



April 11, 2019

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

**Re: California Independent System Operator Corporation
Docket No. ER19-____-000**

**Tariff Amendment to Extend Existing Resource Adequacy
Availability Incentive Mechanism Exemption to Planned
Outages**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) proposes to apply the existing exemption from its Resource Adequacy Availability Incentive Mechanism (RAAIM) across a defined subset of outages, regardless of whether they are forced or planned.¹ RAAIM is the CAISO's tariff-based tool to create financial incentives for resources providing resource adequacy (RA) capacity to meet their availability obligations. The CAISO tariff exempts from RAAIM *forced* outages that relate to a resource's administrative actions, are outside the resource's control, or are necessary to manage a short-term use limitation. The CAISO proposes to expand this exemption to *planned* outages that fall into these same three categories.

Based on the CAISO's intended implementation of this new tariff authority along with other accompanying revisions to the relevant business practice manual (BPM), the CAISO estimates the net impact of this change will be that approximately 1.7% of total outages will gain a RAAIM exemption. This represents a narrow and targeted expansion of the existing RAAIM exemption and enhances RAAIM by aligning exemption rules for outages that are driven from the same factors and differ only on the basis of when they are submitted.

The CAISO respectfully requests that the Commission issue an order accepting the proposed revisions by June 17, 2019, with an effective date for the revisions of June 17, 2019.

¹ The CAISO submits this filing pursuant to section 205 of the Federal Power Act, 16 U.S.C. § 824d, and Part 35 of the Commission's Regulations, 18 C.F.R. Part 35.

I. Background

California's RA program, which the CAISO administers jointly with the California Public Utilities Commission and other local regulatory authorities in the CAISO balancing authority area, seeks to secure sufficient capacity when and where needed to support the safe and reliable operation of the CAISO grid. Through RAAIM the CAISO assesses monthly non-availability charges and makes monthly availability incentive payments to RA resources based on the extent to which they fail either to meet their RA must-offer obligations or provide the CAISO with RA substitute capacity when on outage.²

The CAISO tariff provides several exemptions and exclusions from RAAIM both for categories of resources and defined scenarios.³ Examples of exempt resources include resources below one MW and combined heat and power resources.⁴ Section 40.9.3.4(d) of the CAISO tariff provides a scenario-based exclusion. This provision creates a RAAIM exemption where a RA resource has "a Forced Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual."⁵

The CAISO's BPM for Reliability Requirements defines which forced outage types are RAAIM-exempt under this tariff authority.⁶ Examples of exempt outages include: "Unit Testing" (resource's administration action); "Transmission Induced" (cause outside resource's control); and "Short term use limit reached" (managing short-term use limitation). The same BPM identifies which planned outage types are RAAIM-exempt.⁷ Only one planned outage type ("Off Peak Opportunity") is exempt from RAAIM.

Until relatively recently, excluding planned outages from section 40.9.3.4(d) did not have a material impact because from the time the RAAIM tariff provisions

² Until May 1, 2018, alternative capacity required of a RA resource caused by a planned outage was referred to as replacement capacity rather than substitute capacity. For simplicity, in this filing the CAISO uses the term substitute capacity to correspond to either a planned or forced outage on a RA resource.

³ See CAISO tariff, sections 40.9.2 and 40.9.3.

⁴ CAISO tariff, section 40.9.2(a)(1) (fully exempting "Resources with a PMax less than 1.0 MW"); CAISO tariff, section 40.9.2(b)(1) (exempting combined heat and power resources when providing "local and system Resource Adequacy Capacity" but not flexible RA capacity).

⁵ CAISO tariff, section 40.9.3.4(d).

⁶ Business Practice Manual for Reliability Requirements, section 9.3.3. The table in this section identifies which outage types require substitute capacity. By implication, if an outage holds no substitution requirement then it is also exempt from RAAIM.

⁷ *Id.* at section 9.2.2.

went into effect on November 1, 2016, through May 1, 2018, RAAIM only applied to forced outages. Approved planned outages on RA resources—regardless of their cause—did not expose those resources to RAAIM charges. The CAISO’s tariff filing for the Reliability Services Initiative, Phase 1B and Phase 2, extended RAAIM to both planned and forced outages. Those tariff provisions became effective May 1, 2018. With implementation of this change, RA resources faced exposure to RAAIM for planned outages beyond their control. That RAAIM exposure prompted the CAISO to consider more carefully why section 40.9.3.4(d) applies only to forced outages. This filing results from that consideration.

