

California Independent System Operator Corporation

November 18, 2015

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

Re: California Independent System Operator Corporation Compliance Filing to Reconcile Overlapping Commission-Approved Tariff Records

Docket No. ER16-___-000

Dear Secretary Bose:

The California Independent System Operator Corporation ("CAISO") submits this compliance filing to reconcile overlapping tariff records in the Commission's eTariff system in order to reflect the sum of revisions to the same sections of the CAISO tariff that the Commission has already accepted in different proceedings. The CAISO does not propose any changes to any Commission-approved tariff language in this filing and no stakeholder has raised any concerns regarding the filing. The CAISO requests that the Commission accept each of the reconciled tariff records contained in this filing effective as of the latest effective date previously approved by the Commission for the relevant tariff record.

I. Background

As part of its stakeholder process to identify potential clarifications to its tariff, the CAISO has identified a number of instances where CAISO tariff records on file in the Commission's eTariff system, although individually they accurately reflect revisions to tariff sections approved by the Commission in the successive proceedings in which they were filed, do not accurately reflect the cumulative result of the Commission's orders across those proceedings. Such situations typically arise due to the chronological sequence in which those records are filed in various dockets and then acted on by the Commission. From the time the CAISO files a tariff amendment to the time the Commission issues an order accepting it as of a specified effective date, several months or more may pass,

especially if the Commission conditions its acceptance on the filing of revisions to certain portions of the original proposed amendment language in a compliance filing. Given these timeframes, it is necessary on occasion for the CAISO to file tariff amendments in which some of the proposed tariff revisions include changes that affect tariff records that are the subject of already pending tariff amendment proceedings that have not yet been resolved.

To provide a concrete example, on July 30, 2013, the CAISO submitted a tariff amendment in Docket No. ER13-2063-000 to revise the tariff provisions on registration of multi-stage generating (MSG) resources (the original MSG amendment). Then on October 17, 2013, while the original MSG amendment was pending before the Commission, the CAISO submitted a supplemental MSG amendment in Docket No. ER13-2063-001 that included proposed revisions to some of the tariff language proposed in the original MSG amendment. The Commission accepted both MSG amendments in an order issued on March 20, 2014, to be effective April 1, 2014.¹ Subsequently, the CAISO filed and the Commission accepted a petition for limited tariff waiver to suspend the effectiveness of the tariff revisions until May 1, 2014.² Among the tariff records affected by the MSG amendments was that for revised tariff section 30.5.1. However, on November 26, 2013 (i.e., while the MSG amendments were still pending), the CAISO submitted another tariff amendment, in Docket No. ER14-480, that included tariff changes required by Commission Order No. 764 (the Order 764 amendment). The Order 764 amendment also affected the tariff record for section 30.5.1, and because the MSG amendments were still pending at the time the Order 764 amendment was filed, the Order 764 amendment did not include the MSG amendments' proposed revisions to that section. Thus, when the Commission accepted the Order 764 amendment in an order issued on March 20, 2014, to be effective May 1, 2014,³ the accepted tariff record for section 30.5.1 did not include the MSG amendment changes.

Although the revisions for both the MSG amendments and the Order 764 amendment have been accepted by the Commission and are now in effect, the Commission's eTariff page reflects only the Order 764 amendment language in what it shows as the currently effective tariff record for those sections.⁴ Because

⁴ When a tariff record has been revised multiple times, the eTariff page shows the accepted version of the record with the latest effective date as the currently effective version. When there is more than one accepted version of a tariff record with the same effective date, the eTariff page shows the one with the highest Effective Priority Order (EPO) value among those with that effective date as the currently effective record. Since the tariff records in both the

¹ Cal. Indep. Sys. Operator Corp., 146 FERC ¶ 61,191 (2014).

² Cal. Indep. Sys. Operator Corp., 147 FERC ¶ 61,029 (2014).

³ Cal. Indep. Sys. Operator Corp., 146 FERC ¶ 61,204 (2014).

no filed tariff record includes the accepted revisions from both amendment proceedings, the eTariff page cannot display a tariff record that includes all of the currently effective language for those sections. The purpose of this compliance filing is to rectify such situations by submitting conformed tariff records that reflect the effect of tariff revisions that have been approved for the same tariff sections in different proceedings, but have never been included in a single tariff record before because of such chronological overlaps between proceedings.

II. Compliance Filing

The CAISO submits this compliance filing to ensure that the eTariff system reflects all approved tariff amendments, and that the records on the system are consistent with the conformed tariff posted on the CAISO website. This filing satisfies the specific requirements of the Commission orders in the proceedings that accepted the provisions included in the conformed tariff records filed herewith. The CAISO does not propose any changes to Commission-approved tariff language in this filing.

Attachment A to this filing contains a key to the overlapping tariff records the CAISO it is proposing to reconcile. Attachment A is divided into five columns. Column 1 identifies each specific tariff section whose eTariff records are being reconciled in this filing. Column 2 explains the nature of the overlap between different tariff record versions of each tariff section in different proceedings that gave rise to the need to file such reconciliations to ensure that the effective tariff records on file fully reflect all accepted language. Columns 3 and 4 reproduce the marked tariff redline revisions from the filings that gave rise to the overlap with respect to each tariff section, whereby one accepted version of that section came to take precedence as the currently effective eTariff version, with Column 3 showing the redline revisions from the inadvertently "superseded" filing, and Column 4 showing the redline revisions from the "superseding" filing. Finally, Column 5 shows the redline changes proposed in this filing to the tariff record currently shown as effective in the eTariff system, in order to make sure that all accepted tariff language is included in the effective tariff record. In some cases, the tariff section as rendered in Column 5 includes underlying language not shown in either of the two overlapping versions; this occurs in cases where the Commission accepted additional revisions to the section subsequent to the original occurrence of the overlap. In most cases, the redlined text in Column 5 tracks the redline text shown in the "superseded" accepted version in Column 3.

above-referenced proceedings both had an effective date of May 1, 2014, and the Order 764 amendment records were assigned a higher EPO value than the MSG amendment records, the Order 764 amendment records are shown as effective, and the MSG amendment records are shown as superseded.

The CAISO posted the document contained in Attachment A on its website for stakeholder review and comment on September 29, 2015, and held a web conference meeting with stakeholders on October 13, 2015, at which the CAISO made a presentation explaining the rationale for this filing, took questions from stakeholders, and addressed written stakeholder comments. The CAISO resolved the few questions raised by stakeholders during the meeting.⁵

Attachment B to this filing contains the marked redline tariff sections showing the revisions necessary to the effective tariff records currently on file in order to fully reflect all accepted language in those sections. Attachment C to this filing contains the clean tariff sections showing the full text of the reconciled tariff records once all the conforming changes made by this filing are incorporated.

The CAISO requests that the Commission accept each of the reconciled tariff records contained in this filing effective as of the latest effective date previously approved by the Commission for the relevant tariff record.

III. Communications

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

Roger E. Collanton General Counsel Sidney L. Mannheim Assistant General Counsel California Independent System Operator Corporation 250 Outcropping Way Folsom, CA 95630 Tel: (916) 351-4400Fax: (916) 608-7222 E-mail: smannheim@caiso.com

⁵ Materials related to the stakeholder process that resulted in this filing are available on the CAISO website at

http://www.caiso.com/informed/Pages/StakeholderProcesses/TariffClarificationsFiling.aspx.

Subsequent to the stakeholder meeting, the table in Attachment A was revised to eliminate several tariff sections whose overlaps had been resolved by other filings.

IV. Service

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

V. Conclusion

For the reasons explained above, the CAISO respectfully requests that the Commission accept this compliance filing as submitted.

Respectfully submitted,

<u>/s/ Sidney L. Mannheim</u> Sidney L. Mannheim Assistant General Counsel California Independent System Operator Corporation 250 Outcropping Way Folsom, CA 95630 Tel: (916) 351-4400 Fax: (916) 608-7222

Attorney for the California Independent System Operator Corporation

Attachment A – Explanatory Table Showing Marked Tariff Language from Overlapping Filings

Compliance Filing to Reconcile Overlapping Commission-Approved Tariff Records

November 18, 2015

California Independent System Operator Corporation

TARIFF OVERLAP FILING – EXPLANATORY TABLE SHOWING MARKED TARIFF LANGUAGE FROM OVERLAPPING FILINGS

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event both	effective tariff record
		filings have the same effective date)	filings have the same effective date)	
4.6	Version 6.0.0 of the tariff	4.6 Relationship Between CAISO And Generators	4.6 Relationship Between CAISO And Generators	4.6 Relationship Between CAISO And Generators
	record for Section 4.6 as			
	filed with the Regulatory	The CAISO shall not accept Bids for any Generating Unit	The CAISO shall not accept Bids for any Generating Unit	The CAISO shall not accept Bids for any Generating Unit
	Must-Take Generation	interconnected to the electric grid within the CAISO	interconnected to the electric grid within the CAISO	interconnected to the electric grid within the CAISO
	Amendment, Sept. 17,	Balancing Authority Area otherwise than through a	Balancing Authority Area (which includes a Pseudo-Tie of a	Balancing Authority Area (which includes a Pseudo-Tie of a
	2012, Docket No. ER12-	Scheduling Coordinator. The CAISO shall further not be	Generating Unit to the CAISO Balancing Authority Area)	Generating Unit to the CAISO Balancing Authority Area)
	2634, did not include the	obligated to accept Bids from Scheduling Coordinators	otherwise than through a Scheduling Coordinator. The	otherwise than through a Scheduling Coordinator. The
	changes to this section	relating to Generation from any Generating Unit	CAISO shall further not be obligated to accept Bids from	CAISO shall further not be obligated to accept Bids from
	reflected in Version 4.0.0	interconnected to the electric grid within the CAISO	Scheduling Coordinators relating to Generation from any	Scheduling Coordinators relating to Generation from any
	as filed with the	Balancing Authority Area unless the relevant Generator	Generating Unit interconnected to the electric grid within the	Generating Unit interconnected to the electric grid within the
	Regulation Energy	undertakes in writing, by entering into a Participating	CAISO Balancing Authority Area (which includes a Pseudo-Tie	CAISO Balancing Authority Area (which includes a Pseudo-Tie
	Management	Generator Agreement, QF PGA, or Metered Subsystem	of a Generating Unit to the CAISO Balancing Authority Area)	of a Generating Unit to the CAISO Balancing Authority Area)
	Amendment, Aug. 22,	Agreement with the CAISO, to comply with all applicable	unless the relevant Generator undertakes in writing, by	unless the relevant Generator undertakes in writing, by
	2011, Docket No. ER11-	provisions of this CAISO Tariff as they may be amended from	entering into a Participating Generator Agreement <u>or, if</u>	entering into a Participating Generator Agreement or, if
	4353-000, and accepted	time to time, including, without limitation, the applicable	eligible to enter such an agreement under the applicable	eligible to enter such an agreement under the applicable
	by FERC Order Nov. 30,	provisions of this Section 4.6 and Section 7.7. The CAISO	terms of the CAISO tariff, QFa Net Scheduled PGA, Pseudo-	terms of the CAISO tariff, a Net Scheduled PGA, Pseudo-Tie
	2011 (137 FERC ¶ 61,165)	shall not accept Bids from Scheduling Coordinators relating	Tie Participating Generator Agreement, or Metered	Participating Generator Agreement, or Metered Subsystem
	(because Version 5.0.0 as	to Generation from a Non-Generator Resource unless the	Subsystem Agreement, with the CAISO, to comply with all	Agreement, with the CAISO to comply with all applicable
	filed Mar. 7, 2012 in	resource owner or operator undertakes in writing, by	applicable provisions of this CAISO Tariff as they may be	provisions of this CAISO Tariff as they may be amended from
	Docket No. ER12-1226	entering into a Participating Generator Agreement and	amended from time to time, including, without limitation,	time to time, including, without limitation, the applicable
	delayed effective date to	Participating Load Agreement, to comply with all applicable	the applicable provisions of this Section 4.6 and Section 7.7.	provisions of this Section 4.6 and Section 7.7. The CAISO
	Nov. 27, 2012, per FERC	provisions of this CAISO Tariff as they may be amended from		shall not accept Bids from Scheduling Coordinators relating
	letter Order Apr. 2,	time to time including, without limitation, the applicable		to Generation from a Non-Generator Resource unless the
	2012.)	provisions of this Section 4.6 and Section 7.7.		resource owner or operator undertakes in writing, by
				entering into a Participating Generator Agreement and
				Participating Load Agreement, to comply with all applicable
				provisions of this CAISO Tariff as they may be amended from
				time to time including, without limitation, the applicable
				provisions of this Section 4.6 and Section 7.7.

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	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event both	effective tariff record
		filings have the same effective date)	filings have the same effective date)	
6.5.2.3.6	Version 3.0.0 of the tariff	6.5.2.3.6 Virtual Bid Reference Prices	N/A [Version 3.0.0 of the tariff record for Section 6.5.2 ends	6.5.2.3.6 Virtual Bid Reference Prices
	record for Section 6.5.2		with Section 6.5.2.3.5]	
	as filed with Tariff	The CAISO will publish Virtual Bid Reference Prices prior to		The CAISO will publish Virtual Bid Reference Prices prior to
	Clarification Amendment	the applicable reference period for the Virtual Bid Reference		the applicable reference period for the Virtual Bid Reference
	Compliance filing, Apr. 8,	Prices.		Prices.
	2011, Docket No. ER11-			
	2574-002, and later			
	versions did not include			
	the addition of this			
	section reflected in			
	Version 1.0.0 as filed with			
	the Convergence Bidding			
	Compliance filing, Nov.			
	15, 2010, Docket No.			
	ER11-2128, and accepted			
	by FERC Order Jan. 31,			
	2011 (134 FERC ¶			
	61,070).			

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event both	effective tariff record
		filings have the same effective date)	filings have the same effective date)	
8.2.2	Version 2.0.0 of the tariff	8.2.2 Time-Frame for Revising Ancillary Service Standards	8.2.2 Time-Frame for Revising Ancillary Service Standards	8.2.2 Time-Frame for Revising Ancillary Service Standards
	record for Section 8.2.2			
	as filed with Scarcity	The CAISO shall periodically undertake a review of the CAISO	The CAISO shall periodically undertake a review of the CAISO	The CAISO shall periodically undertake a review of the CAISO
	Pricing Compliance filing,	Controlled Grid operation to determine any revision to the	Controlled Grid operation to determine any revision to the	Controlled Grid operation to determine any revision to the
	Aug. 23, 2010, Docket	Ancillary Services standards to be used in the CAISO	Ancillary Services standards to be used in the CAISO	Ancillary Services standards to be used in the CAISO
	No. ER10-2293, did not	Balancing Authority Area. At a minimum the CAISO shall	Balancing Authority Area. At a minimum the CAISO shall	Balancing Authority Area. At a minimum the CAISO shall
	include the changes to	conduct such reviews to accommodate revisions to NERC and	conduct such reviews to accommodate revisions to NERC and	conduct such reviews to accommodate revisions to NERC and
	this section reflected in	WECC reliability standards, including any requirements of the	WECC Reliability Standards and any requirements of the NRC.	WECC Reliability Standards and any requirements of the NRC.
	Version 1.0.0 as filed with	NRC. The CAISO may adjust the Ancillary Services standards	If the CAISO modifies its Ancillary Services standards,	If the CAISO modifies its Ancillary Services standards,
	the Non Generating	temporarily to take into account, among other things,	including its rules to determine minimum procurement	including its rules to determine minimum procurement
	Resource Amendment,	variations in system conditions, Real-Time Dispatch	requirements for Ancillary Services, the CAISO will notify	requirements for Ancillary Services, the CAISO will notify
	July 12, 2010, Docket No.	constraints, contingencies, and voltage and dynamic stability	Market Participants.reliability standards, including any	Market Participants. The CAISO may adjust the Ancillary
	ER10-1755, and accepted	assessments. Where practicable, the CAISO will provide	requirements of the NRC. The CAISO may adjust the	Services standards temporarily to take into account, among
	by FERC Order Sept. 10,	notice, via the CAISO Website, of any temporary adjustments	Ancillary Services standards temporarily to take into account,	other things, variations in system conditions, Real-Time
	2010 (132 FERC ¶	to Ancillary Service standards by 6:00 p.m. two (2) days	among other things, variations in system conditions, Real-	Dispatch constraints, contingencies, and voltage and dynamic
	61,211).	ahead of the Operating Day to which the adjustment will	Time Dispatch constraints, contingencies, and voltage and	stability assessments. Where practicable, the CAISO will
		apply. Periodic reviews by the CAISO may include, but are	dynamic stability assessments. Where practicable, the CAISO	provide notice, via the CAISO Website, of any temporary
		not limited to: (a) analysis of the deviation between actual	will provide notice, via the CAISO Website, of any temporary	adjustments to Ancillary Service standards by 6:00 p.m. two
		and forecast Demand; (b) analysis of patterns of unplanned	adjustments to Ancillary Service standards by 6:00 p.m. two	(2) days ahead of the Operating Day to which the adjustment
		Generating Unitresource Outages; (c) analysis of compliance	(2) days ahead of the Operating Day to which the adjustment	will apply. Periodic reviews by the CAISO may include, but
		with NERC and WECC reliability standards, including any	will apply. Periodic reviews by the CAISO may include, but	are not limited to: (a) analysis of the deviation between
		requirements of the NRC; (d) analysis of operation during	are not limited to: (a) analysis of the deviation between	actual and forecast Demand; (b) analysis of patterns of
		system disturbances; (e) analysis of patterns of shortfalls	actual and forecast Demand; (b) analysis of patterns of	unplanned Generating Unitresource Outages; (c) analysis of
		between Day-Ahead Schedules and actual Generation and	unplanned Generating Unit Outages; (c) analysis of	compliance with NERC and WECC Reliability Standards and
		Demand; and (f) analysis of patterns of unplanned	compliance with NERC and WECC <u>Reliability Standards</u>	any requirements of the NRC; (d) analysis of operation during
		transmission Outages.	and reliability standards, including any requirements of the	system disturbances; (e) analysis of patterns of shortfalls
			NRC; (d) analysis of operation during system disturbances; (e)	between Day-Ahead Schedules and actual Generation and
			analysis of patterns of shortfalls between Day-Ahead	Demand; and (f) analysis of patterns of unplanned
			Schedules and actual Generation and Demand; and (f)	transmission Outages.
			analysis of patterns of unplanned transmission Outages.	

