AS Awards;</p> <p>(b) compliance with the system operation requirements set out in this Section 7;</p>		
7.7.14.2.2	Powerex	<p>7.7.14.2.2 Communications during Unavailability of CAISO’s Secure Communication System</p> <p>During any period of CAISO’s secure communication system unavailability, the CAISO shall:</p> <p>(a) make all reasonable efforts to keep Market Participants aware of current CAISO Controlled Grid status using voice communications;</p> <p>(b) use the most recent set of Day-Ahead Schedules, RUC Schedules, AS Awards, HASP Block Intertie Schedules, HASP Block AS Awards, FMM Schedules, and Dispatch Instructions for each Scheduling Coordinator for the current and all future</p>	By definition, HASP Intertie Block Schedules become FMM Schedules, subject to any needed operational/reliability adjustments to the quantity of the schedule. It is thus not necessary to add a specific reference to the HASP Intertie Block Schedules.	Revised Draft

		Settlement Periods and/or Trading Days until the CAISO's secure communication system is restored; and (c) attempt to take critical Bids, including ETC and TOR Self-Schedules changes, from Scheduling Coordinators via voice communications as time and personnel availability allows.		
7.7.15.2.2	Powerex	<p>7.7.15.2.2 Consequences of Removal of a Bid</p> <p>The CAISO may remove part of a Bid, but retain other parts of the Bid for the applicable CAISO Market run and interval for the same or different product, and may retain parts of the Bid for subsequent CAISO Market runs or intervals. If a particular Energy or Ancillary Service Bid must be removed pursuant to Section 7.7.15.2.1, the CAISO will remove the entire Bid for that particular service and market. The Scheduling Coordinator may resubmit removed Bids in subsequent CAISO Markets, provided the Scheduling Coordinator complies with any operator instructions regarding the subject Bids. In the event a Bid is removed from an IFM run, the RUC Availability Bid associated with the removed IFM Bid may still be accepted for the corresponding RUC run, unless the RUC Availability Bid is determined to be the cause of the disruption. A problematic Bid as described in Section 7.7.15.2.1 will typically be identified as infeasible prior to publication of the CAISO Market interval in which it is causing a problem, in which case to the extent practicable the CAISO may remove the Bid, execute the CAISO Market without the removed Bid, and publish a CAISO Market result for that interval. In some instances, a Bid may be able to clear through the IFM without causing an infeasibility issue, but then it may be necessary to remove the RUC Availability Bid associated with the IFM Bid for the corresponding RUC run due to infeasibility issues raised for the RUC run. If an Ancillary Service Bid or Submission to Self-Provide Ancillary Services is removed from the IFM, the Scheduling Coordinator may resubmit these components in the RTM provided the issues identified in the IFM have been resolved and the Bid or submission is otherwise consistent with the Ancillary Service bidding rules in</p>	The ISO will clarify the language for the final posting.	Revised Draft

		<p>the CAISO Tariff.</p> <p>If, for the reasons discussed above, the CAISO is required to remove a Bid in the <u>HASP or</u> FMM or RTD runs conducted for future intervals during the Real-Time Market, the removed Bid may still be used in the binding runs of the Real-Time Market for the same interval if the problems previously experienced with the Bid do not arise. If the CAISO is required to remove an Ancillary Services Bid submitted in the Real-Time Market for consideration in the <u>HASP or</u> FMM, the CAISO may retain the Energy Bid submitted in association with the Ancillary Services Bid for that CAISO Market run.</p>		