II. Proposed Tariff Revisions

Through this filing, the CAISO proposes to amend its tariff so it can extend RAAIM-exempt status to all outages “in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation,” regardless of whether the outage was planned or forced. Specifically, the CAISO proposes these modifications to section 40.9.3.4(d) of its tariff (changes highlighted in red):

Exclusions from RAAIM for certain ~~Forced~~ Outage types.
The RAAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an ~~Forced~~ Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.

CAISO has identified no other tariff revisions needed to facilitate this expanded RAAIM exemption.

The most significant impact from this amendment will be for planned outages outside the resource’s control because these are the types of outages impacted by this filing that are most commonly reported to the CAISO. There is a strong policy basis for extending the exemption for these planned outages. RAAIM’s purpose is to “create incentives for resource adequacy resources to participate in the CAISO market consistent with the type of resource adequacy capacity they are providing.”⁸ Where RAAIM imposes charges for outages outside the generator’s control such charges do not create performance incentives. For this reason it is just and reasonable to exempt from RAAIM all outages, whether planned or forced, that fall under section 40.9.3.4(d).

⁸ *Cal. Indep. Sys. Operator Corp.*, Transmittal Letter, at 4, FERC Docket No. ER15-1825-000 (May 29, 2015).

The initial policy document that created the forced outage RAIM exemption recognized this reality and stated the principle that “resource outages will be excluded from the availability incentive process if an outage is beyond the resource’s control.”⁹ This policy guided the current tariff provisions exempting forced transmission-induced outages from RAIM. When the CAISO drafted the tariff provisions for the combined Phase 1B and Phase 2 filing, the CAISO neglected to consider that the outages covered in section 40.9.3.4(d) can occur in both the forced and planned timeframes and that the RAIM exemption in that section should have been expanded to cover planned outages.

The exclusion of planned outages from section 40.9.3.4(d) was not an intentional decision. There is no policy basis for distinguishing the exemption on the basis of whether these outages are submitted in a planned or forced timeframe. In either the planned or forced timeframe, these outages are driven by the same factors the generator cannot control. On the other hand, it is just and reasonable to treat these types of outages the same regardless of when they are submitted because it eliminates any incentive a generator might have to delay reporting such outages merely to obtain a RAIM exemption.¹⁰

Through this filing the CAISO now seeks to remedy that oversight. Because the use-limitation management and administrative action exemptions are part of section 40.9.3.4(d) today, the CAISO finds that the same rationale applies for including those within the planned outage exemption window; these also should have been included when RAIM expanded to include planned outages.

III. Anticipated Impact of Changes to RAIM Exemptions

The CAISO reviewed four-and-a-half years of outage reporting history (October 2014 through March 2019) to gain a better understanding of the likely impacts of this filing. Attachment C to this filing describes the CAISO’s intended implementation of this proposed exemption. That attachment explains how the CAISO plans to amend section 9.2.2 of the Reliability Requirements BPM to identify the specific planned outage types that would be exempt from RAIM and a substitution obligation. Attachment C also explains that the CAISO has reviewed section 9.3.3 of the Reliability Requirements BPM and reassessed what forced outage types today are exempt from RAIM and a substitution obligation. Based on that re-assessment, the CAISO intends to amend section 9.3.3 of the

⁹ Reliability Services Initiative, Draft Final Proposal Addendum at 46 (Feb. 27, 2015). Because the tariff revision proposed in this filing is within the policy approved by the CAISO Board of Governors, the CAISO did not present this filing for the Governing Board’s approval.

¹⁰ The CAISO has made clear that delaying outage reporting to avoid RAIM is not appropriate practice. Business Practice Manual for Outage Management, section 4.5.

Reliability Requirements BPM to no longer make certain forced outage types RAIM exempt.