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		filings have the same effective date)	filings have the same effective date)	
8.4.5	Version 1.0.0 of the tariff	8.4.5 Communication Equipment	8.4.5 Communication Equipment	8.4.5 Communication Equipment
	record for Section 8.4.5			
	as filed with the Non	Unless otherwise authorized by the CAISO, all Scheduling	Unless otherwise authorized by the CAISO, all Scheduling	Unless otherwise authorized by the CAISO, all Scheduling
	Generating Resource	Coordinators wishing to submit an Ancillary Service Bid must	Coordinators wishing to submit an Ancillary Service Bid must	Coordinators wishing to submit an Ancillary Service Bid must
	Amendment, July 12,	have the capability to submit to and receive information	have the capability to submit to and receive information	have the capability to submit to and receive information
	2010, Docket No. ER10-	from the CAISO's secure communication system. In addition,	from the CAISO's secure communication system. In addition,	from the CAISO's secure communication system. In addition,
	1755, did not include the	they must be capable of receiving Dispatch Instructions	they must be capable of receiving Dispatch Instructions	they must be capable of receiving Dispatch Instructions
	changes to this section	electronically and they must provide the CAISO with a	electronically and they must provide the CAISO with a	electronically and they must provide the CAISO with a
	reflected in Version 2.0.0	telephone number, or fax number through which Dispatch	telephone number, or fax number through which Dispatch	telephone number, or fax number through which Dispatch
	(with an earlier effective	Instructions for each Generating Unit, System Unit,	Instructions for each <u>resource</u> Generating Unit, System Unit,	Instructions for each resource may be given if necessary. The
	date) as filed with the	Participating Load, Proxy Demand Resource, Load and	Load and System Resource may be given if necessary. The	CAISO will determine which method of communication is
	Proxy Demand Resource	System Resource may be given if necessary. The CAISO will	CAISO will determine which method of communication is	appropriate; provided that the CAISO will consult with the
	Compliance filing, Sept.	determine which method of communication is appropriate;	appropriate; provided that the CAISO will consult with the	Scheduling Coordinator, if time permits, and will consider the
	13, 2010, ER10-2623, and	provided that the CAISO will consult with the Scheduling	Scheduling Coordinator, if time permits, and will consider the	method of communication then utilized by such Scheduling
	accepted by FERC Order	Coordinator, if time permits, and will consider the method of	method of communication then utilized by such Scheduling	Coordinator; provided further, that the CAISO shall make the
	Jan. 4, 2011 (134 FERC ¶	communication then utilized by such Scheduling Coordinator;	Coordinator; provided further, that the CAISO shall make the	final determination as to the additional communication
	61,004) (which order was	provided further, that the CAISO shall make the final	final determination as to the additional communication	methods. Ancillary Service Providers whose resources are
	erroneously issued in	determination as to the additional communication methods.	methods. Ancillary Service Providers Participating	scheduled, bid in or under contract, shall ensure that there is
	Docket No. ER10-2621)	Participating Generators, owners or operators of	Generators, owners or operators of Loads, and operators of	a twenty-four (24) hour personal point of contact with the
		Participating Loads, and operators of System Units or System	System Units or System Resources whose resources are	CAISO for the resource. <u>Scheduling Coordinators</u>
		Resources whose resources are scheduled, bid in or under	scheduled, bid in or under contract, shall ensure that there is	representing Proxy Demand Resources that are scheduled,
		contract, shall ensure that there is a twenty-four (24) hour	a twenty-four (24) hour personal point of contact with the	bid in or under contract shall ensure that there is a twenty-
		personal point of contact with the CAISO for the Generating	CAISO for the <u>resource</u> . An Ancillary Service	four (24) hour personal point of contact with the CAISO for
		Unit, System Unit, <u>Participating</u> Load or System Resource.	ProviderGenerating Unit, System Unit, Load or System	the Proxy Demand Resource. An Ancillary Service Provider
		Scheduling Coordinators representing Proxy Demand	Resource. A Participating Generator or provider of	wishing to offer any Ancillary Service must provide a direct
		Resources that are scheduled, bid in or under contract shall	Curtailable Demand wishing to offer any Ancillary Service	ring down voice communications circuit (or a dedicated
		ensure that there is a twenty-four (24) hour personal point of	must provide a direct ring down voice communications	telephone line available twenty-four (24) hours a day every
		contact with the CAISO for the Proxy Demand Resource. A	circuit (or a dedicated telephone line available twenty-four	day of the year) between the control room operator for the
		Participating Generator, or provider of Curtailable Demand	(24) hours a day every day of the year) between the control	resource providing the Ancillary Service and the CAISO
		wishing to offer any Ancillary Service must provide a direct	room operator for the <u>resource</u> Generating Unit or	Control Center. Each Ancillary Service Provider must also
		ring down voice communications circuit (or a dedicated	Curtailable Demand providing the Ancillary Service and the	provide an alternate method of voice communications with
		telephone line available twenty-four (24) hours a day every	CAISO Control Center. Each Ancillary Service	the CAISO from the control room in addition to the direct
		day of the year) between the control room operator for the	Provider Participating Generator must also provide an	communication link required above. Operators of Dynamic
		Generating Unit or Curtailable Demand providing the	alternate method of voice communications with the CAISO	System Resources from which Dynamic Schedules or Bids are
		Ancillary Service and the CAISO Control Center. Each	from the control room in addition to the direct	submitted to the CAISO shall provide communications links
		Participating Generator must also provide an alternate	communication link required above. Operators of Dynamic	meeting CAISO standards for dynamic imports from System
		method of voice communications with the CAISO from the	System Resources from which Dynamic Schedules or Bids are	Resources. Ancillary Service Providers whose resources
		control room in addition to the direct communication link	submitted to the CAISO shall provide communications links	provide Regulation shall also provide communication links
		required above. Operators of Dynamic System Resources	meeting CAISO standards for dynamic imports from System	meeting CAISO standards for direct digital control. Operators
		from which Dynamic Schedules or Bids are submitted to the	Resources. Ancillary Service Providers whose resources	of System Resources providing Regulation shall provide
		CAISO shall provide communications links meeting CAISO	provideParticipating Generators and operators of System	communications links meeting CAISO standards for imports

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	standards for dynamic imports from System Resources.	Units providing Regulation shall also provide communication	of Regulation. If any communication system becomes
	Participating Generators and operators of System Units	links meeting CAISO standards for direct digital control.	unavailable, the relevant Ancillary Service Provider and the
	providing Regulation shall also provide communication links	Operators of System Resources providing Regulation shall	CAISO shall take immediate action to identify the cause of
	meeting CAISO standards for direct digital control. Operators	provide communications links meeting CAISO standards for	the interruption and to restore the communication system.
	of System Resources providing Regulation shall provide	imports of Regulation. If any communication system	A Scheduling Coordinator that has provided a Submission to
	communications links meeting CAISO standards for imports	becomes unavailable, the relevant Ancillary Service Provider	Self-Provide an Ancillary Service, or has submitted a Bid to
	of Regulation. If any communication system becomes	Participating Generators, operators of System Units, Loads	provide or contracted for Ancillary Services, shall ensure that
	unavailable, the relevant Participating Generators, operators	and System Resources and the CAISO shall take immediate	the resource concerned is able to receive and implement
	of System Units, Participating Loads, Proxy Demand	action to identify the cause of the interruption and to restore	Dispatch Instructions.
	Resources, Loads and System Resources and the CAISO shall	the communication system. A Scheduling Coordinator that	
	take immediate action to identify the cause of the	has provided a Submission to Self-Provide an Ancillary	
	interruption and to restore the communication system. A	Service, or has submitted a Bid to provide or contracted for	
	Scheduling Coordinator that has provided a Submission to	Ancillary Services, shall ensure that the <u>resourceGenerating</u>	
	Self-Provide an Ancillary Service, or has submitted a Bid to	Unit, System Unit, Load or System Resource concerned is	
	provide or contracted for Ancillary Services, shall ensure that	able to receive and implement Dispatch Instructions.	
	the Generating Unit, System Unit, Participating Load, Proxy		
	Demand Resource, Load or System Resource concerned is		
	able to receive and implement Dispatch Instructions.		

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both filings have the same effective date)	date (or higher eTariff Record Priority value in the event both filings have the same effective date)	effective tariff record
8.9	This section is affected by two overlap occurrences resulting in the absence of accepted tariff language from tariff records. First, Version 2.0.0 as filed with Multi- Stage Generating Resource Compliance filing, Sept. 8, 2010, Docket ER10-2560, did	filings have the same effective date) 8.9, Verification, Compliance Testing, And Auditing Availability of contracted and Self-Provided Ancillary Services and RUC Capacity shall be verified by the CAISO by unannounced testing of Generating Units, Loads and System Resourcesresources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive device resource providing	filings have the same effective date) 8.9, Verification, Compliance Testing, And Auditing Availability of contracted and Self-Provided Ancillary Services and RUC Capacity shall be verified by the CAISO by unannounced testing of Generating Units, Loads and System Resources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive device providing Ancillary Services or RUC Capacity.	8.9 Verification, Compliance Testing, And Auditing Availability of contracted and Self-Provided Ancillary Services shall be verified by the CAISO by unannounced testing of Generating Units, Loads and System Resourcesresources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive deviceresource providing Ancillary Services. Participating
	not include the changes to this section (highlighted in yellow in Col. 1) reflected in Version 1.0.0 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket ER10-1755, as accepted by FERC Order Sept. 10, 2010 (132 FERC ¶ 61,211). Second, Version 5.0.0 as filed with the CAISO MSG Delay of Implementation Amendment, Nov. 12, 2010, Docket ER11-2106, did not include the changes to this section (highlighted in blue in Col. 1) reflected in Version 4.0.0 as filed with the Proxy Demand Resource Compliance filing, Sept. 13, 2010, ER10-2623, and accepted by FERC Order Jan. 4, 2011 (134 FERC ¶ 61,004) (erroneously issued in Docket ER10-2621).	Ancillary Services or RUC Capacity. Participating Generators, owners or operators of Participating Loads, <u>Scheduling</u> <u>Coordinators representing owners or operators of Proxy</u> <u>Demand Resources</u> , operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service or RUC Capacity is not available in any way. All <u>Participating</u> <u>Generators, owners or operators of Loads, operators of</u> <u>System Units or System Resources and owners or operators</u> <u>of reactive devicesAncillary Service Providers</u> shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services and RUC Capacity. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a <u>resourceGenerating Unit, System Unit, Load or System</u> <u>Resource</u> , which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers.	Participating Generators, owners or operators of Participating Loads, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service or RUC Capacity is not available in any way. All Participating Generators, owners or operators of Loads, operators of System Units or System Resources and owners or operators of reactive devices shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services and RUC Capacity. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a Generating Unit, System Unit, Load or System Resource, which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. <u>Further, all of these</u> <u>requirements apply to each MSG Configuration.</u>	Generators, owners or operators of Participating Loads, <u>Scheduling Coordinators representing owners or operators of</u> <u>Proxy Demand Resources</u> , operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service is not available in any way. All <u>Participating</u> <u>Generators</u> , owners or operators of Loads, operators of System Units or System Resources and owners or operators of reactive devices <u>Ancillary Service Providers</u> shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self- provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a <u>resourceGenerating Unit</u> , <u>System Unit</u> , Load or System Resource, which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. Further, all of these requirements apply to each MSG Configuration.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event both	effective tariff record
		filings have the same effective date)	filings have the same effective date)	
8.9.2	Version 2.0.0 of the tariff	8.9.2 Compliance Testing for Regulation	8.9.2 Compliance Testing for Regulation	8.9.2 Compliance Testing for Regulation
	record for Section 8.9.2			
	as filed with Multi-Stage	The CAISO may test the capability of any <u>resource</u> Generating	The CAISO may test the capability of any Generating Unit or	The CAISO may test the capability of any Generating Unit or
	Generating Resource	Unit or System Resource providing Regulation by using the	System Resource providing Regulation by using the CAISO	System Resource resource providing Regulation by using the
	Compliance filing,	CAISO EMS to move that <u>resource'sGenerating Unit's or</u>	EMS to move that Generating Unit's or System Resource's	CAISO EMS to move that Generating Unit's or System
	September 8, 2010,	System Resource's output over the full range of its	output over the full range of its Regulation capacity within a	Resource's resource's output over the full range of its
	Docket No. ER10-2560,	Regulation capacity within a ten (10) minute period.	ten-minute period. For a Multi-Stage Generating Resource	Regulation capacity within a ten(10) minute period. For a
	and later versions did not		the full range of Regulation capacity is evaluated at the	Multi-Stage Generating Resource the full range of Regulation
	include the changes to		applicable MSG Configuration.	capacity is evaluated at the applicable MSG Configuration.
	this section reflected in			
	Version 1.0.0 as filed with			
	the Non Generating			
	Resource Amendment,			
	July 12, 2010, Docket No.			
	ER10-1755, and accepted			
	by FERC Order Sept. 10,			
	2010 (132 FERC ¶			
	61,211).			
8.10.2	Version 2.0.0 of the tariff	8.10.2 Spinning Reserve	8.10.2 Spinning Reserve	8.10.2 Spinning Reserve
	record for Section 8.10.2			
	as filed with Multi-Stage	The CAISO shall test the Spinning Reserve capability of a	The CAISO shall test the Spinning Reserve capability of a	The CAISO shall test the Spinning Reserve capability of a
	Generating Resource	resourceGenerating Unit, System Unit or System Resource by	Generating Unit, System Unit or System Resource by issuing	Generating Unit, System Unit or System Resourceresource by
	Compliance filing,	issuing unannounced Dispatch Instructions requiring the	unannounced Dispatch Instructions requiring the Generating	issuing unannounced Dispatch Instructions requiring the
	September 8, 2010,	resourceGenerating Unit, System Unit or System Resource to	Unit, System Unit or System Resource to ramp up to its ten	Generating Unit, System Unit or System Resourceresource to
	Docket No. ER10-2560,	ramp up to its ten (10) minute capability. The CAISO shall	(10) minute capability. The CAISO shall measure the	ramp up to its ten (10) minute capability. The CAISO shall
	and later versions did not	measure the response of the <u>resourceGenerating Unit</u> ,	response of the Generating Unit, System Unit or System	measure the response of the Generating Unit, System Unit or
	include the changes to	System Unit or System Resource to determine compliance	Resource to determine compliance with requirements. Such	System Resource resource to determine compliance with
	this section reflected in	with requirements. Such tests may not necessarily occur on	tests may not necessarily occur on the hour. The Scheduling	requirements. Such tests may not necessarily occur on the
	Version 1.0.0 as filed with	the hour. The Scheduling Coordinator for the	Coordinator for the Generating Unit, System Unit or System	hour. The Scheduling Coordinator for the Generating Unit,
	the Non Generating	resourceGenerating Unit, System Unit or System Resource	Resource shall be paid pursuant to Section 11.5.6. For a	System Unit or System Resourceresource shall be paid
	Resource Amendment,	shall be paid pursuant to Section 11.5.6.	Multi-Stage Generating Resource the range of Spinning	pursuant to Section 11.5.6. For a Multi-Stage Generating
	July 12, 2010, Docket No.		capacity evaluated is the range for the applicable MSG	Resource the range of Spinning capacity evaluated is the
	ER10-1755, and accepted		Configuration.	range for the applicable MSG Configuration.
	by FERC Order Sept. 10,			
	2010 (132 FERC ¶			
	61,211).			