8.3.1	Powerex	<p>8.3.1 Procurement Of Ancillary Services</p> <p>The CAISO shall operate a competitive Day-Ahead Market and Real-Time Market to procure Ancillary Services. The Security Constrained Unit Commitment (SCUC) and Security Constrained Economic Dispatch (SCED) applications used in the Integrated Forward Market (IFM) and the Real-Time Market (RTM) shall calculate optimal resource commitment, Energy, and Ancillary Services Awards and Schedules at least cost to End-Use Customers consistent with maintaining System Reliability. Any Scheduling Coordinator representing resources, System Units, Participating Loads, Proxy Demand Resources or imports of System Resources may submit Bids into the CAISO's Ancillary Services markets provided that it is in possession of a current certificate for the resources concerned. Regulation Up, Regulation Down, and Operating Reserves necessary to meet CAISO requirements not met by self-provision will be procured by the CAISO as described in this CAISO Tariff. The amount of Ancillary Services procured in the IFM is based on the CAISO Forecast of CAISO Demand and the forecasted intertie schedules in RTM for the Operating Hour net of (i) Self-Provided Ancillary Services from resources internal to the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) and Dynamic System Resources certified to provide Ancillary</p>	<p>By definition, HASP Intertie Block Schedules become FMM Schedules, subject to any needed operational/reliability adjustments to the quantity of the schedule. It is thus not necessary to add a specific reference to the HASP Intertie Block Schedules.</p>	Revised Draft

		<p>Services and (ii) Ancillary Services self-provided pursuant to an ETC, TOR or Converted Right.</p> <p>The amount of additional Ancillary Services procured in the RTM is based on the CAISO Forecast of CAISO Demand, the Day-Ahead Schedules established net interchange, and the forecast of the Intertie Schedules for the Operating Hour in the RTM net of (i) available awarded Day-Ahead Ancillary Services, (ii) Self-Provided Ancillary Services from resources internal to the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) and Dynamic System Resources certified to provide Ancillary Services, and (iii) Ancillary Services self-provided pursuant to an ETC, TOR or Converted Right. The amount of Ancillary Services procured in the Real-Time Market is based upon the CAISO Forecast of CAISO Demand, HASP Block Intertie Schedules, and the FMM Intertie Schedule established net interchange for the Operating Hour net of (i) available awarded Day-Ahead Ancillary Services, (ii) Self-Provided Ancillary Services from resources internal to the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) and Dynamic System Resources certified to provide Ancillary Services, (iii) additional Operating Reserves procured in the HASP and FMM, and (iv) Ancillary Services self-provided pursuant to an ETC, TOR or Converted Right. The CAISO may procure incremental Ancillary Services in the Real-Time Market based in part on a determination during the Hour-Ahead Scheduling Process or FMM that any Ancillary Services capacity awarded or self-provided in the Day-Ahead Market is not available as a result of a resource constraint or Transmission Constraints. Resource constraints may include but are not limited to an Outage of a resource or Ramp Rate constraints. Incremental procurement in the Real-Time Market will exclude Ancillary Services Capacity the CAISO has determined is not available.</p> <p>The CAISO will manage the Energy from both CAISO procured and Self-Provided Ancillary Services as part of the Real-Time</p>		