Table 3, below, reflects outage reporting patterns during the period reviewed.¹¹ Based on an assessment of historic outage data, the CAISO expects that the net impact of this paired set of BPM amendments will be relatively minor, with an approximately 1.77% increase in the proportion of overall outages that are exempt from RAIM. Accordingly, the CAISO does not foresee a reliability impact or degradation of the RA program by making these changes.¹²

¹¹ This data reflects all generator outages and is not limited to outages on Resource Adequacy Resources, nor does it account for the duration or magnitude of the outage. Nevertheless the CAISO believes it provides a relatively reliable view of the likely impacts.

¹² If the CAISO BPM stakeholder revision process results in an outcome different from what is outlined in Attachment C, then the impact of this tariff amendment likely will be different than what is projected in this filing.

Table 3

Historical Outage Reporting (October 2014-March 2019)			
	PLANNED	FORCED	Grand Total
Outage Types Not Impacted by Filing	72.83%	69.12%	69.86%
AMBIENT_DUE_TO_FUEL_INSUFFICIENCY	0.09%	0.19%	0.17%
AMBIENT_DUE_TO_TEMP	4.16%	28.71%	23.85%
METERING_TELEMETRY	2.71%	1.61%	1.83%
MSS_RESERVABLE	0.00%	0.12%	0.09%
PLANT_MAINTENANCE	60.84%	7.54%	18.08%
PLANT_TROUBLE	4.67%	29.44%	24.54%
POWER_SYSTEM_STABILIZER	0.36%	0.23%	0.25%
RAMP_RATE	0.00%	0.83%	0.67%
UNIT_CYCLING	0.00%	0.45%	0.36%
Forced Outage Losing RAAIM Exemption	2.83%	3.80%	3.61%
AVR_EXCITER	0.05%	0.19%	0.17%
ENVIRONMENTAL_RESTRICTIONS	0.27%	1.71%	1.43%
ICCP	0.01%	0.01%	0.01%
RTU_RIG	2.38%	0.44%	0.83%
TRANSITIONAL_LIMITATION	0.07%	1.36%	1.10%
UNIT_SUPPORTING_STARTUP	0.04%	0.08%	0.07%
Planned Outage Gaining RAAIM Exemption	24.34%	27.08%	26.54%
All Use Limit Reached Outage Types	0.00%	4.01%	3.22%
AMBIENT_NOT_DUE_TO_TEMP	13.03%	18.66%	17.55%
NEW_GENERATOR_TEST_ENERGY	0.68%	0.15%	0.26%
TECHNICAL_LIMITATIONS_NOT_IN_MARKET_MODEL	0.00%	0.00%	0.00%
TRANSMISSION_INDUCED	3.90%	2.10%	2.46%
UNIT_TESTING	6.73%	2.15%	3.05%
Grand Total	100.00%	100.00%	100.00%
	n=93,484	n=379,152	n=472,636

At first glance Table 3 suggests the impact of this proposal would be significant. Over the study period, 24% of planned outages were in outage types that would be gaining a RAAIM exemption, while only 3.8% of forced outages were in outage types that would lose a RAAIM exemption. However, there were over four times as many forced outages as planned. Table 4, below represents the absolute numbers involved. This table shows that over the study period, 8,353 [22,752-14,399] net outages were in categories that will gain a RAAIM exemption. These 8,353 outages represent 1.77% of the total 472,636 outages during the study period. The 1.77% figure represents a reasonable

approximation of the extent to which RAAIM exemptions would be extended as a result of this filing.

Table 4

Net Impact of Proposal			
	PLANNED	FORCED	Grand Total
Outage Types Not Impacted by Filing	68,089	262,078	330,167
Forced Outage Losing RAAIM Exemption	2,643	14,399	17,042
Planned Outage Gaining RAAIM Exemption	22,752	102,675	125,427
Grand Total	93,484	379,152	472,636

IV. Stakeholder Engagement

On December 5, 2018, the CAISO released a market notice informing stakeholders of its intent to pursue this filing.¹³ The CAISO followed the market notice with a white paper, published on December 7, 2018, which provided more context and explanation for the proposed change.¹⁴ The white paper proposed to extend the exemption in section 40.9.3.4(d) only to planned transmission-induced outages and did not propose to add other types of planned outages to the RAAIM exemptions in section 40.9.3.4(d). On December 12, 2018, the CAISO held a teleconference with stakeholders to discuss that more limited proposal and elaborate on issues discussed in the white paper; written comments followed approximately one week later.