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both	[3] Marked Tariff language from [1] added to currently effective tariff record
8.10.3	Version 2.0.0 of the tariff record for Section 8.10.3 as	filings have the same effective date)8.10.3Non-Spinning Reserve	filings have the same effective date)8.10.3Non-Spinning Reserve	8.10.3 Non-Spinning Reserve
	filed with Multi-Stage Generating Resource Compliance filing, September 8, 2010, Docket No. ER10-2560, and later versions did not include the changes to this section reflected in Version 1.0.0 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket No. ER10-1755, and accepted by FERC Order Sept. 10, 2010 (132 FERC ¶ 61,211).	The CAISO may test the Non-Spinning Reserve capability of a <u>resourceGenerating Unit, System Unit or System Resource</u> by issuing unannounced Dispatch Instructions requiring the <u>resourceGenerating Unit, System Unit or System Resource</u> to <u>come on line and ramp up or to reduce Demand</u> to its <u>certified capacity within</u> ten (10) <u>minutes.minute capability.</u> The CAISO shall measure the response of the <u>resourceGenerating Unit, System Unit or System Resource</u> or Load to determine compliance with requirements. The Scheduling Coordinator for the <u>resourceGenerating Unit, System Resource</u> shall be paid pursuant to Section 11.5.6.	The CAISO may test the Non-Spinning Reserve capability of a Generating Unit, Load, System Unit or System Resource by issuing unannounced Dispatch Instructions requiring the Generating Unit, Load, System Unit or System Resource to come on line and ramp up or to reduce Demand to its ten (10) minute capability. The CAISO shall measure the response of the Generating Unit, System Unit, System Resource or Load to determine compliance with requirements. The Scheduling Coordinator for the Generating Unit, System Unit, Load or System Resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.	The CAISO may test the Non-Spinning Reserve capability of a Generating Unit, Load, System Unit or System Resourceresource by issuing unannounced Dispatch Instructions requiring the Generating Unit, Load, System Unit or System Resourceresource to come on line and ramp up or to reduce Demand to its certified capacity within ten (10) minutes-capability. The CAISO shall measure the response of the Generating Unit, System Unit, System Resourceresource or Load to determine compliance with requirements. The Scheduling Coordinator for the Generating Unit, System Unit, Load or System Resourceresource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.
8.10.8.2	Version 14.0.0 of the tariff record for Section 8.10.8.2 as filed with the Order 764	8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity	8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity	8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity
	Market Changes Amendment, Nov. 26, 2013, Docket No. ER14- 480, did not include the changes to this section reflected in Version 13.0.0 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket ER13-2063- 001, and accepted by FERC Order March 20, 2014 (146 FERC ¶ 61,191). As both versions of the section had the same effective date, Version 14.0.0 superseded Version 13.0.0 due to its higher eTariff Record Priority value.	If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit or Dynamic Resource Specific System Resource level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.	If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit or Dynamic Resource-Specific System Resource level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.	If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit or Dynamic Resource Specific System Resource level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
Section	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event both	effective tariff record
	Overlap	filings have the same effective date)	filings have the same effective date)	
11 5 2	Version 8.0.0 of the tariff	11.5.2 Uninstructed Imbalance Energy	-	11.5.2 Uninstructed Imbalance Energy
11.5.2	record for Section 11.5.2 as	11.5.2 Oninstructed imbalance Energy	11.5.2 Uninstructed Imbalance Energy	11.5.2 Uninstructed Imbalance Energy
		Cohoduling Coordinators shall be paid or sharged a LUC	Schoduling Coordinators shall be paid as sharrood a LUE	Schoduling Coordinators shall be paid or sharged a LUE
	filed with the Order 764	Scheduling Coordinators shall be paid or charged a UIE	Scheduling Coordinators shall be paid or charged a UIE	Scheduling Coordinators shall be paid or charged a UIE Sottlement Amount for each LAD, DNede or Scheduling Doint
	Market Changes	Settlement Amount for each LAP, PNode or Scheduling Point for which the CAISO calculates a UIE quantity. UIE quantities	Settlement Amount for each LAP, PNode or Scheduling Point	Settlement Amount for each LAP, PNode or Scheduling Point
	Amendment, Nov. 26, 2013, Docket No. ER14-		for which the CAISO calculates a UIE quantity for each	for which the CAISO calculates a UIE quantity for each
		are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export	Settlement Interval. UIE quantities are calculated for each	Settlement Interval. UIE quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch
	480, did not include the		resource that has a Day-Ahead Schedule, Dispatch	
	changes to this section	Schedule or Metered Quantity. For MSS Operators electing	Instruction, Real-Time Interchange Export Schedule or	Instruction, Real-Time Interchange Export Schedule or
	reflected in Version 7.0.0	gross Settlement, regardless of whether that entity has	Metered Quantity. For MSS Operators electing gross	Metered Quantity. For MSS Operators electing gross
	as filed with the RDRR	elected to follow its Load or to participate in RUC, the UIE for	Settlement, regardless of whether that entity has elected to	Settlement, regardless of whether that entity has elected to
	Compliance filing, August	such entities is settled similarly to how UIE for non-MSS	follow its Load or to participate in RUC, the UIE for such	follow its Load or to participate in RUC, the UIE for such
	19, 2013, Docket No. ER13-	entities is settled as provided in this Section 11.5.2. The	entities is settled similarly to how UIE for non-MSS entities is	entities is settled similarly to how UIE for non-MSS entities is
	2192, and accepted by	CAISO shall account for UIE in two categories: (1) Tier 1 UIE is accounted as the quantity deviation from the resource's	settled as provided in this Section 11.5.2. The CAISO shall account for UIE in two categories: (1) Tier 1 UIE is accounted	settled as provided in this Section 11.5.2. The CAISO shall
	FERC Order March 28, 2014 (146 FERC ¶ 61,233).		o (<i>y</i>)	account for UIE every five minutes based on the resource's
	As both versions of the	IIE; and (2) Tier 2 UIE is accounted as the quantity deviation	as the quantity deviation fromevery five minutes based on the resource's IIE; and (2) Tier 2 UIE is accounted as the	Dispatch Instruction. For all resources, including Generating
	section had the same	from the resource's Day-Ahead Schedule or as described in Section 11.52.25.4. For Generating Units, System Units of	quantity deviation from the resource's Day Ahead Schedule	Units, System Units of MSS Operators that have elected gross
			or as described in Section 11.2.5.4 Dispatch Instruction. For	Settlement, Physical Scheduling Plants, System Resources
	effective date, Version	MSS Operators that have elected gross Settlement, Physical		and all Participating Load, <u>Reliability Demand Response</u>
	8.0.0 superseded Version 7.0.0 due to its higher	Scheduling Plants, System Resources and all Participating	all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical	Resources, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the
	<u> </u>	Load, <u>Reliability Demand Response Resources</u> , and Proxy		
	eTariff Record Priority	Demand Resources, the Tier 1 UIE Settlement Amount is	Scheduling Plants, System Resources and all Participating	product of its UIE MWh quantity and the applicable RTD
	value.	calculated for each Settlement Interval as the product of its	Load and Proxy Demand Resources, the Tier 1-UIE Settlement Amount is calculated for each Settlement Interval as the	LMP. The UIE Settlement Amount for non-Participating Load
		Tier 1 UIE quantity and its Resource-Specific Tier 1 UIE Settlement Interval Price as calculated per Section 11.5.2.1,	product of its Tier 1-UIE <u>Mwh</u> quantity and its Resource-	and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have
		and the Tier 2 UIE Settlement Amount is calculated for each	Specific Tier 1 UIE Settlement Interval Price as calculated per	elected net Settlement, the UIE Settlement Amount is
		Settlement Interval as the product of its Tier 2 UIE quantity	Section 11.5.2.1, and the Tier 2 UIE Settlement Amount is	calculated for each Settlement Interval as the product of its
		and the simple average of the relevant Dispatch Interval	calculated for each Settlement Interval as the product of its	UIE quantity and its Real-Time Settlement Interval MSS Price.
		LMPs. The Tier 2 UIE Settlement Amount for non-	Tier 2 UIE quantity and the simple average of the relevant	Ore quantity and its Real-time settlement interval Wiss Price.
		Participating Load and MSS Demand under gross Settlement	Dispatch Interval LMPs applicable RTD LMP. The Tier 2 UIE	* * * *
		is settled as described in Section 11.5.2.2. For MSS	Settlement Amount for non-Participating Load and MSS	
		Operators that have elected net Settlement, the Tier 1 UIE	Demand under gross Settlement is settled as described in	
		Settlement Amount is calculated for each Settlement Interval	Section 11.5.2.2. For MSS Operators that have elected net	
		as the product of its Tier 1 UIE quantity and its Real-Time	Settlement, the Tier 1-UIE Settlement Amount is calculated	
		Settlement Interval MSS Price, and the Tier 2 UIE Settlement	for each Settlement Interval as the product of its Tier 1 UIE	
		Amount is calculated for each Settlement Interval as the	quantity and its Real-Time Settlement Interval MSS Price, and	
		product of its Tier 2 UIE quantity and the Real-Time	the Tier 2 UIE Settlement Amount is calculated for each	
		Settlement Interval MSS Price.	Settlement Interval as the product of its Tier 2 UIE quantity	
			and the Real-Time Settlement Interval MSS Price.	
		* * * *		
			* * *	
1	1			

11.8.2.1.6 ta	Version 14.0.0 of the	filings have the same effective date)	both filings have the same effective date)	
11.8.2.1.6 ta	Version 14.0.0 of the			
O C N N N in th in W D 1 1 E I a a M F I 1 in se V V ta th R Q 2 c c t th th th th th th th th th th th th t	tariff record for Section 11.8.2 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, did not include the changes to these sections reflected in Version 13.0.0 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket No. ER13-2063-001, and accepted by FERC Order March 20, 2014 (146 FERC ¶ 61,191). Version 14.0.0 did, however, include changes to these sections reflected in Version 12.0.0 of the tariff record as filed with the RIMPR1 Bid Cost Recovery Tariff Amendment, Sep. 25, 2013, Docket No. ER13- 2452-000; the redline changes shown on the right in Column 2 are those made by the RIMPR1 Amendment.	11.8.2.1.5 IFM Energy Bid Cost For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid submitted to the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day- Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, and except for any portion of the Day-Ahead Schedule associated with an Energy Bid less than zero, for any Settlement Interval is set to zero for any portion of the Day-Ahead Schedule that is not delivered from the otherwise Bid Cost Recovery Eligible Resource that has metered Generation below its Day-Ahead Schedule; any portion of the Day-Ahead Schedule that is actually delivered remains eligible for IFM Energy Bid Cost Recovery. The delivered portions of the Day-Ahead Schedule for this calculation are determined using the Day-Ahead Metered Energy Adjustment Factor. The Day-Ahead Metered Energy Adjustment Factor is not applied to IFM Energy Bid Costs that associate with Energy Bid Sthat are less than zero. The CAISO will determine the IFM Energy Bid Cost for a Multi- Stage Generating Resource at the Generating Unit or Dynamic Resource Specific System Resource-level. The CAISO will determine the applicable net IFM Energy Bid Cost surplus or net IFM Energy Bid Cost shortfalls as described in Section 11.8.2.4.	 11.8.2.1.5 IFM Energy Bid Cost For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid <u>used in</u> submitted to the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, and except for any portion of the Day Ahead Schedule associated with an Energy Bid less than zero, for any Settlement Interval is set to zero for any portion of the Day Ahead Schedule that is not delivered from the otherwise Bid Cost Recovery Eligible Resource that has metered Generation below its Day Ahead Schedule; any portion of the Day Ahead Schedule that is actually delivered remains eligible for IFM Energy Bid Cost Recovery.—The IFM Energy Bid Cost calculations are subject to delivered portions of the Day Ahead Schedule for this calculation are determined using the application of the Day Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.7.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric 	11.8.2.1.5 IFM Energy Bid Cost For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day- Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource Specific System Resource level.

	less than zero.The CAISO will determine the IFM Energy BidCost for a Multi-Stage Generating Resource at theGenerating Unit or Dynamic Resource-Specific SystemResource level.The CAISO will determine the applicable netIFM Energy Bid Cost surplus or net IFM Energy Bid Costshortfalls as described in Section 11.8.2.4.	
11.8.2.1.6 IFM AS Bid Cost For any Settlement Interval, the IFM AS Bid Cost shall be th	11.8.2.1.6 IFM AS Bid CosteFor any Settlement Interval, the IFM AS Bid Cost shall be the	11.8.2.1.6 IFM AS Bid CostFor any Settlement Interval, the IFM AS Bid Cost shall be the
product of the IFM AS Award from each accepted IFM AS Bi and the relevant AS Bid Price, divided by the number of		product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of
Settlement Intervals in a Trading Hour. The CAISO will	Settlement Intervals in a Trading Hour. The CAISO will	Settlement Intervals in a Trading Hour. The CAISO will
determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic	determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic	determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic
Resource-Specific System Resource-level. The IFM AS Bid	Resource-Specific System Resource level. The IFM AS Bid	Resource Specific System Resource level. The IFM AS Bid
Cost shall also include Mileage Bid Costs. For any	Cost shall also include Mileage Bid Costs. For any	Cost shall also include Mileage Bid Costs. For any
Settlement Interval, the IFM Mileage Bid Cost shall be the	Settlement Interval, the IFM Mileage Bid Cost shall be the	Settlement Interval, the IFM Mileage Bid Cost shall be the
product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy	product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy	product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy
consistent with Section 11.10.1.7, and the relevant Mileage		consistent with Section 11.10.1.7, and the relevant Mileage
Bid price, divided by the number of Settlement Intervals in		Bid price, divided by the number of Settlement Intervals in a
Trading Hour. The CAISO will determine and calculate IFM	Trading Hour. The CAISO will determine and calculate IFM	Trading Hour. The CAISO will determine and calculate IFM
Mileage Bid Cost for a Multi-Stage Generating Resource at	Mileage Bid Cost for a Multi-Stage Generating Resource at	Mileage Bid Cost for a Multi-Stage Generating Resource at
the Generating Unit or Dynamic Resource Specific System	the Generating Unit or Dynamic Resource-Specific System	the Generating Unit or Dynamic Resource Specific System
Resource-level.	Resource level.	Resource-level.