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		<p>Dispatch. In the Day-Ahead Market, the CAISO procures one-hundred (100) percent of its Ancillary Service requirements based on the Day-Ahead Demand Forecast net of Self-Provided Ancillary Services. After the Day-Ahead Market, the CAISO procures additional Ancillary Services needed to meet system requirements from all resources in the Real-Time Market. The amount of Ancillary Services procured in the Real-Time Market is based on the CAISO Forecast of CAISO Demand <u>plus submitted Export Bids, to the extent Export Bids are selected in the MPM process</u> for the Operating Hour net of Self-Provided Ancillary Services.</p> <p>The CAISO procurement of Ancillary Services from Non-Dynamic System Resources in the HASP is for the entire next Operating Hour. The CAISO procurement of Ancillary Services from all other resources in the Real-Time Market is for a fifteen (15) minute FMM interval. The CAISO's procurement of Ancillary Services from Non-Dynamic System Resources, Dynamic System Resources and internal Generation (which includes Generation from Generating Units that are Pseudo-Ties to the CAISO Balancing Authority Area) in the Real-Time Market is based on the Ancillary Service Bids submitted or generated in the RTM consistent with the requirements in Section 30. The CAISO may also procure Ancillary Services pursuant to the requirements in Section 42.1 and as permitted under the terms and conditions of a Reliability Must-Run Contract.</p> <p>The CAISO will contract for long-term Voltage Support service with owners of Reliability Must-Run Units under Reliability Must-Run Contracts. The CAISO will procure Black Start capability through individual contracts with Scheduling Coordinators for Reliability Must-Run Units and other Generating Units which have Black Start capability. These requirements and standards apply to all Ancillary Services whether self-provided or procured by the CAISO.</p>		
8.7	Powerex	<p>8.7 Ancillary Services Awards</p> <p>The CAISO shall provide Scheduling Coordinators with Ancillary</p>	The ISO will conform the information release timeline for HASP.	Revised Draft

		<p>Services Awards for the Day-Ahead and Real-Time Markets consistent with the provisions of the CAISO Tariff. The CAISO shall post the Ancillary Service Awards and Ancillary Service Schedules for the applicable Day-Ahead Market no later than the publication of the Day-Ahead Schedule for the applicable Day-Ahead Market; no later than approximately forty (40) <u>forty-five (45)</u> minutes prior to the Operating Hour of their advisory HASP Ancillary Services schedules; and no later than approximately fifteen (15) <u>twenty-two and a half (22.5)</u> minutes prior to the next FMM Interval. Where long-term contracts are involved, the information may be treated as standing information for the duration of the contract.</p> <p>Once the CAISO has given Scheduling Coordinators notice of the Day-Ahead and Real-Time Market Ancillary Service Awards and Ancillary Service Schedules, these awards and Schedules represent binding commitments made in the markets between the CAISO and the Scheduling Coordinators concerned, subject to any amendments issued as described above.</p>		
Appendix A -Hourly Block Intertie Schedule	PG&E	<p>Appendix definition of Hourly Block Intertie Schedule</p> <p>All capitalized terms in need to be defined. If not, please remove capitalization.</p> <p>HASP Block Intertie Schedule:</p> <p>The output of the HASP resulting from accepted Self-Schedule Hourly Blocks and awarded Economic Hourly Block Bids (but excluding an Economic Hourly Block Bid with Intra-Hour option). HASP Block Intertie Schedules, as modified after accepted, are settled at the applicable FMM LMP and FMM ASMPs. HASP Block Intertie Schedules are advisory only in that they may be curtailed by the CAISO for Reliability reasons. Otherwise, the MWH quantity of a HASP Block Intertie Schedule is financially binding.</p>	The ISO will check the usage of capitalized terms for the final posting.	Revised Draft
Appendix A - FMM	PG&E	<p>Appendix definition of FMM Scheduled Energy</p> <p>Re-examine definition and ensure tariff section references are</p>	This term will be deleted because it is not used in the tariff.	Revised Draft

Scheduled Energy		correct.		