No parties expressed concern or questioned the CAISO’s conclusion that the RAAIM exemption should apply to all transmission-induced generation outages. The comments mostly were limited to clarifying questions and suggestions to expand the exemption even further than the CAISO proposed. The most noteworthy comment was a suggestion that the CAISO not limit the expanded exemption to planned transmission-induced generation outages but include other planned outages that also are outside the resource’s control. The CAISO considered this feedback and concluded there was no specific reason to limit the expanded exemption only to transmission-induced outages. Instead, the CAISO altered the scope of its proposal so section 40.9.3.4(d) no longer would distinguish between planned and forced

¹³ The market notice is available at: <http://www.caiso.com/Documents/PotentialExemption-Transmission-InducedOutages-PlannedTimeframe-Call121218.html>.

¹⁴ The white paper is available at: <http://www.caiso.com/Documents/WhitePaper-TransmissionInducedGeneratorOutages.pdf>.

outages. The CAISO notified stakeholders of this shift in a revised white paper published March 5, 2019, and held a second stakeholder call on March 12, 2019.

Several parties also raised clarifying questions as to the initial proposal that apply equally to the expanded proposal. For example, one party sought clarification that besides the RAAIM exemption, exempt outages also would not hold a substitution obligation. Section 9.3.3 of the BPM for Reliability Requirements already exempts forced outages that fall under section 40.9.3.4(d) from a substitution requirement. Because the purpose of this filing is to create comparable treatment for planned and forced outages that fall under section 40.9.3.4(d), as discussed in Attachment C, the CAISO intends to change section 9.2.2 of the BPM to note that the newly-exempt planned outages similarly will hold no substitution obligation. Another party suggested that the RAAIM exemption for outages beyond a resource's control apply equally to internal and external RA resources. The exemption in section 40.9.3.4(d) is implemented by identifying specific natures of work in the BPM as exempt. To the extent an external RA resource submits an outage to the CAISO's outage management system that uses such an exempt nature of work, then that resource will hold the same RAAIM exemption as an internal resource.

Beyond the relatively narrow change proposed in this filing, the CAISO is reviewing RAAIM and outage/substitution needs holistically in the RA Enhancements stakeholder initiative.¹⁵ Any additional longer-term changes to the RA program and RAAIM can be addressed as part of that process.

IV. Effective Date

The CAISO respectfully requests that the Commission issue an order accepting the proposed revisions by June 17, 2019, with an effective date for the revisions of June 17, 2019.

¹⁵ Details of the RA Enhancements initiative are available at:
<http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx>.

VI. Communications

Under Rule 203(b)(3),¹⁶ the CAISO respectfully requests that all correspondence and other communications about this filing be served upon:

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VII. 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.

VIII. Contents of Filing

Besides this transmittal letter, this filing includes these attachments:

- | | |
|--------------|--|
| Attachment A | Clean CAISO tariff sheets incorporating this tariff amendment; |
| Attachment B | Red-lined document showing the revisions in this tariff amendment; and |
| Attachment C | Description of Anticipated Business Practice Manual Amendments |

¹⁶ 18 C.F.R. § 385.203(b)(3).

IX. Conclusion

For the reasons set forth in this filing, the CAISO respectfully requests that the Commission issue an order accepting the tariff revisions in this filing effective June 17, and with an order by June 17, 2019.

Respectfully submitted,

/s/ David S. Zlotlow

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Attachment A – Clean Tariff

RAAIM Exemption Extension to Planned Outages

California Independent System Operator Corporation

40.9.3.4 Treatment of Outages

- (a) **RA Substitute Capacity Not Required.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity on an Outage during the Resource Adequacy month that does not require RA Substitute Capacity under Section 9.3.1.3.3.
- (b) **RA Substitute Capacity Required and Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges -
- (1) the RAAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on outage to the extent the resource provides RA Substitute Capacity for that outage as required under Section 40.9.3.6; and
 - (2) the RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity commitment. For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement. For the purposes of this Section 40.9, base ramping resources (as defined in section 40.10.3.2) are considered to be a higher quality of Flexible Capacity Category than either peak ramping resources (as defined in section 40.10.3.3) or super-peak ramping resources (as defined in section 40.10.3.4). Additionally, peak ramping resources (as defined in section 40.10.3.3) are considered to be a higher quality of Flexible Capacity Category than super-peak ramping resources (as defined in section 40.10.3.4).
- (c) **RA Substitute Capacity Required not Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges, the RAAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an outage to the extent the resource does not provide RA Substitute Capacity for the outage as required under Section 40.9.3.6.