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event	[3] Marked Tariff language from [1] added to currently effective tariff record
		filings have the same effective date)	both filings have the same effective date)	
11.8.3,	Version 10.0.0 of the	11.8.3 RUC Bid Cost Recovery Amount	11.8.3 RUC Bid Cost Recovery Amount	11.8.3 RUC Bid Cost Recovery Amount
11.8.3.1.1,	tariff record for Section			
11.8.3.1.2,	11.8.3 as filed with the	For purposes of determining the RUC Unrecovered Bid Cost	For purposes of determining the RUC Unrecovered Bid Cost	For purposes of determining the RUC Unrecovered Bid Cost
11.8.3.1.4.1,	Mandatory MSG Delay	Uplift Payments as determined in Section 11.8.5 and for the	Uplift Payments as determined in Section 11.8.5 and for the	Uplift Payments as determined in Section 11.8.5 and for the
11.8.3.2	Amendment, Oct. 17,	purposes of allocating Net RUC Bid Cost Uplift as described	purposes of allocating Net RUC Bid Cost Uplift as described	purposes of allocating Net RUC Bid Cost Uplift as described
11.8.3.3.2	2013, Docket No. ER13-	in Section 11.8.6.5, the CAISO shall calculate the RUC Bid	in Section 11.8.6.5, the CAISO shall calculate the RUC Bid	in Section 11.8.6.5, the CAISO shall calculate the RUC Bid
	2063-001, did not include	Cost Shortfall or the RUC Bid Cost Surplus as the algebraic	Cost Shortfall or the RUC Bid Cost Surplus as the algebraic	Cost Shortfall or the RUC Bid Cost Surplus as the algebraic
	the changes to these	difference between the RUC Bid Cost and the RUC Market	difference between the RUC Bid Cost and the RUC Market	difference between the RUC Bid Cost and the RUC Market
	sections reflected in	Revenues for each Bid Cost Recovery Eligible Resource for	Revenues for each Bid Cost Recovery Eligible Resource for	Revenues for each Bid Cost Recovery Eligible Resource for
	Version 9.0.0 as filed	each Settlement Interval. The RUC Bid Costs shall be	each Settlement Interval. The RUC Bid Costs shall be	each Settlement Interval. The RUC Bid Costs shall be
	with the Renewable	calculated pursuant to Section 11.8.3.1 and the RUC Market	calculated pursuant to Section 11.8.3.1 and the RUC Market	calculated pursuant to Section 11.8.3.1 and the RUC Market
	Integration Market	Revenues shall be calculated pursuant to Section 11.8.3.2.	Revenues shall be calculated pursuant to Section 11.8.3.2.	Revenues shall be calculated pursuant to Section 11.8.3.2.
	Product Review (RIMPR1)	The CAISO will include Bid Cost Recovery costs related to	Bid Cost Recovery costs related to Short Start Units	The CAISO will include Bid Cost Recovery costs related to
	Bid Cost Recovery Tariff	Short Start Units committed in Real-Time <u>because as a result</u>	committed in Real-Time as a result of awarded RUC Capacity	Short Start Units committed in Real-Time <u>because</u> as a result
	Amendment, Sept. 25,	of awarded RUC Capacity-will be included in <u>RTMRUC</u>	will be included in RUC Compensation Costs.	of awarded RUC Capacity will be included in <u>RTMRUC</u>
	2013, Docket No. ER13-	Compensation Costs.		Compensation Costs.
	2452, and accepted by			
	FERC Order Dec. 19, 2013	* * * *	* * * *	* * * *
	(145 FERC ¶ 61,254).			
		11.8.3.1.1 RUC Start-Up Cost	11.8.3.1.1 RUC Start-Up Cost	11.8.3.1.1 RUC Start-Up Cost
		The RUC Start-Up Cost for any Settlement Interval in a RUC	The RUC Start-Up Cost for any Settlement Interval in a RUC	The RUC Start-Up Cost for any Settlement Interval in a RUC
		Commitment Period shall consist of Start-Up Cost of the Bid	Commitment Period shall consist of Start-Up Cost of the Bid	Commitment Period shall consist of Start-Up Cost of the Bid
		Cost Recovery Eligible Resource submitted to the CAISO for	Cost Recovery Eligible Resource submitted to the CAISO for	Cost Recovery Eligible Resource submitted to the CAISO for
		the applicable RUC Commitment Period divided by the	the applicable RUC Commitment Period divided by the	the applicable RUC Commitment Period divided by the
		number of Settlement Intervals in the applicable RUC	number of Settlement Intervals in the applicable RUC	number of Settlement Intervals in the applicable RUC
		Commitment Period. For each Settlement Interval, only the	Commitment Period. For each Settlement Interval, only the	Commitment Period. For each Settlement Interval, only the
		RUC Start-Up Cost in a CAISO RUC Commitment Period is	RUC Start-Up Cost in a CAISO RUC Commitment Period is	RUC Start-Up Cost in a CAISO RUC Commitment Period is
		eligible for Bid Cost Recovery. The CAISO will determine the	eligible for Bid Cost Recovery. The CAISO will determine the	eligible for Bid Cost Recovery. The CAISO will determine the
		RUC Start-Up Cost for a Multi-Stage Generating Resource	RUC Start-Up Cost for a Multi-Stage Generating Resource	RUC Start-Up Cost for a Multi-Stage Generating Resource
		based on the MSG Configuration committed by the CAISO in	based on the MSG Configuration committed by the CAISO in	based on the MSG Configuration committed by the CAISO in
		RUC.	RUC.	RUC.
		The following rules shall be applied in sequence and shall	The following rules shall be applied in sequence and shall	The following rules shall be applied in sequence and shall
		qualify the RUC Start-Up Cost in a RUC Commitment Period:	qualify the RUC Start-Up Cost in a RUC Commitment Period:	qualify the RUC Start-Up Cost in a RUC Commitment Period:
		(a) The RUC Start-Up Cost for a RUC Commitment	(a) The RUC Start-Up Cost for a RUC Commitment	(a) The RUC Start-Up Cost for a RUC Commitment
		Period is zero if there is an IFM Commitment	Period is zero if there is an IFM Commitment	Period is zero if there is an IFM Commitment
		Period within that RUC Commitment Period.	Period within that RUC Commitment Period.	Period within that RUC Commitment Period.
		(b) The RUC Start-Up Cost for a RUC Commitment	(b) The RUC Start-Up Cost for a RUC Commitment	(b) The RUC Start-Up Cost for a RUC Commitment
		Period is zero if the Bid Cost Recovery Eligible	Period is zero if the Bid Cost Recovery Eligible	Period is zero if the Bid Cost Recovery Eligible
		Resource is manually pre-dispatched under an	Resource is manually pre-dispatched under an	Resource is manually pre-dispatched under an
		RMR Contract prior to the Day-Ahead Market or is	RMR Contract prior to the Day-Ahead Market or is	RMR Contract prior to the Day-Ahead Market or is
		flagged as an RMR Dispatch in the Day-Ahead	flagged as an RMR Dispatch in the Day-Ahead	flagged as an RMR Dispatch in the Day-Ahead

		Schedule anywhere within that RUC Commitment		Sched
		Period.		Period
	(c)	The RUC Start-Up Cost for a RUC Commitment	(c)	The RI
		Period is zero if there is no RUC Start-Up at the		Period
		start of that RUC Commitment Period because		start o
		the RUC Commitment Period is the continuation		the RL
		of an IFM, RUC, or RTM Commitment Period from		of an I
		the previous Trading Day.		the pr
	(d)	The RUC Start-Up Cost for a RUC Commitment	(d)	The Rl
		Period is zero if the Start-Up is delayed beyond		Period
		the RUC Commitment Period in question or		the RL
		cancelled by the Real-Time Market prior to the		cancel
		Bid Cost Recovery Eligible Resource starting its		Bid Co
		start-up process.		start-u
	(e)	If a RUC Start-Up is terminated in the Real-Time	(e)	lf a RU
		within the applicable RUC Commitment Period		within
		through an Exceptional Dispatch Shut-Down		throug
		Instruction issued while the Bid Cost Recovery		Instru
		Eligible Resource is starting up the, RUC Start-Up		Eligibl
		Cost is prorated by the ratio of the Start-Up Time		Cost is
		before termination over the RUC Start-Up Time.		before
	(f)	The RUC Start-Up Cost for a RUC Commitment	(f)	The RI
		Period is qualified if an actual Start-Up occurs		Period
		within that RUC Commitment Period. An actual		within
		Start-Up is detected between two consecutive		Start-l
		Settlement Intervals when the relevant metered		Settle
		Energy in the applicable Settlement Intervals		Energy
		increases from below the Minimum Load Energy		increa
		and reaches or exceeds the relevant Minimum		and re
		Load Energy. The Minimum Load Energy is the		Load E
		product of the relevant Minimum Load and the		produ
		duration of the Settlement Interval. The CAISO		durati
		will determine the Minimum Load Energy for		will de
		Multi-Stage Generating Resources based on the		Multi-
		CAISO-committed MSG Configuration.		CAISO
	(g)	The RUC Start-Up Cost shall be qualified if an	(g)	The RI
	(0)	actual Start-Up occurs earlier than the start of the	(0)	actual
		RUC Start-Up, if the relevant Start-Up is still		RUC St
		within the same Trading Day and the Bid Cost		within
		Recovery Eligible Resource actually stays on until		Recov
		the RUC Start-Up, otherwise the Start-Up Cost is		the RL
		zero for the RUC Commitment Period. An actual		zero fo
		Start-Up is detected when the relevant metered		
		Energy in the applicable Settlement Intervals		
I				

Schedule anywhere within that RUC Commitment Period.

- (c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.
- (e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.
- (f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.
- (g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs earlier than the start of the RUC Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period.

Schedule anywhere within that RUC Commitment Period.

- (c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.
- (e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.
- (f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.
- (g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs-earlier than the start of the RUC Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals

indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO RUC Commitment Period.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not actually Oncommitted or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4. ,except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Loa Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs of the

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not actually On in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, a Bid Cost Recovery Eligible Resource, except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs of the metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the

indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO RUC Commitment Period.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4., except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.

* * * *

11.8.3.1.4.1RUC Transition Costs ApplicabilityWithin any eligible RUC CAISO Commitment Perioddetermined pursuant to the rules specified in Section11.8.1.3, the CAISO shall apply the RUC Transition Costs forthe Settlement Intervals in which the Multi-StageGenerating Resources is actually transitioning from the"from" MSG Configuration and reaches the Minimum Loadof the "to" MSG Configuration to which the Multi-StageGenerating Resource is transitioning, subject to theTolerance Band.

* * * *

11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are calculated combined with RTM Bid Cost and and RTM Market Revenue on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement. highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value.

* * * *

11.8.3.1.4.1 RUC Transition Costs Applicability Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resources reaches the Minimum Load of the MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

* * * *

11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are calculated on an MSS level, consistent with the Energy Settlement. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement. of the metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.

* * * *

11.8.3.1.4.1RUC Transition Costs ApplicabilityWithin any eligible RUC CAISO Commitment Perioddetermined pursuant to the rules specified in Section11.8.1.3, the CAISO shall apply the RUC Transition Costs forthe Settlement Intervals in which the Multi-StageGenerating Resources is actually transitioning from the"from" MSG Configuration and reaches the Minimum Loadof the "to" MSG Configuration to which the Multi-StageGenerating Resource is transitioning, subject to theTolerance Band.

* * * *

11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are calculated combined with RTM Bid Cost and <u>RTM Market Revenue</u> on an MSS level, consistent with the Energy Settlement as calculated according to Section <u>11.8.4.3.2</u>. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event	effective tariff record
		filings have the same effective date)	both filings have the same effective date)	
11.8.5,	Version 6.0.0 of the tariff	11.8.5 Unrecovered Bid Cost Uplift Payment	11.8.5 Unrecovered Bid Cost Uplift Payment	11.8.5 Unrecovered Bid Cost Uplift Payment
11.8.5.1,	record for Section 11.8.5			
11.8.5.2	as filed with the	Bid Cost Recovery Eligible Resources will receive an	Scheduling Coordinators shall receive an Unrecovered Bid	Bid Cost Recovery Eligible Resources will receive an
	Mandatory MSG Delay	Unrecovered Bid Cost Uplift Payment as described in this	Cost Uplift Payment for a Bid Cost Recovery Eligible	Unrecovered Bid Cost Uplift Payment as described in this
	Amendment, Oct. 17,	Section below. For Multi-Stage Generating Resources,	Resource, including resources for MSS Operators that have	Section below. For Multi-Stage Generating Resources,
	2013, Docket No. ER13-	Unrecovered Bid Cost Uplift Payments will be calculated and	elected gross Settlement, if the net of all IFM Bid Cost	Unrecovered Bid Cost Uplift Payments will be calculated and
	2063-001, did not include	made at the Generating Unit level and not the MSG	Shortfalls and IFM Bid Cost Surpluses calculated pursuant to	made at the Generating Unit level and not the MSG
	the changes to these	Configuration level. MSS Bid Cost Recovery Eligible	Section 11.8.2, RUC Bid Cost Shortfalls and RUC Bid Cost	Configuration level. MSS Bid Cost Recovery Eligible
	sections reflected in	Resources by MSS Operators that have elected net	Surpluses calculated pursuant to Section 11.8.3, and the	Resources by MSS Operators that have elected net
	Version 5.0.0 as filed	settlement will receive Unrecovered Bid Cost Uplift Payment	RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses	settlement will receive Unrecovered Bid Cost Uplift Paymen
	with the Renewable	for MSS Bid Cost Recovery Eligible Resources at the MSS	calculated pursuant to Section 11.8.4 for that Bid Cost	for MSS Bid Cost Recovery Eligible Resources at the MSS
	Integration Market	level and not by individual resource. MSS Bid Cost Recovery	Recovery Eligible Resource over a Trading Day is positive.	level and not by individual resource. MSS Bid Cost Recovery
	Product Review (RIMPR1)	Eligible Resources by MSS Operators that have elected gross	For Multi-Stage Generating Resources, Unrecovered Bid Cost	Eligible Resources by MSS Operators that have elected gross
	Bid Cost Recovery Tariff	settlement will receive Unrecovered Bid Cost Uplift	Uplift Payments will be calculated and made at the	settlement will receive Unrecovered Bid Cost Uplift
	Amendment, Sept. 25,	Payments at the MSS Bid Cost Recovery Eligible Resource	Generating Unit level or Dynamic Resource-Specific System	Payments at the MSS Bid Cost Recovery Eligible Resource
	2013, Docket No. ER13-	level like all other resources.	Resource and not the MSG Configuration level. For MSS	level like all other resources.
	2452, and accepted by		Operators that have elected net Settlement, the	
	FERC Order Dec. 19, 2013	11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment	Unrecovered Bid Cost Uplift Payment is at the MSS level.	11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment
	(145 FERC ¶ 61,254).		The MSS IFM, RUC, and RTM Bid Cost Shortfall or IFM. RUC,	
		Scheduling Coordinators shall receive an IFM Unrecovered	and RTM Bid Cost Surplus for each market for each Trading	Scheduling Coordinators shall receive an IFM Unrecovered
		Bid Cost Uplift Payment for a Bid Cost Recovery Eligible	Hour is the sum of the IFM, RUC, and RTM Bid Cost	Bid Cost Uplift Payment for a Bid Cost Recovery Eligible
		Resource, including resources for MSS Operators that have	Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all	Resource, including resources for MSS Operators that have
		elected gross Settlement, if the net of all IFM Bid Cost	resources in the MSS. Scheduling Coordinators for MSS	elected gross Settlement, if the net of all IFM Bid Cost
		Shortfalls and IFM Bid Cost Surpluses calculated pursuant to	Operators that have elected net Settlement will receive an	Shortfalls and IFM Bid Cost Surpluses calculated pursuant to
		Section 11.8.2 , RUC Bid Cost Shortfalls and RUC Bid Cost	Unrecovered Bid Cost Uplift Payment if the net of all IFM,	Section 11.8.2 , RUC Bid Cost Shortfalls and RUC Bid Cost
		Surpluses calculated pursuant to Section 11.8.3, and the	RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM	Surpluses calculated pursuant to Section 11.8.3, and the
		RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses	Bid Cost Surpluses for that MSS over a Trading Day is	RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses
		calculated pursuant to Section 11.8.4 for that Bid Cost	positive.	calculated pursuant to Section 11.8.4 for that Bid Cost
		Recovery Eligible Resource over a Trading Day is positive.		Recovery Eligible Resource over a Trading Day is positive.
		For Multi-Stage Generating Resources, Unrecovered Bid		For Multi-Stage Generating Resources, Unrecovered Bid
		Cost Uplift Payments will be calculated and made at the		Cost Uplift Payments will be calculated and made at the
		Generating Unit level or Dynamic Resource-Specific System		Generating Unit level and not the MSG Configuration level.
		Resource and not the MSG Configuration level. For MSS		For MSS Operators that have elected net Settlement, the
		Operators that have elected net Settlement, the		Unrecovered Bid Cost Uplift Payment is at the MSS level.
		Unrecovered Bid Cost Uplift Payment is at the MSS level.		The MSS IFM, RUC, and RTM Bid Cost Shortfall or IFM. RUC,
		The MSS IFM, RUC, and RTM Bid Cost Shortfall or IFM. RUC,		and RTM Bid Cost Surplus for each market for each Trading
		and RTM Bid Cost Surplus for each market for each Trading		Hour is the sum of the IFM, RUC, and RTM Bid Cost
		Hour is the sum of the IFM, RUC, and RTM Bid Cost		Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all
		Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all		resources in the MSS. Scheduling Coordinators for MSS
		resources in the MSS. Scheduling Coordinators for MSS		Operators that have elected net Settlement will receive an
		Operators that have elected net Settlement will receive an		Unrecovered Bid Cost Uplift Payment if the net of all IFM,