Appendix A - Bid Cost Recovery (BCR) Eligible	PG&E	Bid Cost Recovery (BCR) Eligible Resources The CAISO's definition of BCR Eligible Resources contains an extra, unnecessary word. The first sentence should be changed to say, "Those resources eligible to participate in the Bid Cost Recovery as specified in Section 11.8, which include Generating Units, System Units, System Resources with FMM Economic bids..."	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft
Appendix A - CAISO Markets Processes	Powerex	Definition of CAISO Markets Processes The MPM, IFM, RUC, STUC, <u>HASP</u> , FMM and RTD.	The ISO acknowledges the drafting error and will correct it for the final posting.	Revised Draft
Appendix A - HASP Block Intertie Schedule	Powerex	Definition of HASP Block Intertie Schedule The output of the HASP resulting from accepted Self-Schedule Hourly Blocks <u>for Energy and Ancillary Services</u> and awarded Economic Hourly Block Bids (but excluding an Economic Hourly Block Bid with Intra-Hour option). HASP Block Intertie Schedules, as modified after accepted, are settled at the applicable FMM LMP and FMM ASMPs. HASP Block Intertie Schedules are advisory only in that they may be curtailed by the CAISO for Reliability reasons. Otherwise, the MWH quantity of a HASP Block Intertie Schedule is financially binding.	The definition of the term now includes an explicit statement that "A HASP Block Intertie Schedule can include Energy and AS."	Revised Draft
Appendix A - Market Clearing	Powerex	The act of conducting any of the process used by the CAISO to determine LMPs, Day-Ahead Schedules, RUC Awards or AS Awards, HASP Intertie Block Schedules, <u>HASP Block AS Awards, FMM FFM</u> Schedules and Dispatch Instructions based on Supply Bids and Demand Bids or CAISO Demand Forecast.	The term "HASP Block Intertie Schedule" is defined as including ancillary services so the additional term is not necessary.	Revised Draft
Appendix A -Standard Ramping Energy	Powerex	Definition of Standard Ramping Energy - the existing definition of the Appendix A Master Definitions is temporally limited to hourly schedule changes. In light of the introduction of the FMM, the definition must be modified to account for ramping that will be	Ramping between FMM intervals is accounted for but not as standard ramping energy.	Revised Draft

		required in the FMM context.		
Appendix A - Bid Cost Recovery (BCR) Eligible Resources	SCE	- Bid Cost Recovery (BCR) Eligible Resources Those resources eligible to participate in the Bid Cost Recovery as specified in Section 11.8, which include Generating Units, System Units, System Resources that with FMM Economic bids, Participating Loads, and Proxy Demand Resources. A System Resource that has a Schedule that results from Bids submitted in violation of Section 30.5.5 shall not be a Bid Cost Recovery Eligible Resource for any Settlement Interval that occurs during the time period covered by the Schedule that results from Bids submitted in violation of Section 30.5.5. Accepted Self-Schedule Hourly Blocks are not eligible to participate in Bid Cost Recovery in the Real-Time Market.	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft
Appendix A - Operational Adjustment	SCE	Definition of Operational Adjustment The new 15-minute market is now called FMM (Fifteen Minute Market) and the CAISO has expanded from one single definition of Optimal Energy to two definitions – FMM Optimal Energy and RTD Optimal Energy, the reason being that they are now priced with two different market LMPs. Likewise, the CAISO also needs to expand the definition of Operational Adjustment to FMM Operational Adjustment and RTD Operational Adjustment, because the intertie schedule changes will also receive two different market prices.	Creating separate definitions is unnecessary because depending on the timelines the OA could be settled at the RTD price if not reflected in the FMM schedule. If it is reflected in the FMM schedule then the OA is subject to the HASP schedules decline charge but is not settled.	Initial Draft
Appendix A - Expected Energy	Six Cities	The next to last sentence of the definition as drafted does not make Expected Energy sense. Should the word “Schedules” remain in the text?	The ISO acknowledges the drafting error and will correct it for the final posting.	Revised Draft
Appendix A - FMM AS Award	Six Cities	As drafted, this definition suggests that the only AS awards made FMM AS Award in the FMM are for imports. Is this correct?	The ISO acknowledges the drafting error and will correct it for the final posting.	Revised Draft
Appendix A – - Variable Energy	LSA	Appendix A, Variable Energy Resource (2)-(3): What are the implications for Solar Thermal projects, which can	The ISO is proposing to include in Appendix A of its tariff the definition for variable energy resources to comply with FERC’s Order 764. The proposed language matches the definition adopted by	Revised Draft

Resource		provide a measure of storage, or VERs with on-site storage? Almost all VERs – especially newer resources – can control variability in the downward direction, and some (e.g., solar thermal, or those producing below their capability at a given time) can be flexible up as well. What is the purpose of this criterion?	FERC. (See Order 764 at P 210.) The definition specifies that the energy source (not the device) has variability that the facility owner operator cannot control. The proposed definition of variable energy resource would encompass solar thermal resources as well as wind and solar photovoltaic resources that have active power controls.	