- (d) **Exclusions from RAAIM for certain Outage types.** The RAAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.
- (e) **Derates on Generating Units Providing system RA Capacity and Listed Local RA Capacity.** If a Generating Unit providing both system RA Capacity and Listed Local RA Capacity is on Forced Outage, then for purposes of RAAIM and RA Substitute Capacity the quantity of the Forced Outage will be apportioned first to the system RA Capacity provided from that Generating Unit. If the quantity of the Forced Outage exceeds the quantity of system RA Capacity provided by the Generating Unit, then the remainder of the Forced Outage shall be apportioned to the Listed Local RA Capacity provided by the Generating Unit.

Attachment B – Marked Tariff

RAAIM Exemption Extension to Planned Outages

California Independent System Operator Corporation

40.9.3.4 Treatment of Outages

- (a) **RA Substitute Capacity Not Required.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity on an Outage during the Resource Adequacy month that does not require RA Substitute Capacity under Section 9.3.1.3.3.
- (b) **RA Substitute Capacity Required and Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges -
- (1) the RAAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on outage to the extent the resource provides RA Substitute Capacity for that outage as required under Section 40.9.3.6; and
 - (2) the RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity commitment. For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement. For the purposes of this Section 40.9, base ramping resources (as defined in section 40.10.3.2) are considered to be a higher quality of Flexible Capacity Category than either peak ramping resources (as defined in section 40.10.3.3) or super-peak ramping resources (as defined in section 40.10.3.4). Additionally, peak ramping resources (as defined in section 40.10.3.3) are considered to be a higher quality of Flexible Capacity Category than super-peak ramping resources (as defined in section 40.10.3.4).
- (c) **RA Substitute Capacity Required not Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges, the RAAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an outage to the extent the resource does not provide RA Substitute Capacity for the outage as required under Section 40.9.3.6.

- (d) **Exclusions from RAAIM for certain Forced-Outage types.** The RAAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an Forced-Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.
- (e) **Derates on Generating Units Providing system RA Capacity and Listed Local RA Capacity.** If a Generating Unit providing both system RA Capacity and Listed Local RA Capacity is on Forced Outage, then for purposes of RAAIM and RA Substitute Capacity the quantity of the Forced Outage will be apportioned first to the system RA Capacity provided from that Generating Unit. If the quantity of the Forced Outage exceeds the quantity of system RA Capacity provided by the Generating Unit, then the remainder of the Forced Outage shall be apportioned to the Listed Local RA Capacity provided by the Generating Unit.

Attachment C – Description of Anticipated Business Practice Manual Amendments

RAAIM Exemption Extension to Planned Outages

California Independent System Operator Corporation

Attachment C

Description of Anticipated Business Practice Manual Amendments

As discussed in the transmittal letter, section 40.9.3.4(d) of the CAISO tariff contains the enabling language that grants the CAISO authority to exempt certain outages from RAAIM. The CAISO exercises that authority by identifying in the Reliability Requirements BPM the specific outage nature of work categories that, when submitted by a scheduling coordinator to the CAISO's outage management system, trigger a RAAIM exemption. As part of this stakeholder process, the CAISO has identified the changes it intends to make to the Reliability Requirements BPM if the Commission accepts this filing. The CAISO's BPM revision process takes approximately two months for a revision cycle. The CAISO will begin the revision process before it receives a Commission order but the revisions would not be effective until after the revised tariff provision is effective. Based on the current BPM process and assuming the Commission accepts the tariff filing, the CAISO expects the BPM revisions to be effective July 1, 2019. Changes to the RAAIM-exempt status of an outage would not be effective until the effective date of the BPM revision.