Unrecovered Bid Cost Uplift Payment if the net of all IFM,	RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM
RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM	Bid Cost Surpluses for that MSS over a Trading Day is
Bid Cost Surpluses for that MSS over a Trading Day is	positive.
positive.	
	11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift
11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift	Payment
Payment	Scheduling Coordinators shall receive RUC and RTM
Scheduling Coordinators shall receive RUC and RTM	Unrecovered Bid Cost Uplift Payments for a Bid Cost
Unrecovered Bid Cost Uplift Payments for a Bid Cost	Recovery Eligible Resource, if the net of all RUC Bid Cost
Recovery Eligible Resource, if the net of all RUC Bid Cost	Shortfalls and RUC Bid Cost Surpluses calculated pursuant to
Shortfalls and RUC Bid Cost Surpluses calculated pursuant to	Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid
Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid	Cost Surpluses calculated pursuant to Section 11.8.4, for
Cost Surpluses calculated pursuant to Section 11.8.4, for	that Bid Cost Recovery Eligible Resource over a Trading Day
that Bid Cost Recovery Eligible Resource over a Trading Day	is positive. For Metered Subsystems that have elected net
is positive. For Metered Subsystems that have elected net	settlement, the Unrecovered Bid Cost Uplift Payment will be
settlement, the Unrecovered Bid Cost Uplift Payment will be	the sum, if positive, of the RUC, and RTM Bid Cost Shortfall
the sum, if positive, of the RUC, and RTM Bid Cost Shortfall	or RUC, and RTM Bid Cost Surplus for each Trading Hour
or RUC, and RTM Bid Cost Surplus for each Trading Hour	over the Trading Day for all Bid Cost Recovery Eligible
over the Trading Day for all Bid Cost Recovery Eligible	Resources in the MSS.
Resources in the MSS.	

rerlap	date (or lower eTariff Record Priority value in the event both filings have the same effective date)30.5.1 General Bidding Rules	date (or higher eTariff Record Priority value in the event both filings have the same effective date)	effective tariff record
		both filings have the same effective date)	
	20 5 1 General Bidding Pules		
	Solar delicital blocking fulles	30.5.1 General Bidding Rules	30.5.1 General Bidding Rules
cord for Section 30.5. 1			
filed with the Order 764	(a) All Energy and Ancillary Services Bids of each	(a) All Energy and Ancillary Services Bids of each	(a) All Energy and Ancillary Services Bids of each
arket Changes	Scheduling Coordinator submitted to the DAM for	Scheduling Coordinator submitted to the DAM for	Scheduling Coordinator submitted to the DAM for
nendment, Nov. 26,	the following Trading Day shall be submitted at or	the following Trading Day shall be submitted at or	the following Trading Day shall be submitted at or
13, Docket No. ER14-	prior to 10:00 a.m. on the day preceding the Trading	prior to 10:00 a.m. on the day preceding the Trading	prior to 10:00 a.m. on the day preceding the Trading
0, did not include the	Day, but no sooner than seven (7) days prior to the	Day, but no sooner than seven (7) days prior to the	Day, but no sooner than seven (7) days prior to the
anges to this section	Trading Day. All Energy and Ancillary Services	Trading Day. All Energy and Ancillary Services	Trading Day. All Energy and Ancillary Services
flected in Version 6.0.0			
filed with the	* * * *	* * * *	* * * *
andatory MSG Delay			
nendment, Oct. 17,	(k) For any given Trading Hour, a Scheduling Coordinator	(k) For any given Trading Hour, a Scheduling Coordinator	(k) For any given Trading Hour, a Scheduling Coordinator
13, Docket No. ER13-	may submit Self-Schedules and/or Submissions to	may submit Self-Schedules and/or Submissions to	may submit Self-Schedules and/or Submissions to
63-001, and accepted by	Self-Provide Ancillary Services in only one MSG	Self-Provide Ancillary Services in only one MSG	Self-Provide Ancillary Services in only one MSG
RC Order Mar. 20, 2014	Configuration for each Generating Unit-or Dynamic	Configuration for each Generating Unit or Dynamic	Configuration for each Generating Unit-or Dynamic
46 FERC ¶ 61,191).	Resource-Specific System Resource.	Resource-Specific System Resource.	Resource-Specific System Resource.
n 1 0 a fl fl fl n 1 1 F	nendment, Nov. 26, 13, Docket No. ER14- 0, did not include the anges to this section flected in Version 6.0.0 filed with the andatory MSG Delay nendment, Oct. 17, 13, Docket No. ER13- 63-001, and accepted by RC Order Mar. 20, 2014	 Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Ket and atory MSG Delay hendment, Oct. 17, 13, Docket No. ER13-63-001, and accepted by RC Order Mar. 20, 2014 Ket and the trading Day. All Energy and Ancillary Services in only one MSG Configuration for each Generating Unit-or Dynamic 	arket Changes nendment, Nov. 26, 13, Docket No. ER14- 0, did not include the anges to this section lected in Version 6.0.0 filed with the andatory MSG Delay nendment, Oct. 17, 13, Docket No. ER13- 63-001, and accepted by RC Order Mar. 20, 2014Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary ServicesScheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services in only one MSG Configuration for each Generating Unit-or DynamicScheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services(k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit-or Dynamic(k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit-or Dynamic

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
34.7(7)	Version 3.0.0 of the tariff record for Section 34.7 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, moved the content of former Section 34.5 to Section 34.7 but did not include the changes to this subsection reflected in Version 15.0.0 for Section 34.5 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	 34.5 General Dispatch Principles The CAISO shall conduct all Dispatch activities consistent with the following principles: **** (7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions; 	 3457 General Dispatch Principles The CAISO shall conduct all Dispatch activities consistent with the following principles: **** (7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions; 	 34.7 General Dispatch Principles The CAISO shall conduct all Dispatch activities consistent with the following principles: **** (7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, <u>Reliability Demand</u> <u>Response Resources</u>, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;
34.7(12)	Version 3.0.0 of the tariff record for Section 34.7 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket ER14-480, moved the content of former Section 34.5 to Section 34.7 but did not include the changes to this subsection reflected in Version 16.0.0 for Sect. 34.5 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket ER13- 2063-001, and accepted by FERC Order Mar. 20, 2014 (146 FERC ¶ 61,191).	(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit-or Dynamic Resource-Specific System Resource.	(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit or Dynamic Resource-Specific System Resource.	(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit-or Dynamic Resource-Specific System Resource.

Section Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
34.8 Version 3.0.0 of the tar record for Section 34.8 filed with the Order 764		34.68 Dispatch of Dispatch <u>Instructions</u> to Units, Participating Loads, and PDR	34.8 Dispatch Instructions to Units, Participating Loads, and PDRs, and RDRRs
Market Changes Amendment, Nov. 26, 2013, Docket No. ER14- 480, moved the conten of former Section 34.6 f Section 34.8 but did noi include the changes to this section reflected in Version 6.0.0 of the tari record for Section 34.6 filed with the RDRR Compliance filing, Augu 19, 2013, Docket No. ER13-2192, and accepto by FERC Order March 2 2014 (146 FERC ¶ 61,233).	 (iii) replacement of an Ancillary Service; (c) agency operation of Generating Units, Participating Loads or Interconnection schedules, for example: (i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria; (ii) Generating Units that can be Dispatched for Black Start; 	 The CAISO may issue Dispatch Instructions covering: (a) Ancillary Services; (b) Energy, which may be used for: (i) Congestion relief; (ii) provision of Imbalance Energy; or (iii) replacement of an Ancillary Service; (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example: (i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria; (ii) Generating Units that can be Dispatched for Black Start; (iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules; (d) the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff; (e) MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions; (f) necessary to respond to a System Emergency or imminent emergency; or (g) Transition Instructions. 	 The CAISO may issue Dispatch Instructions covering: (a) Ancillary Services; (b) Energy, which may be used for: (i) Congestion relief; (ii) provision of Imbalance Energy; or (iii) replacement of an Ancillary Service; (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example: (i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria; (ii) Generating Units that can be Dispatched for Black Start; (iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules; (d) the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff; (e) MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions; (f) Dispatch necessary to respond to a System Emergency or imminent emergency; (g) Transition Instructions; or (h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.18.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event	effective tariff record
		filings have the same effective date)	both filings have the same effective date)	
34.11.1	Version 1.0.0 of the tariff record for Section	34.9.1 System Reliability Exceptional Dispatches	34.911.1 System Reliability Exceptional Dispatches	34.11.1 System Reliability Exceptional Dispatches
	34.11.1 as filed with the	The CAISO may issue a manual Exceptional Dispatch for	The CAISO may issue a manual Exceptional Dispatch for	The CAISO may issue a manual Exceptional Dispatch for
	Order 764 Market	Generating Units, System Units, Participating Loads, Proxy	Generating Units, System Units, Participating Loads, Proxy	Generating Units, System Units, Participating Loads, Proxy
	Changes Amendment,	Demand Resources, Reliability Demand Response Resources,	Demand Resources, Dynamic System Resources, and	Demand Resources, Reliability Demand Response Resources,
	Nov. 26, 2013, Docket	Dynamic System Resources, and Condition 2 RMR Units	Condition 2 RMR Units pursuant to Section 41.9, in addition	Dynamic System Resources, and Condition 2 RMR Units
	No. ER14-480, moved the	pursuant to Section 41.9, in addition to or instead of	to or instead of resources with a Day-Ahead Schedule	pursuant to Section 41.9, in addition to or instead of
	content of former	resources with a Day-Ahead Schedule dispatched by RTM	dispatched by RTM optimization software during a System	resources with a Day-Ahead Schedule dispatched by RTM
	Section 34.9.1 to Section	optimization software during a System Emergency, or to	Emergency, or to prevent an imminent System Emergency	optimization software during a System Emergency, or to
	34.11.1 but did not	prevent an imminent System Emergency or a situation that	or a situation that threatens System Reliability and cannot	prevent an imminent System Emergency or a situation that
	include the changes to	threatens System Reliability and cannot be addressed by the	be addressed by the RTM optimization and system	threatens System Reliability and cannot be addressed by the
	this section reflected in	RTM optimization and system modeling. To the extent	modeling. To the extent possible, the CAISO shall utilize	RTM optimization and system modeling. To the extent
	Version 5.0.0 for Section	possible, the CAISO shall utilize available and effective Bids	available and effective Bids from resources before	possible, the CAISO shall utilize available and effective Bids
	34.9.1 as filed with the	from resources before dispatching resources without Bids.	dispatching resources without Bids. To deal with any threats	from resources before dispatching resources without Bids.
	RDRR Compliance filing,	To deal with any threats to System Reliability, the CAISO	to System Reliability, the CAISO may also issue a manual	To deal with any threats to System Reliability, the CAISO
	August 19, 2013, Docket	may also issue a manual Exceptional Dispatch in the Real-	Exceptional Dispatch in the Real-Time for Non-Dynamic	may also issue a manual Exceptional Dispatch in the Real-
	No. ER13-2192, and	Time for Non-Dynamic System Resources that have not been	System Resources that have not been or would not be	Time for Non-Dynamic System Resources that have not been
	accepted by FERC Order	or would not be selected by the RTM for Dispatch, but for	selected by the RTM for Dispatch, but for which the relevant	or would not be selected by the RTM for Dispatch, but for
	March 28, 2014 (146	which the relevant Scheduling Coordinator has submitted a	Scheduling Coordinator has submittedreceived a Bid-into	which the relevant Scheduling Coordinator has received a
	FERC ¶ 61,233).	Bid into the HASP.	the HASP <u>Block Intertie Schedule</u> .	HASP Block Intertie Schedule.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event	effective tariff record
		filings have the same effective date)	both filings have the same effective date)	
34.11.3	Version 0.0.0 of the tariff	34.9.3 Transmission-Related Modeling Limitations	34.911.3 Transmission-Related Modeling Limitations	34.11.3 Transmission-Related Modeling Limitations
	record for Section			
	34.11.3 as filed with the	The CAISO may also manually Dispatch resources in addition	The CAISO may also manually Dispatch resources in addition	The CAISO may also manually Dispatch resources in addition
	Order 764 Market	to or instead of resources with a Day-Ahead Schedule or	to or instead of resources with a Day-Ahead Schedule or	to or instead of resources with a Day-Ahead Schedule or
	Changes Amendment,	dispatched by the RTM optimization software, during or	dispatched by the RTM optimization software, during or	dispatched by the RTM optimization software, during or
	Nov. 26, 2013, Docket	prior to the Real-Time as appropriate, to address	prior to the Real-Time as appropriate, to address	prior to the Real-Time as appropriate, to address
	No. ER14-480, moved the	transmission-related modeling limitations in the Full	transmission-related modeling limitations in the Full	transmission-related modeling limitations in the Full
	content of former	Network Model. Transmission-related modeling limitations	Network Model. Transmission-related modeling limitations	Network Model. Transmission-related modeling limitations
	Section 34.9.3 to Section	for the purposes of Exceptional Dispatch, including for	for the purposes of Exceptional Dispatch, including for	for the purposes of Exceptional Dispatch, including for
	34.11.3 but did not	settlement of such Exceptional Dispatch as described in	settlement of such Exceptional Dispatch as described in	settlement of such Exceptional Dispatch as described in
	include the changes to	Section 11.5.6, shall consist of any FNM modeling limitations	Section 11.5.6, shall consist of any FNM modeling limitations	Section 11.5.6, shall consist of any FNM modeling limitations
	this section reflected in	that arise from transmission maintenance, lack of Voltage	that arise from transmission maintenance, lack of Voltage	that arise from transmission maintenance, lack of Voltage
	Version 2.0.0 for Section	Support at proper levels as well as incomplete or incorrect	Support at proper levels as well as incomplete or incorrect	Support at proper levels as well as incomplete or incorrect
	34.9.3 as filed with the	information about the transmission network, for which the	information about the transmission network, for which the	information about the transmission network, for which the
	RDRR Compliance filing,	Participating TOs have primary responsibility. The CAISO	Participating TOs have primary responsibility. The CAISO	Participating TOs have primary responsibility. The CAISO
	August 19, 2013, Docket	shall also manually Dispatch resources under this Section	shall also manually Dispatch resources under this Section 34.	shall also manually Dispatch resources under this Section
	No. ER13-2192, and	34.9.3 in response to system conditions including	<u>911</u> .3 in response to system conditions including threatened	34.11.3 in response to system conditions including
	accepted by FERC Order	threatened or imminent reliability conditions for which the	or imminent reliability conditions for which the timing of the	threatened or imminent reliability conditions for which the
	March 28, 2014 (146	timing of the Real-Time Market optimization and system	Real-Time Market optimization and system modeling are	timing of the Real-Time Market optimization and system
	FERC ¶ 61,233).	modeling are either too slow or incapable of bringing the	either too slow or incapable of bringing the CAISO	modeling are either too slow or incapable of bringing the
		CAISO Controlled Grid back to reliable operations in an	Controlled Grid back to reliable operations in an appropriate	CAISO Controlled Grid back to reliable operations in an
		appropriate time-frame based on the timing and physical	time-frame based on the timing and physical characteristics	appropriate time-frame based on the timing and physical
		characteristics of available resources to the CAISO. All	of available resources to the CAISO.	characteristics of available resources to the CAISO. <u>All</u>
		reliability-based Exceptional Dispatch Instructions for		reliability-based Exceptional Dispatch Instructions for
		Reliability Demand Response Resources, including for		Reliability Demand Response Resources, including for
		testing, will be issued under this Section 34.9.3.		testing, will be issued under this Section 34.9.3.

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
34.17.1	Version 1.0.0 as filed with the Order 764	34.15.1 Resource Constraints	34. <u>1517</u> .1 Resource Constraints	34.17.1 Resource Constraints
	Market Changes Amendment, Nov. 26,	The SCED shall enforce the following resource physical constraints:	The SCED shall enforce the following resource physical constraints:	The SCED shall enforce the following resource physical constraints:
	2013, Docket No. ER14- 480, moved the content of former section 34.15.1	(a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The	(a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The	(a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The
	to Section 34.17.1 but did not include the changes to this section reflected in Version 7.0.0	more restrictive operating or regulating limits. The used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.	more restrictive operating or regulating limits. The used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.	more restrictive operating or regulating limit shall be used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.
	as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket No. ER13- 2063-001, and accepted by FERC Order March 20, 2014 (146 FERC ¶	 (b) Forbidden Operating Regions. When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operation Region. The CAISO will 	(b) Forbidden Operating Regions. When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operation Region. The CAISO will	 (b) Forbidden Operating Regions. When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operation Region. The CAISO will
	61,191).	not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a	not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a	not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a
		 Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval. (c) Operational Ramp Rates and Start-Up Times. The 	 Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval. (c) Operational Ramp Rates and Start-Up Times. The 	 Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval. (c) Operational Ramp Rates and Start-Up Times. The
		submitted Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch	submitted Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch	submitted Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch
		Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the HASP will not be observed. Rather, the ramp of the Non-Dynamic System	Regulating Range win mint the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the <u>HASPFMM</u> will not be observed. Rather, the ramp of the Non-Dynamic	Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the FMM will not be observed. Rather, the ramp of the Non-Dynamic System

Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Imbalance Energy that can be provided within the Dispatch Interval based on the applicable Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is offline, the relevant Operational Ramp Rate function. and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.

- (d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.
- (e) Minimum Run Time and Down Time. The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit or Dynamic Resource Specific System Resource and MSG Configuration.
- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.16.3.
- (g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Intertie Schedules are financially binding and are settled pursuant to Section 11.4.

System Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Imbalance Energy that can be provided within the Dispatch Interval based on the applicable Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is off-line, the relevant Operational Ramp Rate function, and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.

- (d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.
- (e) Minimum Run Time and Down Time. The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit or Dynamic Resource-Specific System Resource and MSG Configuration.
- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.<u>1618</u>.3.
- (g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.4.

Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Imbalance Energy that can be provided within the Dispatch Interval based on the applicable Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is offline, the relevant Operational Ramp Rate function. and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.

- (d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.
- (e) Minimum Run Time and Down Time. The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit or Dynamic Resource Specific System Resource and MSG Configuration.
- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.18.3.
- (g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.4.

(h) Daily Energy use limitation to the extent that Energy	(h) Daily Energy use limitation to the extent that Energy	(h) Daily Energy use limitation to the extent that Energy
limitation is expressed in a resource's Bid. If the	limitation is expressed in a resource's Bid. If the	limitation is expressed in a resource's Bid. If the
Energy Limits are violated for purposes of Exceptional	Energy Limits are violated for purposes of Exceptional	Energy Limits are violated for purposes of Exceptiona
Dispatches for System Reliability, the Bid will be	Dispatches for System Reliability, the Bid will be	Dispatches for System Reliability, the Bid will be
settled as provided in Section 11.5.6.1.	settled as provided in Section 11.5.6.1.	

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both filings have the same effective date)	date (or higher eTariff Record Priority value in the event both filings have the same effective date)	effective tariff record
34.20.2.2	Version 0.0.0 of the tariff			
34.20.2.3	record for Section	34.19.2.2 Computation	34. <u>1920</u> .2.2 Computation	34.20.2.2 Computation
54.20.2.5	34.20.2 as filed with the		Computation	
	Order 764 Market	For each Dispatch Interval, the CAISO will compute updated	For each Dispatch Interval, the CAISO will compute updated	For each Dispatch Interval, the CAISO will compute updated
	Changes Amendment,	Imbalance Energy needs and will Dispatch Generating Units,	Imbalance Energy needs and will Dispatch Generating Units,	Imbalance Energy needs and will Dispatch Generating Units,
	Nov. 26, 2013, Docket	System Units, Dynamic System Resources, Participating	System Units, Dynamic System Resources, Participating	System Units, Dynamic System Resources, Participating
	No. ER14-480, moved the	Load, <u>Reliability Demand Response Resources</u> , and Proxy	Load, and Proxy Demand Resources according to the CAISO's	Load, <u>Reliability Demand Response Resources</u> , and Proxy
	content of former	Demand Resources according to the CAISO's SCED during	SCED during that time period to meet Imbalance Energy	Demand Resources according to the CAISO's SCED during
	Section 34.19.2 to	that time period to meet Imbalance Energy requirements.	requirements. The RTM transactions will be settled at the	that time period to meet Imbalance Energy requirements.
	Section 34.20.2 but did	The RTM transactions will be settled at the Dispatch Interval	Dispatch Interval LMPs in accordance with Section 11.5.	The RTM transactions will be settled at the Dispatch Interval
	not include the changes	LMPs in accordance with Section 11.5.	bispater interval Livit 5 in accordance with Section 11.5.	LMPs in accordance with Section 11.5.
	to this section reflected		34. <u>1920</u> .2.3 Eligibility to Set the Real-Time LMP	
	in Version 5.0.0 for	34.19.2.3 Eligibility to Set the Real-Time LMP	All Generating Units, Participating Loads, Proxy Demand	34.20.2.3 Eligibility to Set the Real-Time LMP
	Section 34.19.2 as filed	All Generating Units, Participating Loads, Proxy Demand	Resources, Dynamic System Resources, System Units, or	All Generating Units, Participating Loads, Proxy Demand
	with the RDRR	Resources, Reliability Demand Response Resources (other	COGs subject to the provisions in Section 27.7, with Bids,	Resources, <u>Reliability Demand Response Resources (other</u>
	Compliance filing, August	than those Reliability Demand Response Resources	including Generated Bids, that are unconstrained due to	than those Reliability Demand Response Resources
	19, 2013, Docket No.	addressed below in this Section 34.19.2.3), Dynamic System	Ramp Rates or other temporal constraints are eligible to set	addressed below in this Section 34.19.2.3), Dynamic System
	ER13-2192, and accepted	Resources, System Units, or COGs subject to the provisions	the LMP, provided that (a) a Generating Unit or a Dynamic	Resources, System Units, or COGs subject to the provisions
	by FERC Order March 28,	in Section 27.7, with Bids, including Generated Bids, that are	Resource-Specific System Resource is Dispatched between	in Section 27.7, with Bids, including Generated Bids, that are
	2014 (146 FERC ¶	unconstrained due to Ramp Rates or other temporal	its Minimum Operating Limit and the highest MW value in	unconstrained due to Ramp Rates or other temporal
	61,233).	constraints are eligible to set the LMP, provided that (a) a	its Economic Bid or Generated Bid, or (b) a Participating	constraints are eligible to set the LMP, provided that (a) a
		Generating Unit or a Dynamic Resource-Specific System	Load, a Proxy Demand Resource, a Dynamic System	Generating Unit or a Dynamic Resource-Specific System
		Resource is Dispatched between its Minimum Operating	Resource that is not a Resource-Specific System Resource, or	Resource is Dispatched between its Minimum Operating
		Limit and the highest MW value in its Economic Bid or	a System Unit is Dispatched between zero (0) MW and the	Limit and the highest MW value in its Economic Bid or
		Generated Bid, or (b) a Participating Load, a Proxy Demand	highest MW value within its submitted Economic Bid range	Generated Bid, or (b) a Participating Load, a Proxy Demand
		Resource, <u>a Reliability Demand Response Resource</u> , a	or Generated Bid. If a resource is Dispatched below its	Resource, <u>a Reliability Demand Response Resource</u> , a
		Dynamic System Resource that is not a Resource-Specific	Minimum Operating Limit or above the highest MW value in	Dynamic System Resource that is not a Resource-Specific
		System Resource, or a System Unit is Dispatched between	its Economic Bid range or Generated Bid, or the CAISO	System Resource, or a System Unit is Dispatched between
		zero (0) MW and the highest MW value within its submitted	enforces a resource-specific constraint on the resource due	zero (0) MW and the highest MW value within its submitted
		Economic Bid range or Generated Bid. <u>A Reliability Demand</u>	to an RMR or Exceptional Dispatch, the resource will not be	Economic Bid range or Generated Bid. <u>A Reliability Demand</u>
		Response Resource that is dispatched in Real-Time by an	eligible to set the LMP. Resources identified as MSS Load	Response Resource that is dispatched in Real-Time by an
		entity other than the CAISO in order to mitigate a local	following resources are not eligible to set the LMP. A	entity other than the CAISO in order to mitigate a local
		transmission or distribution system emergency pursuant to	resource constrained at an upper or lower operating limit or	transmission or distribution system emergency pursuant to
		applicable state or local programs, contracts, or regulatory	dispatched for a quantity of Energy such that its full	applicable state or local programs, contracts, or regulatory
		requirements not set forth in the CAISO Tariff, or to perform	Ramping capability is constraining the ability of the resource	requirements not set forth in the CAISO Tariff, or to perform
		a test, will not be eligible to set the LMP. If a resource is	to be dispatched for additional Energy in target interval,	a test, will not be eligible to set the LMP. If a resource is
		Dispatched below its Minimum Operating Limit or above the	cannot be marginal (i.e., it is constrained by the Ramping	Dispatched below its Minimum Operating Limit or above the
		highest MW value in its Economic Bid range or Generated	capability) and thus is not eligible to set the Dispatch	highest MW value in its Economic Bid range or Generated
		Bid, or the CAISO enforces a resource-specific constraint on	Interval LMP. Non-Dynamic System Resources are not	Bid, or the CAISO enforces a resource-specific constraint on
		the resource due to an RMR or Exceptional Dispatch, the	eligible to set the Dispatch Interval LMP. Dynamic System	the resource due to an RMR or Exceptional Dispatch, the
		resource will not be eligible to set the LMP. Resources	Resources are eligible to set the Dispatch Interval LMP. A	resource will not be eligible to set the LMP. Resources

identified as MCC (and fallen in a manual of the little	Constanting of Output Constants at her the state of 'l' at the	identified as MCC (and falles in a second
identified as MSS Load following resources are not eligible	Constrained Output Generator that has the ability to be	identified as MSS Load following resources are not eligible
to set the LMP. A resource constrained at an upper or lower	committed or shut off within applicable time periods that	to set the LMP. A resource constrained at an upper or lower
operating limit or dispatched for a quantity of Energy such	comprise the RTM will be eligible to set the Dispatch Interval	operating limit or dispatched for a quantity of Energy such
that its full Ramping capability is constraining the ability of	LMP if any portion of its Energy is necessary to serve	that its full Ramping capability is constraining the ability of
the resource to be dispatched for additional Energy in target	Demand. Dispatches of Regulation resources by EMS in	the resource to be dispatched for additional Energy in target
interval, cannot be marginal (i.e., it is constrained by the	response to AGC will not set the RTM LMP. Dispatches of	interval, cannot be marginal (i.e., it is constrained by the
Ramping capability) and thus is not eligible to set the	Regulation resources to a Dispatch Operating Point by RTM	Ramping capability) and thus is not eligible to set the
Dispatch Interval LMP. Non-Dynamic System Resources are	SCED will be eligible to set the RTM LMP.	Dispatch Interval LMP. Non-Dynamic System Resources are
not eligible to set the Dispatch Interval LMP. Dynamic		not eligible to set the Dispatch Interval LMP. Dynamic
System Resources are eligible to set the Dispatch Interval		System Resources are eligible to set the Dispatch Interval
LMP. A Constrained Output Generator that has the ability to		LMP. A Constrained Output Generator that has the ability to
be committed or shut off within applicable time periods that		be committed or shut off within applicable time periods that
comprise the RTM will be eligible to set the Dispatch Interval		comprise the RTM will be eligible to set the Dispatch Interval
LMP if any portion of its Energy is necessary to serve		LMP if any portion of its Energy is necessary to serve
Demand. Dispatches of Regulation resources by EMS in		Demand. Dispatches of Regulation resources by EMS in
response to AGC will not set the RTM LMP. Dispatches of		response to AGC will not set the RTM LMP. Dispatches of
Regulation resources to a Dispatch Operating Point by RTM		Regulation resources to a Dispatch Operating Point by RTM
SCED will be eligible to set the RTM LMP.		SCED will be eligible to set the RTM LMP.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective		[3] Marked Tariff language from [1] added to currently		
	Overlap	date (or lower eTariff Record Priority value in the event both			effective tariff	record	
		filings have the same effective date)					
40.4.6.3.1.1,	Version 5.0.0 of the	40.4.6.3.1.1 Developing the Assessment Model	40.4.6.3.1.1	Developing the Assessment Model	40.4.6.3.1.1	Developing the Assessment Model	
40.4.6.3.2.2	tariff record for Section						
	40.4.6 as filed with the	To develop the base case model for the DG Deliverability	Assessment, the CAISO will include: Phase II w base acilities (i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case; (ii) Those Generating Facilities that have obtained		To develop the base case model for the DG Deliverability Assessment, the CAISO will include:		
	Tariff Clarifications	Assessment, the CAISO will include:					
	Compliance filing, July	(i) The most recent GIP or GIDAP Queue Cluster Phase II			(i) The mo	(i) The most recent GIP or GIDAP Queue Cluster Phase II	
	11, 2013, ER13-1274-	Interconnection Study deliverability power flow base			Interconnection Study deliverability power flow base case, which includes Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full		
	001, did not include the	case, which includes Distributed Generation Facilities					
	changes to this section	of interconnection customers with active					
	reflected in Version	interconnection requests who have requested Full					
	6.0.0 (with an earlier	Capacity or Partial Capacity Deliverability Status;	delivera	bility option under either Section 8.2 of the	<u>Capacit</u>	y or Partial Capacity Deliverability Status;	
	effective date) as filed	(ii) Those Generating Facilities that have obtained	GIP or S	ection 9.2 of the GIDAP;	(ii) Those G	Generating Facilities that have obtained	
	with the Deliverability	Deliverability using the annual full capacity		ission additions and upgrades approved in the		ability using the annual full capacity	
	for Distributed	deliverability option under either Section 8.2 of the		mprehensive Transmission Plan for the most		bility option under either Section 8.2 of the	
	Generation Compliance	GIP <u>, or Section 9.2 of the GIDAP<u>, or equivalent</u></u>	recent Transmission Planning Process cycle;			Section 9.2 of the GIDAP <u>, or equivalent</u>	
	Filing, September 26,			•		(es) under the applicable Utility Distribution	
	2013, Docket No. ER12-	<u>Company tariffs;</u>		Phase I Interconnection Study that have been		<u>ny tariffs;</u>	
	2643-003, and	(iii) Transmission additions and upgrades approved in the		ined to be deliverable in accordance with their		ission additions and upgrades approved in the	
	accepted by FERC letter	final comprehensive Transmission Plan for the most		ed Deliverability Status and were not assigned		mprehensive Transmission Plan for the most	
	Order March 5, 2014.	recent Transmission Planning Process cycle;		ivery Network Upgrade costs in the Phase I		Transmission Planning Process cycle;	
		(iv) Any Generating Facilities in the most recent GIDAP		nnection Study;		nerating Facilities in the most recent GIDAP	
		Phase I Interconnection Study that have been		Network Upgrades that have received		Interconnection Study that have been	
		determined to be deliverable in accordance with their	-	nental approvals or for which Construction		ined to be deliverable in accordance with their	
		requested Deliverability Status <u>(including Distributed</u>		es have commenced;		ed Deliverability Status <u>(including Distributed</u>	
		Generation Facilities of interconnection customers		V amounts of resources interconnected to the		tion Facilities of interconnection customers	
		with active interconnection requests who have		tion system below specific Nodes of the CAISO		tive interconnection requests who have	
		requested Full Capacity or Partial Capacity		led Grid contained in the most recent		ed Full Capacity or Partial Capacity	
		Deliverability Status) and were not assigned any		ission Planning Process base portfolio, except		ability Status) and were not assigned any	
		Delivery Network Upgrade costs in the Phase I		e CAISO will remove each Node (by using a zero		/ Network Upgrade costs in the Phase I	
		Interconnection Study;		ue) located within electrical areas for which		nnection Study; / Network Upgrades that have received	
		(v) Delivery Network Upgrades that have received governmental approvals or for which Construction		st recently completed GIP or GIDAP Phase I or Interconnection Study has identified a need		nental approvals or for which Construction	
		Activities have commenced;		livery Network Upgrade or for which the most	-	es have commenced;	
		(vi) The MW amounts of resources interconnected to the		Phase II Interconnection Study identified and		V amounts of resources interconnected to the	
		dDistribution sSystem below specific Nodes of the		moved a Delivery Network Upgrade to support		bution $\frac{1}{5}$ ystem below specific Nodes of the	
		CAISO Controlled Grid contained in the most recent		ability for MW amounts in the Interconnection		Controlled Grid contained in the most recent	
		Transmission Planning Process base portfolio, except	queue;	asing for www amounts in the interconnection		ission Planning Process base portfolio, except	
		that the CAISO will remove each Node (by using a zero		l distributed generation development based on		e CAISO will remove each Node (by using a zero	
		MW value) located within electrical areas for which		/ amount of distributed generation in		ue) located within electrical areas for which	
		the most recently completed GIP or GIDAP Phase I or		ble Utility Distribution Company and Metered		st recently completed GIP or GIDAP Phase I or	
		Phase II Interconnection Study has identified a need		em interconnection queues including non-net-		Interconnection Study has identified a need	
		for a Delivery Network Upgrade or for which the most		metering resources requesting		livery Network Upgrade or for which the most	
			chergy-			and a method which the most	

recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;

(vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues, including non-netenergy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
(viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
(ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

* * * *

40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner and the CAISO to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase

interconnection through state-jurisdictional interconnection processes;

- (viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
 (iv) Other information that the CAISO, in its reasonable
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

* * * *

recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;

- (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-netenergy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
- (viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

* * * *

40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner-and the CAISO to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase

40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner and the CAISO to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase

I <u>interconnection</u> <u>S</u>tudy results <u>or the equivalent</u> <u>thereof</u> may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

(iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I <u>Jinterconnection <u>So</u>tudy results<u>or the equivalent thereof</u>, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.</u>

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have <u>requested</u> <u>Deliverability Status in the underlying interconnection</u> <u>process and have already received Phase I +interconnection</u> <u>Ss</u>tudy results <u>or the equivalent thereof</u> are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process.

Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to both the applicable Participating Transmission Owner, which shall provide a copy of the application to and the CAISO within five (5) Business Days after the application was submitted.

I Interconnection Study results may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

(iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I Interconnection Study results, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have already received Phase I Interconnection Study results are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process.

Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to both the applicable Participating Transmission Owner and the CAISO.

I <u>linterconnection</u> <u>Ss</u>tudy results <u>or the equivalent</u> <u>thereof</u> may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

(iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I <u>J</u>interconnection <u>Ss</u>tudy results<u>or the equivalent thereof</u>, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have <u>requested</u> <u>Deliverability Status in the underlying interconnection</u> <u>process and have</u> already received Phase I <u>I</u><u>interconnection</u> <u>Sa</u>tudy results <u>or the equivalent thereof</u> are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process.

Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to both the applicable Participating Transmission Owner, which shall provide a copy of the application to-and the CAISO within five (5) Business Days after the application was submitted.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event	effective tariff record
		filings have the same effective date)	both filings have the same effective date)	
43.2.2.1	Version 1.0.0 of the tariff	43.1.2.1 LSE Opportunity to Resolve Collective Deficiency	43. <u>42</u> .2.1 LSE Opportunity to Resolve Collective	43.2.2.1 LSE Opportunity to Resolve Collective
	record for Section 43.2.2	in Local Capacity Area Resources	Deficiency in Local Capacity Area Resources	Deficiency in Local Capacity Area Resources
	as filed with the Capacity			
	Procurement Mechanism	Where the CAISO determines that a need for ICPM Capacity	Where the CAISO determines that a need for I CPM Capacity	Where the CAISO determines that a need for CPM Capacity
	Tariff Amendment, Dec.	exists under Section 43.1.2, but prior to any designation of	exists under Section 43.42.2, but prior to any designation of	exists under Section 43.2.2, but prior to any designation of
	1, 2010, Docket No.	ICPM Capacity, the CAISO shall issue a Market Notice, no	[‡] CPM Capacity, the CAISO shall issue a Market Notice, no	CPM Capacity, the CAISO shall issue a Market Notice , no
	ER11-2256, did not	later than sixty (60) days before the beginning of the	later than sixty (60) days before the beginning of the	later than sixty (60) days before the beginning of the
	include the changes to	Resource Adequacy Compliance Year, identifying the	Resource Adequacy Compliance Year, identifying the	Resource Adequacy Compliance Year, identifying the
	this section (under its	deficient Local Capacity Area and the quantity of capacity	deficient Local Capacity Area and the quantity of capacity	deficient Local Capacity Area and the quantity of capacity
	previous section number	that would permit the deficient Local Capacity Area to	that would permit the deficient Local Capacity Area to	that would permit the deficient Local Capacity Area to
	43.1.2.1) reflected in	comply with the Local Capacity Technical Study criteria	comply with the Local Capacity Technical Study criteria	comply with the Local Capacity Technical Study criteria
	Version 3.0.0 (with an	provided in Section 40.3.1.1 and, where only specific	provided in Section 40.3.1.1 and, where only specific	provided in Section 40.3.1.1 and, where only specific
	earlier effective date) as	resources are effective to resolve the Reliability Criteria	resources are effective to resolve the Reliability Criteria	resources are effective to resolve the Reliability Criteria
	filed with the Tariff	deficiency, the CAISO shall provide the identity of such	deficiency, the CAISO shall provide the identity of such	deficiency, the CAISO shall provide the identity of such
	Clarifications Compliance	resources. Any Scheduling Coordinator may submit a	resources. Any Scheduling Coordinator may submit a	resources. Any Scheduling Coordinator may submit a
	filing, April 8, 2011,	revised annual Resource Adequacy Plan within thirty (30)	revised annual Resource Adequacy Plan within thirty (30)	revised annual Resource Adequacy Plan within thirty (30)
	Docket No. ER11-2574-	days of the <u>date</u> beginning of the <u>Market Notice</u> Resource	days of the beginning of the Resource Adequacy Compliance	days of the <u>datebeginning</u> of the <u>Market NoticeResource</u>
	002, and accepted by	Adequacy Compliance Year demonstrating procurement of	Year demonstrating procurement of additional Local	Adequacy Compliance Year demonstrating procurement of
	FERC letter Order Jan. 12,	additional Local Capacity Area Resources consistent with the	Capacity Area Resources consistent with the Market Notice	additional Local Capacity Area Resources consistent with th
	2012.	Market Notice issued under this Section.	issued under this Section.	Market Notice issued under this Section.
		Any Scheduling Coordinator that provides such additional	Any Scheduling Coordinator that provides such additional	Any Scheduling Coordinator that provides such additional
		Local Capacity Area Resources consistent with the Market	Local Capacity Area Resources consistent with the Market	Local Capacity Area Resources consistent with the Market
		Notice under this Section shall have its share of any ICPM	Notice under this Section shall have its share of any ICPM	Notice under this Section shall have its share of any CPM
		procurement costs under Section 43.7.3 reduced on a	procurement costs under Section 43.78.3 reduced on a	procurement costs under Section 43.8.3 reduced on a
		proportionate basis. If the full quantity of capacity is not	proportionate basis. If the full quantity of capacity is not	proportionate basis. If the full quantity of capacity is not
		reported to the CAISO under revised annual Resource	reported to the CAISO under revised annual Resource	reported to the CAISO under revised annual Resource
		Adequacy Plans in accordance with this Section, the CAISO	Adequacy Plans in accordance with this Section, the CAISO	Adequacy Plans in accordance with this Section, the CAISO
		may designate ICPM Capacity sufficient to alleviate the	may designate ICPM Capacity sufficient to alleviate the	may designate CPM Capacity sufficient to alleviate the
		deficiency.	deficiency.	deficiency.

Section	Explanation of Tariff	[1] Marked Tariff language from filing with earlier effective	[2] Marked Tariff language from filing with later effective	[3] Marked Tariff language from [1] added to currently
	Overlap	date (or lower eTariff Record Priority value in the event both	date (or higher eTariff Record Priority value in the event	effective tariff record
		filings have the same effective date)	both filings have the same effective date)	
43.8.1	Version 1.0.0 as filed with the Capacity Procurement Mechanism	43.7.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan	43.78.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan	43.8.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan
	Tariff Amendment, Dec. 1, 2010, Docket No. ER11-2256, did not include the changes to this section (under its previous section number 43.7.1) reflected in Version 3.0.0 (with an earlier effective date) as filed with the Tariff Clarifications Compliance filing, April 8, 2011, Docket No. ER11-2574- 002, and accepted by FERC letter Order Jan. 12, 2012.	If the CAISO makes ICPM designations under Section 43.1.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the ICPM Capacity Payments for such ICPM designations (for the full term of those ICPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficient Local Capacity Area (s) within a TAC Area. The Local Capacity <u>Area</u> Resource Deficiency under this Section shall be computed on a monthly basis and the ICPM Capacity Payments allocated based on deficiencies during the month(s) covered by the ICPM designation(s).	If the CAISO makes ICPM designations under Section 43.12.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the ICPM Capacity Payments for such ICPM designations (for the full term of those ICPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficient Local Capacity Area (s) within a TAC Area. The Local Capacity Resource Deficiency under this Section shall be computed on a monthly basis and the ICPM Capacity Payments allocated based on deficiencies during the month(s) covered by the ICPM designation(s).	If the CAISO makes CPM designations under Section 43.2.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficient Local Capacity Area (s) within a TAC Area. The Local Capacity <u>Area</u> Resource Deficiency under this Section shall be computed on a monthly basis and the CPM Capacity Payments allocated based on deficiencies during the month(s) covered by the CPM designation(s).
Expected	Version 5.0.0 as filed	- Expected Energy	- Expected Energy	- Expected Energy
Energy	with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14- 480, did not include the changes to this section reflected in Version 3.0.0 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, <u>Reliability Demand Response</u> <u>Resources</u> , and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable Real-Time LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non- Dynamic System Resources is converted into HASP Intertie Schedules. Expected Energy is used as the basis for Settlements.	The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable Real- TimeFMM or RTD LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into HASP IntertieFMM Schedules. Expected Energy is used as the basis for Settlements.	The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, <u>Reliability Demand Response</u> <u>Resources</u> , and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable FMM or RTD LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non- Dynamic System Resources is converted into FMM Schedules. Expected Energy is used as the basis for Settlements.

Attachment B – Marked Tariff Records

Compliance Filing to Reconcile Overlapping Commission-Approved Tariff Records

November 18, 2015

California Independent System Operator Corporation

4.6 Relationship Between CAISO And Generators

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

* * * *

6.5.2.3 Public Market Information

6.5.2.3.1 Demand Forecasts

6.5.2.3.1.1 Beginning seven (7) days prior to the target Day-Ahead Market, and updated as necessary, the CAISO will publish the CAISO Forecast of CAISO Demand.

6.5.2.3.1.2 By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish the updated CAISO Forecast of CAISO Demand.

6.5.2.3.2 Network and System Conditions

By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish known network and system conditions, including but not limited to TTC and ATC, the total capacity of inter-Balancing Authority Area Transmission Interfaces, and the available capacity.

6.5.2.3.3 Ancillary Services Requirements

By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish forecasted Ancillary Services requirements and regional constraints by AS Region.

6.5.2.3.4 Natural Gas and Greenhouse Gas Price Indices

The CAISO will publish relevant natural gas price indices and greenhouse gas price indices when available.

6.5.2.3.5 Extremely Long-Start Unit Commitment

The CAISO will communicate commitment instructions to Scheduling Coordinators for Extremely Long-Start Resources by 3:00 p.m. two (2) days in advance of the Operating Day through a secure communication system.

6.5.2.3.6 Virtual Bid Reference Prices

The CAISO will publish Virtual Bid Reference Prices prior to the applicable reference period for the Virtual Bid Reference Prices.

* * * *

8.2.2 Time-Frame For Revising Ancillary Service Standards

The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC Reliability Standards and any requirements of the NRC. If the CAISO modifies its Ancillary Services standards, including its rules to determine minimum procurement requirements for Ancillary Services, the CAISO will notify Market Participants. The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned <u>Generating Unitresource</u> Outages; (c) analysis of compliance with NERC and WECC Reliability Standards and any requirements of the NRC; (d) analysis of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.

* * * *

8.4.5 Communication Equipment

Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO's secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each resource may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. Ancillary Service Providers whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the resource. Scheduling Coordinators representing Proxy Demand Resources that are scheduled, bid in or under contract shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the Proxy Demand Resource. An Ancillary Service Provider wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the resource providing the Ancillary Service and the CAISO Control Center. Each Ancillary Service Provider must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO standards for dynamic imports from System Resources. Ancillary Service Providers whose resources provide Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide

communications links meeting CAISO standards for imports of Regulation. If any communication system becomes unavailable, the relevant Ancillary Service Provider and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the resource concerned is able to receive and implement Dispatch Instructions.

* * * *

8.9 Verification, Compliance Testing, And Auditing

Availability of contracted and Self-Provided Ancillary Services shall be verified by the CAISO by unannounced testing of Generating Units, Loads and System Resources resources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive deviceresource providing Ancillary Services. Participating Generators, owners or operators of Participating Loads, Scheduling Coordinators representing owners or operators of Proxy Demand Resources, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service is not available in any way. All Participating Generators, owners or operators of Loads, operators of System Units or System Resources and owners or operators of reactive devices Ancillary Service Providers shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or selfprovided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a Generating Unit, System Unit, Load or System Resource, resource which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. Further, all of these requirements apply to each MSG Configuration.

* * * *

8.9.2 Compliance Testing for Regulation

The CAISO may test the capability of any Generating Unit or System Resourceresource providing Regulation by using the CAISO EMS to move that Generating Unit's or System Resource's resource's output over the full range of its Regulation capacity within a ten_-(10) minute period. For a Multi-Stage Generating Resource the full range of Regulation capacity is evaluated at the applicable MSG Configuration.

* * * *

8.10.2 Spinning Reserve

The CAISO shall test the Spinning Reserve capability of a Generating Unit, System Unit or System Resourceresource by issuing unannounced Dispatch Instructions requiring the Generating Unit, System Unit or System Resourceresource to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the Generating Unit, System Unit or System Resourceresource to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the Generating Unit, System Unit or System Resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Spinning capacity evaluated is the range for the applicable MSG Configuration.

8.10.3 Non-Spinning Reserve

The CAISO may test the Non-Spinning Reserve capability of a Generating Unit, Load, System Unit or System Resourceresource by issuing unannounced Dispatch Instructions requiring the Generating Unit, Load, System Unit or System Resourceresource to come on line and ramp up or to reduce Demand to its certified capacity within ten (10) minutes capability. The CAISO shall measure the response of the Generating Unit, System Unit, System Resourceresource or Load to determine compliance with requirements. The Scheduling Coordinator for the Generating Unit, System Unit, Load or System Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.

* * * *

8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity

If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit or Dynamic Resource-Specific System Resource-level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.

* * * *

11.5.2 Uninstructed Imbalance Energy

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, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2. For MSS Operators that have elected net Settlement, the UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2. 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.

11.8.2.1.5 IFM Energy Bid Cost

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific System Resource-level.

11.8.2.1.6 IFM AS Bid Cost

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific System Resource-level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number

* * * *

of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific System Resource level.

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11.8.3 RUC Bid Cost Recovery Amount

For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. <u>The CAISO will include</u> Bid Cost Recovery costs related to Short Start Units committed in Real-Time <u>because</u> as a result of awarded RUC Capacity <u>will be included in RTMRUC</u> Compensation Costs.

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11.8.3.1.1 RUC Start-Up Cost

The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC. The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:

(a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM
 Commitment Period within that RUC Commitment Period.

- (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead Schedule anywhere within that RUC Commitment Period.
- (c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.
- (e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.
- (f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.
- (g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs-earlier than the start of the RUC Start-Up, if the relevant Start-Up is still within the same

Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO RUC Commitment Period.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Marketactually On in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4., except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. - If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG

Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs of the metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.

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11.8.3.1.4.1 RUC Transition Costs Applicability

Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resources is actually transitioning from the "from" MSG Configuration and reaches the Minimum Load of the "to" MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

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11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are calculated combined with RTM Bid Cost and RTM Market Revenue on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement.

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11.8.5 Unrecovered Bid Cost Uplift Payment

Bid Cost Recovery Eligible Resources will receive an Unrecovered Bid Cost Uplift Payment as described in this Section below. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources.

11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive an <u>IFM</u> Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, including resources for MSS Operators that have elected gross Settlement, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2, RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. For MSS Operators that have elected net Settlement, the Unrecovered Bid Cost Surplus for each market for each Trading Hour is the sum of the IFM, RUC, and RTM Bid Cost Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all resources in the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement will receive an Unrecovered Bid Cost Uplift Payment is at the MSS. Level. The MSS IFM, RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all resources in the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement will receive an Unrecovered Bid Cost Uplift Payment if the net of all IFM, RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Surpluses for that MSS over a Trading Day is positive.

11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift Payment

<u>Scheduling Coordinators shall receive RUC and RTM Unrecovered Bid Cost Uplift Payments for a Bid</u> <u>Cost Recovery Eligible Resource, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses</u> calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4, for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Metered Subsystems that have elected net settlement, the Unrecovered Bid Cost Uplift Payment will be the sum, if positive, of the RUC, and RTM Bid Cost Shortfall or RUC, and RTM Bid Cost Surplus for each Trading Hour over the Trading Day for all Bid Cost Recovery Eligible Resources in the MSS.

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30.5.1 General Bidding Rules

(a) All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the RTM for the following Trading Day shall be submitted starting from the time of publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day, and ending seventy-five (75) minutes prior to each applicable Trading Hour in the RTM. Scheduling Coordinators may submit only one set of Bids to the RTM for a given Trading Hour, which the CAISO uses for all Real-Time Market processes. The CAISO will not accept any Energy or Ancillary Services Bids for the following Trading Day between 10:00 a.m. on the day preceding the Trading Day and the publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day;

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(k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit-or-Dynamic Resource-Specific System Resource.

34.7 General Dispatch Principles

The CAISO shall conduct all Dispatch activities consistent with the following principles:

The CAISO shall issue AGC instructions electronically as often as every four (4) seconds from its Energy Management System (EMS) to resources providing Regulation and on Automatic Generation Control to meet NERC and WECC performance requirements;

* * * *

(7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, <u>Reliability Demand</u> <u>Response Resources</u>, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;

* * * *

(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and

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Minimum Run Time and Minimum Down Time at the Generating Unit-or Dynamic

Resource-Specific System Resource.