Appendix E Section 6	Powerex	6. Treatment of Equal Price Bids. The CAISO shall allow these Scheduling Coordinators to resubmit, at their own discretion, their Bid no later than two (2) hours the same day the original Bid was submitted. In the event identical prices still exist following resubmission of Bids, the CAISO shall determine the merit order for each Ancillary Service by considering applicable constraint information for each Generating Unit, Load or other resource, and optimize overall costs for the Trading Day. If equal Bids still remain, the CAISO shall proportion participation in the Day-Ahead Schedule <u>or HASP</u> or FMM Schedule (as the case may be) amongst the bidding Generating Units, Loads and resources with identical Bids to the extent permitted by operating constraints and in a manner deemed appropriate by the CAISO.	By definition, HASP Intertie Block Schedules become FMM Schedules, subject to any needed operational/reliability adjustments to the quantity of the schedule. It is thus not necessary to add a specific reference to the HASP Intertie Block Schedules.	Revised Draft
Appendix JJ Section 8.4	Viasyn	Appendix JJ Large Generator Interconnection Agreement Section 8.4 Provision of Data from a Variable Energy Resource <i>The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the CAISO Transmission Provider to the extent necessary for the CAISO's Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources consistent with the terms of the CAISO tariff and applicable Business Practice Manuals. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the CAISO Transmission—Provider with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The</i>	The ISO acknowledges the drafting error and will correct it for the second draft tariff posting.	Initial Draft

		<p><i>Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the CAISO Transmission Provider with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The CAISO Transmission Provider and Interconnection Customer whose Generating Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the Transmission Provider regarding all forced outages to the extent necessary for the Transmission Provider's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the CAISO Transmission Provider, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the CAISO Transmission Provider. Such requirements for meteorological and forced outage data are set forth in the CAISO Tariff and applicable Business Practice Manuals as they may change from time to time.</i></p> <p>Comment: The ISO should clarify that its intent is to require Interconnection Customers with Variable Energy Resources to provide data only to the CAISO for the development and deployment of power production forecasts, as the term Transmission Provider is not defined in the CAISO Tariff and the FERC definition of Transmission Provider (18 C.F.R. §358.3(k))</p>		
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		can be construed to include Transmission Owners within the California ISO Balancing Authority Area. Redundant phrasing is also removed.		
Appendix M Section 1.7.3	Powerex	In this section of the Dynamic Scheduling Protocol, it is unclear what the phrase in brackets “with the exception of intra-hour Dispatch Instructions of the Energy associated with accepted Ancillary Services Bids or Dispatch Instructions for Imbalance Energy” means. The CAISO should clarify if the “exception” applies to congestion and/or transmission reservations or neither – in which case the phrase should be deleted from the tariff.	This provision reflects accepted tariff language and no changes are necessary to implement the Board-approved policy.	Revised Draft
Appendix Q, 5.1	SCE	5.1 Schedules For all Generating Units that comprise the Participating Intermittent Resources shall comply with the Bidding and scheduling rules specified in Sections 4, 30, 31, and 34. Scheduling Coordinators shall be required to submit HASP/RTM Bids (MWh) for the	Yes the cross references will be provided.	PIRP Language
LGIA	LSA	In LGIA, 8.4, second and third paragraph: The specifics are already covered in more detail in the tariff and BPMs. What is the purpose of stating them here?	The ISO is proposing to include this language in its <i>pro forma</i> LGIA set forth (Appendix EE of the ISO tariff) to comply with directives in FERC Order 764. As part of Order 764, the Commission stated “an interconnection customer with a VER having wind as the energy source must provide, at a minimum, site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. An interconnection customer with a VER having solar as the energy source must provide, at a minimum, site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The exact specifications of data to be provided by the interconnection customer will remain subject to negotiation between the parties, which as noted above must take into account the size and configuration of the VER, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. It may also include additional meteorological data commensurate with the power production forecasting employed by the public utility transmission provider. As with other data reporting requirements, the public utility transmission provider may file an unexecuted LGIA pursuant to FPA section 205 seeking to demonstrate the necessity of requests for additional information if the parties cannot reach mutual agreement as to the specifications of data to be provided.” (See Order 764 at P	Revised Draft

			177.)	