A. Planned Outage Impacts

If the Commission accepts this tariff amendment, the CAISO intends to implement the tariff provisions by amending section 9.2.2 of the Reliability Requirements BPM to identify more planned outage types as exempt from RAAIM and a substitution obligation. Table 1, below, reflects the intended implementation. The rows shaded in gray indicate planned outage types that would become exempt from RAAIM. With the exceptions noted in part B of this attachment, this table reflects that the CAISO plans to provide a RAAIM exemption for all planned outage types that today are exempt when reported as a forced outage.

Table 1

Nature of Work – Planned	RAAIM Exempt & Substitution Unnecessary (Status Quo)	RAAIM Exempt & Substitution Unnecessary (Post Filing)
Ambient due to Fuel insufficiency	No	No
Ambient Due to Temperature	No	No
Ambient Not Due to Temperature	No	Yes
Annual use limit reached	No	Yes
AVR/Exciter	No	No
Environmental Restrictions	No	No
ICCP	No	No
Metering/Telemetry	No	No
Monthly use limit reached	No	Yes
New Generator Test Energy	No	Yes
Off Peak Opportunity	Yes	Yes
Other use limit reached	No	Yes
Plant Maintenance	No	No
Plant Trouble	No	No
Power System Stabilizer (PSS)	No	No
Ramp Rate	No	No
RIMS Outage	No	No
RIMS testing	No	No
RTU/RIG	No	No
Short term use limit reached	No	Yes
Technical Limitations not in Market Model	No	Yes
Transitional Limitation	No	No
Transmission Induced	No	Yes
Unit Supporting Startup	No	No
Unit Testing	No	Yes

B. Forced Outage Impacts

In preparing this filing the CAISO also reviewed the table in section 9.3.3 of the Reliability Requirements BPM that reflects the RAAIM exemptions and substitution requirements for forced outages. The CAISO identified six nature of work types that no longer should be exempt under the existing authority granted by section 40.9.3.4(d). The CAISO intends to amend the Reliability Requirements BPM to reflect that the following forced outage types no longer will be exempt from RAAIM:

1. AVR/Exciter
2. Environmental Restrictions
3. ICCP
4. RTU/RIG
5. Transitional Limitation
6. Unit Supporting Startup

Section 3.4 of the BPM for Outage Management describes the purpose of the various generation outage types and Table 2, below, compiles the purpose of the six above-noted outage types.

Table 2

Nature of Work	Purpose of Outage
AVR/Exciter	AVR/exciter is out of service or unavailable
RTU/RIG	RTU/RIG work
ICCP	ICCP work
Environmental Restrictions	Restrictions due to environmental regulations specific to a resource that limits the dispatchable capacity of that unit.
Transitional Limitation	Generator is transitioning through critical operational point and is unavailable to accept dispatches.
Unit Supporting Startup	Generating unit is supporting the start-up of another generating unit.

The “AVR/Exciter,” “RTU/RIG,” and “ICCP” outage types deal with addressing equipment issues under the resource owner’s control. The CAISO has not identified why a resource owner taking an outage to fix such equipment relates to an administrative action like unit testing, is beyond the resource’s control, or involves managing use limitations. Environmental restrictions on a resource’s output arguably are beyond the resource’s control. Those restrictions, however, do not justify a RAAIM exemption because a resource’s regulatory restrictions are known when a resource is listed as RA capacity. The resource

owner may not know exactly when the restriction will bind but it knows that it faces such restrictions. Further, these restrictions stem from a resource's operating characteristics (e.g., a regulatory restriction on emissions only applies to the extent a resource emits). In this sense, the restriction is not exogenous to the resource. Allowing resources facing regulatory restrictions to hold a RAIM exemption would undermine the value of RAIM and the RA program because it permits them to claim RA capacity for capacity that foreseeably will be unavailable. The "Transitional Limitation" and "Unit Supporting Startup" outage types could be viewed as necessary to manage a transitory use limitation. However, where the CAISO refers to managing a short-term use limitation that refers to the RAIM exemption applicable to Use-Limited Resources that qualify for an opportunity cost adder. Neither the "Transitional Limitation" nor the "Unit Supporting Startup" relate to managing such opportunity cost eligible limitations.