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34.8 Dispatch Instructions to Units, Participating Loads, and PDRs, and RDRRs

The CAISO may issue Dispatch Instructions covering:

- (a) Ancillary Services;
- (b) Energy, which may be used for:
 - (i) Congestion relief;
 - (ii) provision of Imbalance Energy; or
 - (iii) replacement of an Ancillary Service;
- (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example:
 - (i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria;
 - (ii) Generating Units that can be Dispatched for Black Start;
 - (iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules;
- (d) the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff;
- (e) MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions;
- (f) <u>Dispatch</u> necessary to respond to a System Emergency or imminent emergency;
- (g) Transition Instructions; or
- (h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.18.

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34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating

Loads, Proxy Demand Resources, <u>Reliability Demand Response Resources</u>, Dynamic System

Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources

with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has received a HASP Block Intertie Schedule.

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34.11.3 Transmission-Related Modeling Limitations

The CAISO may also manually Dispatch resources in addition to or instead of resources with a Day-Ahead Schedule or dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related modeling limitations in the Full Network Model. Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section 34.11.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO. <u>All reliability-based Exceptional</u> <u>Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued</u> under this Section 34.9.3.

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34.17.1 Resource Constraints

The SCED shall enforce the following resource physical constraints:

- (a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The more restrictive operating or regulating limit shall be used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.
- (b) Forbidden Operating Regions. When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operation Region. The CAISO will not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval.
- (c) Operational Ramp Rates and Start-Up Times. The submitted Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the FMM will not be observed. Rather, the ramp of the Non-Dynamic System Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Imbalance Energy that can be provided within the Dispatch Interval based on the applicable Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is off-

line, the relevant Operational Ramp Rate function, and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.

- (d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.
- (e) Minimum Run Time and Down Time. The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit or Dynamic Resource-Specific System Resource and MSG Configuration.
- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.18.3.
- (g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly predispatch for each Trading Hour once prior to the Operating Hour. The hourly predispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.4.
- (h) Daily Energy use limitation to the extent that Energy limitation is expressed in a resource's Bid. If the Energy Limits are violated for purposes of Exceptional Dispatches for System Reliability, the Bid will be settled as provided in Section 11.5.6.1.

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34.20.2.2 Computation

For each Dispatch Interval, the CAISO will compute updated Imbalance Energy needs and will Dispatch Generating Units, System Units, Dynamic System Resources, Participating Load, <u>Reliability Demand</u> <u>Response Resources</u>, and Proxy Demand Resources according to the CAISO's SCED during that time period to meet Imbalance Energy requirements. The RTM transactions will be settled at the Dispatch Interval LMPs in accordance with Section 11.5.

34.30.2.3 Eligibility to Set the Real-Time LMP

All Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources (other than those Reliability Demand Response Resources addressed below in this Section 34.19.2.3), Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, a Reliability Demand Response Resource, a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. A Reliability Demand Response Resource that is dispatched in Real-Time by an entity other than the CAISO in order to mitigate a local transmission or distribution system emergency pursuant to applicable state or local programs, contracts, or regulatory requirements not set forth in the CAISO Tariff, or to perform a test, will not be eligible to set the LMP. If a resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP.

Dispatches of Regulation resources to a Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.

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40.4.6.3.1.1 Developing the Assessment Model

To develop the base case model for the DG Deliverability Assessment, the CAISO will include:

- (i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case, <u>which includes Distributed Generation Facilities of</u> <u>interconnection customers with active interconnection requests who have requested Full</u> <u>Capacity or Partial Capacity Deliverability Status;</u>
- (ii) Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP, or Section 9.2 of the GIDAP, or equivalent process(es) under the applicable Utility Distribution Company tariffs;
- (iii) Transmission additions and upgrades approved in the final comprehensive Transmission
 Plan for the most recent Transmission Planning Process cycle;
- (iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status (including Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status) and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study;
- (v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced;
- (vi) The MW amounts of resources interconnected to the dDistribution sSystem below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using

a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery Network Upgrade or for which the most recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;

- (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-net-energy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
- (viii) Any additional information provided by each Utility Distribution Company and Metered
 Subsystem regarding anticipated distributed generation development on its Distribution
 System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

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40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner-and the CAISO to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

(i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase I linterconnection Sstudy results or the equivalent thereof may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I <u>Hinterconnection Setudy</u> results<u>or the equivalent thereof</u>, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have requested Deliverability Status in the underlying interconnection process and have already received Phase I linterconnection Setudy results or the equivalent thereof are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process.

Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to-both

the applicable Participating Transmission Owner, which shall provide a copy of the application to-and the CAISO within five (5) Business Days after the application was submitted.

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43.2.2.1 LSE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources

Where the CAISO determines that a need for CPM Capacity exists under Section 43.2.2, but prior to any designation of CPM Capacity, the CAISO shall issue a Market Notice, no later than sixty (60) days before the beginning of the Resource Adequacy Compliance Year, identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator may submit a revised annual Resource Adequacy Plan within thirty (30) days of the <u>datebeginning</u> of the <u>Market Notice</u>Resource Adequacy Compliance Year demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.

Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any CPM procurement costs under Section 43.8.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate CPM Capacity sufficient to alleviate the deficiency.

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43.8.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan

If the CAISO makes CPM designations under Section 43.2.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE based

on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area. The Local Capacity <u>Area</u> Resource Deficiency under this Section shall be computed on a monthly basis and the CPM Capacity Payments allocated based on deficiencies during the month(s) covered by the CPM designation(s).

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Appendix A

Master Definition Supplement

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- Expected Energy

The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, <u>Reliability Demand Response</u> <u>Resources</u>, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable FMM or RTD LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into FMM Schedules. Expected Energy is used as the basis for Settlements.

Attachment C – Clean Tariff Records

Compliance Filing to Reconcile Overlapping Commission-Approved Tariff Records

November 18, 2015

California Independent System Operator Corporation

4.6 Relationship Between CAISO And Generators

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

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6.5.2.3 Public Market Information

6.5.2.3.1 Demand Forecasts

6.5.2.3.1.1 Beginning seven (7) days prior to the target Day-Ahead Market, and updated as necessary, the CAISO will publish the CAISO Forecast of CAISO Demand.

6.5.2.3.1.2 By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish the updated CAISO Forecast of CAISO Demand.

6.5.2.3.2 Network and System Conditions

By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish known network and system conditions, including but not limited to TTC and ATC, the total capacity of inter-Balancing Authority Area Transmission Interfaces, and the available capacity.

6.5.2.3.3 Ancillary Services Requirements

By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish forecasted Ancillary Services requirements and regional constraints by AS Region.

6.5.2.3.4 Natural Gas and Greenhouse Gas Price Indices

The CAISO will publish relevant natural gas price indices and greenhouse gas price indices when available.

6.5.2.3.5 Extremely Long-Start Unit Commitment

The CAISO will communicate commitment instructions to Scheduling Coordinators for Extremely Long-Start Resources by 3:00 p.m. two (2) days in advance of the Operating Day through a secure communication system.

6.5.2.3.6 Virtual Bid Reference Prices

The CAISO will publish Virtual Bid Reference Prices prior to the applicable reference period for the Virtual Bid Reference Prices.

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8.2.2 Time-Frame For Revising Ancillary Service Standards

The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC Reliability Standards and any requirements of the NRC. If the CAISO modifies its Ancillary Services standards, including its rules to determine minimum procurement requirements for Ancillary Services, the CAISO will notify Market Participants. The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned resource Outages; (c) analysis of compliance with NERC and WECC Reliability Standards and any requirements of the NRC; (d) analysis of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.

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8.4.5 Communication Equipment

Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO's secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each resource may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. Ancillary Service Providers whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the resource. Scheduling Coordinators representing Proxy Demand Resources that are scheduled, bid in or under contract shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the Proxy Demand Resource. An Ancillary Service Provider wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the resource providing the Ancillary Service and the CAISO Control Center. Each Ancillary Service Provider must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO standards for dynamic imports from System Resources. Ancillary Service Providers whose resources provide Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide

communications links meeting CAISO standards for imports of Regulation. If any communication system becomes unavailable, the relevant Ancillary Service Provider and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the resource concerned is able to receive and implement Dispatch Instructions.

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8.9 Verification, Compliance Testing, And Auditing

Availability of contracted and Self-Provided Ancillary Services shall be verified by the CAISO by unannounced testing of resources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any resource providing Ancillary Services. Participating Generators, owners or operators of Participating Loads, Scheduling Coordinators representing owners or operators of Proxy Demand Resources, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service is not available in any way. All Ancillary Service Providers shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a resource which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. Further, all of these requirements apply to each MSG Configuration.

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8.9.2 Compliance Testing for Regulation

The CAISO may test the capability of any resource providing Regulation by using the CAISO EMS to move that resource's output over the full range of its Regulation capacity within a ten (10) minute period.

For a Multi-Stage Generating Resource the full range of Regulation capacity is evaluated at the applicable MSG Configuration.

* * * *

8.10.2 Spinning Reserve

The CAISO shall test the Spinning Reserve capability of a resource by issuing unannounced Dispatch Instructions requiring the resource to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the resource to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Spinning capacity evaluated is the range for the applicable MSG Configuration.

8.10.3 Non-Spinning Reserve

The CAISO may test the Non-Spinning Reserve capability of a resource by issuing unannounced Dispatch Instructions requiring the resource to ramp to its certified capacity within ten (10) minutes. The CAISO shall measure the response of the resource or Load to determine compliance with requirements. The Scheduling Coordinator for the resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.

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8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity

If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.

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11.5.2 Uninstructed Imbalance Energy

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, Reliability Demand Response Resources, 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.

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11.8.2.1.5 IFM Energy Bid Cost

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level.

11.8.2.1.6 IFM AS Bid Cost

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Hour.

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11.8.3 RUC Bid Cost Recovery Amount

For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference

between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. The CAISO will include Bid Cost Recovery costs related to Short Start Units committed in Real-Time because of awarded RUC Capacity in RTM Compensation Costs.

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11.8.3.1.1 RUC Start-Up Cost

The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC. The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:

- (a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period.
- (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead Schedule anywhere within that RUC Commitment Period.
- (c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the

Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.

- (e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.
- (f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.
- (g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO RUC Commitment Period.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disgualified as specified in Section 11.17.2.

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11.8.3.1.4.1 RUC Transition Costs Applicability

Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resource is actually transitioning from the "from" MSG Configuration and reaches the Minimum Load of the "to" MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

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11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are combined with RTM Bid Cost and RTM Market Revenue on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2.

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11.8.5 Unrecovered Bid Cost Uplift Payment

Bid Cost Recovery Eligible Resources will receive an Unrecovered Bid Cost Uplift Payment as described in this Section below. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources.

11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive an IFM Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is positive.

11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive RUC and RTM Unrecovered Bid Cost Uplift Payments for a Bid Cost Recovery Eligible Resource, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4, for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Metered Subsystems that have elected net settlement, the Unrecovered Bid Cost Uplift Payment will be the sum, if positive, of the RUC, and RTM Bid Cost Shortfall or RUC, and RTM Bid Cost Surplus for each Trading Hour over the Trading Day for all Bid Cost Recovery Eligible Resources in the MSS.

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30.5.1 General Bidding Rules

(a) All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the RTM for the following Trading Day shall be submitted starting from the time of publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day, and ending seventy-five (75) minutes prior to each applicable Trading Hour in the RTM. Scheduling Coordinators may submit only one set of Bids to the RTM for a given Trading Hour, which the CAISO uses for all Real-Time Market processes. The CAISO will not accept any Energy or Ancillary Services Bids for the following Trading Day between 10:00 a.m. on the day preceding the Trading Day and the publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day;

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 (k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit.

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34.7 General Dispatch Principles

The CAISO shall conduct all Dispatch activities consistent with the following principles:

 The CAISO shall issue AGC instructions electronically as often as every four (4) seconds from its Energy Management System (EMS) to resources providing Regulation and on Automatic Generation Control to meet NERC and WECC performance requirements;

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(7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;

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(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit.

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34.8 Dispatch Instructions to Units, Participating Loads, PDRs, and RDRRs

The CAISO may issue Dispatch Instructions covering:

- (a) Ancillary Services;
- (b) Energy, which may be used for:
 - (i) Congestion relief;
 - (ii) provision of Imbalance Energy; or
 - (iii) replacement of an Ancillary Service;
- (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example:
 - (i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria;
 - (ii) Generating Units that can be Dispatched for Black Start;
 - (iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules;

- the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff;
- MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions;
- (f) Dispatch necessary to respond to a System Emergency or imminent emergency;
- (g) Transition Instructions; or
- (h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.18.

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34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has received a HASP Block Intertie Schedule.

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34.11.3 Transmission-Related Modeling Limitations

The CAISO may also manually Dispatch resources in addition to or instead of resources with a Day-Ahead Schedule or dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related modeling limitations in the Full Network Model. Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section 34.11.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO. All reliability-based Exceptional Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued under this Section 34.9.3.

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34.17.1 Resource Constraints

The SCED shall enforce the following resource physical constraints:

- (a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The more restrictive operating or regulating limit shall be used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.
- (b) Forbidden Operating Regions. When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operation Region. The CAISO will not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval.

- (C) Operational Ramp Rates and Start-Up Times. The submitted Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the FMM will not be observed. Rather, the ramp of the Non-Dynamic System Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Imbalance Energy that can be provided within the Dispatch Interval based on the applicable Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is offline, the relevant Operational Ramp Rate function, and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.
- (d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.
- (e) Minimum Run Time and Down Time. The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit and MSG Configuration.
- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.18.3.
- (g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-

dispatch for each Trading Hour once prior to the Operating Hour. The hourly predispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.4.

(h) Daily Energy use limitation to the extent that Energy limitation is expressed in a resource's Bid. If the Energy Limits are violated for purposes of Exceptional Dispatches for System Reliability, the Bid will be settled as provided in Section 11.5.6.1.

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34.20.2.2 Computation

For each Dispatch Interval, the CAISO will compute updated Imbalance Energy needs and will Dispatch Generating Units, System Units, Dynamic System Resources, Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources according to the CAISO's SCED during that time period to meet Imbalance Energy requirements. The RTM transactions will be settled at the Dispatch Interval LMPs in accordance with Section 11.5.

34.30.2.3 Eligibility to Set the Real-Time LMP

All Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources (other than those Reliability Demand Response Resources addressed below in this Section 34.19.2.3), Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, a Reliability Demand Response Resource, a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. A Reliability Demand Response Resource that is dispatched in Real-Time by an entity other than the CAISO in order to mitigate a local transmission or distribution system emergency pursuant to applicable state or local programs, contracts, or regulatory requirements not set forth in the CAISO Tariff, or to perform a test, will not be eligible to set the LMP. If a resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP. Dispatches of Regulation resources to a Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.

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40.4.6.3.1.1 Developing the Assessment Model

To develop the base case model for the DG Deliverability Assessment, the CAISO will include:

- The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case, which includes Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status;
- Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP, Section 9.2 of the GIDAP, or equivalent process(es) under the applicable Utility Distribution Company tariffs;
- (iii) Transmission additions and upgrades approved in the final comprehensive Transmission
 Plan for the most recent Transmission Planning Process cycle;

- (iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status (including Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status) and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study;
- (v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced;
- (vi) The MW amounts of resources interconnected to the Distribution System below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery Network Upgrade or for which the most recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;
- (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-net-energy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
- (viii) Any additional information provided by each Utility Distribution Company and Metered
 Subsystem regarding anticipated distributed generation development on its Distribution
 System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

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40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase I interconnection study results or the equivalent thereof may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I interconnection study results or the equivalent thereof, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have requested Deliverability Status in the underlying interconnection process and have already received Phase I interconnection study results or the

equivalent thereof are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process.

Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to the applicable Participating Transmission Owner, which shall provide a copy of the application to the CAISO within five (5) Business Days after the application was submitted.

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43.2.2.1 LSE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources

Where the CAISO determines that a need for CPM Capacity exists under Section 43.2.2, but prior to any designation of CPM Capacity, the CAISO shall issue a Market Notice identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator may submit a revised annual Resource Adequacy Plan within thirty (30) days of the date of the Market Notice demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.

Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any CPM procurement costs under Section 43.8.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate CPM Capacity sufficient to alleviate the deficiency.

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43.8.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan

If the CAISO makes CPM designations under Section 43.2.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resource Deficiency under this Section shall be computed on a monthly basis and the CPM Capacity Payments allocated based on deficiencies during the month(s) covered by the CPM designation(s).

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Appendix A

Master Definition Supplement

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- Expected Energy

The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable FMM or RTD LMP for each Dispatch Interval

of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into FMM Schedules. Expected Energy is used as the basis for Settlements.