LGIA	LSA	<p>In LGIA, 8.4, fourth paragraph:</p> <p>This sentence just doesn't make any sense – the IC must “agree” to additional data that are “required?” Does this mean that the IC can say no?</p> <p>In the tariff/BPMs, the requirements are given, and there is no “agreement” necessary or secret requirements that are not included there.</p> <p>This sentence implies that additional requirements, beyond those in the tariff/BPMs, might be imposed. If the CAISO wants to broaden the requirements for certain situations or kinds of VERs, it should use the regular process to alter the tariff /BPM requirements – including a stakeholder process – and not provide for imposition of additional requirements through the LGIA.</p>	<p>FERC directed transmission providers to include this language in its pro forma LGIA for new interconnection customers. In Order 764, “the Commission affirms the approach set forth in the Proposed Rule allowing public utility transmission providers flexibility in identifying the specific meteorological and forced outage data to be reported. As proposed, Article 8.4 of the pro forma LGIA would specify certain categories of data to be provided by interconnection customers with VERs having wind or solar as the energy source, with the exact specifications of data to be provided taking into account the size and configuration of the VER, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. . . . This approach will provide public utility transmission providers the flexibility to negotiate, in the first instance, with interconnection customers whose generating facilities are VERs to identify the particular data to be reported by the customer.” [Footnotes omitted.] (See P 175) The Commission also states: “we decline to establish minimum reporting requirements for non-wind and non-solar VERs and leave to the public utility transmission providers and VERs to negotiate what data are necessary for developing and deploying power production forecasting for these resources, taking into account the size and configuration of the VER, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system.” (See P 213)</p> <p>For new interconnection customers seeking to interconnect variable energy resources that use wind and solar, the ISO intends to incorporate by reference the tariff requirements to report meteorological data into Appendix C of the <i>pro forma</i> LGIA. The Commission has already accepted these tariff requirements as just and reasonable. (See <i>Cal. Indep. Sys. Operator Corp.</i> 131 FERC ¶ 61,087.) To the extent specific requirements are set forth in a business practice manual, the reference to the ISO’s tariff in Appendix C will incorporate these requirements into the <i>pro forma</i> LGIA as well. For variable energy resources that are not wind and solar, the ISO will negotiate what data is necessary for developing</p>	Revised Draft

			and deploying power production forecasting for these resources. The language the ISO is proposing to include in Article 8.4 tracks verbatim the language FERC directed transmission providers to include in their <i>pro forma</i> large generator interconnection agreements for new interconnection customers.	
LGIA	LSA	<p>In LGIA, 8.4, fifth paragraph:</p> <p>Again, the forced-outage reporting requirements are in the tariff, and you don't need to repeat here that the project has to comply with the tariff. Is the implication that requirements above those in the tariff might be imposed? Also, there are no "classes" of VERs with respect to outage reporting.</p>	<p>FERC directed transmission providers to include this language in its <i>pro forma</i> LGIA for new interconnection customers. In Order 764, "the Commission affirms the approach set forth in the Proposed Rule allowing public utility transmission providers flexibility in identifying the specific meteorological and forced outage data to be reported. As proposed, Article 8.4 of the pro forma LGIA would specify certain categories of data to be provided by interconnection customers with VERs having wind or solar as the energy source, with the exact specifications of data to be provided taking into account the size and configuration of the VER, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. . . . This approach will provide public utility transmission providers the flexibility to negotiate, in the first instance, with interconnection customers whose generating facilities are VERs to identify the particular data to be reported by the customer." [Footnotes omitted.] (See Order 764 at P 175) The Commission also states: "we decline to establish minimum reporting requirements for non-wind and non-solar VERs and leave to the public utility transmission providers and VERs to negotiate what data are necessary for developing and deploying power production forecasting for these resources, taking into account the size and configuration of the VER, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system. (See Order 764 at P 213)</p> <p>For new interconnection customers seeking to interconnect variable energy resources, the ISO intends to incorporate by reference the tariff requirements forced outage data into Appendix C of the pro forma LGIA. The Commission has already accepted these tariff requirements as just and reasonable. (See <i>Cal. Indep. Sys. Operator Corp.</i> 131 FERC ¶ 61,087.)</p>	Revised Draft

LGIA	LSA	<p>In LGIA, 8.4, sixth paragraph: REALLY troubling. Again, it implies that requirements in addition to those in the tariff/BPMs could be imposed on a case-by-case basis based on vague criteria, and there is no language here that these requirements (as opposed to those two paragraphs up) have to be “mutually agreed” to.</p>	<p>The ISO is proposing to include this language in its <i>pro forma</i> LGIA set forth (Appendix EE of the ISO tariff) to comply with directives in FERC Order 764. As part of Order 764, the Commission stated “an interconnection customer with a VER having wind as the energy source must provide, at a minimum, site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. An interconnection customer with a VER having solar as the energy source must provide, at a minimum, site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The exact specifications of data to be provided by the interconnection customer will remain subject to negotiation between the parties, which as noted above must take into account the size and configuration of the VER, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. It may also include additional meteorological data commensurate with the power production forecasting employed by the public utility transmission provider. As with other data reporting requirements, the public utility transmission provider may file an unexecuted LGIA pursuant to FPA section 205 seeking to demonstrate the necessity of requests for additional information if the parties cannot reach mutual agreement as to the specifications of data to be provided.” (See P 177.)</p>	Revised Draft
LGIA	LSA	<p>In LGIA 8.4, seventh paragraph: What does this mean? What specific requirements would there be beyond those in the tariff/BPMs?</p>	<p>The ISO is proposing to include this language in its <i>pro forma</i> LGIA set forth (Appendix EE of the ISO tariff) to comply with directives in FERC Order 764. As part of Order 764, the Commission stated “an interconnection customer with a VER having wind as the energy source must provide, at a minimum, site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. An interconnection customer with a VER having solar as the energy source must provide, at a minimum, site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The exact specifications of data to be provided by the interconnection customer will remain subject to negotiation between the parties, which as noted above must take into account the size and configuration of the VER, its characteristics, location, and its importance in maintaining generation resource adequacy and</p>	Revised Draft

			transmission system reliability in its area. It may also include additional meteorological data commensurate with the power production forecasting employed by the public utility transmission provider. As with other data reporting requirements, the public utility transmission provider may file an unexecuted LGIA pursuant to FPA section 205 seeking to demonstrate the necessity of requests for additional information if the parties cannot reach mutual agreement as to the specifications of data to be provided.” (See P 177.)	
LGIA	LSA	In LGIA 8.4, eighth paragraph: Why is this needed if the requirements are already in the tariff/BPMs? Also, how can requirements be included here if they “may change from time to time?” Would all the LGIAs have to be amended when the requirements change?	The ISO is proposing to include this language in its pro forma LGIA set forth (Appendix EE of the ISO tariff) to comply with directives in FERC Order 764. This language reflects that the requirements for the submission of meteorological and forced outage data set forth in Appendix C of the pro forma LGIA may change. The ISO expects to incorporate these requirements by reference into Appendix C of the <i>pro forma</i> LGIA to avoid the administrative burden of modifying each LGIA if a change occurs.	Revised Draft