



## Stakeholder Comments Template

### Variable Operations and Maintenance Cost Review

This template has been created for submission of stakeholder comments on the Variable Operations and Maintenance Cost Review straw proposal. The proposal, stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at: <http://www.caiso.com/StakeholderProcesses/Variable-operations-maintenance-cost-review>.

Upon completion of this template, please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com). Submissions are requested by close of business on **January 21, 2020**.

Submitted by	Organization	Date Submitted
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**Please provide your organization’s comments on the following issues and questions.**

MRP will refer to the CAISO’s December 19, 2019 *Variable Operations and Maintenance Cost Review Straw Proposal* as the “Straw Proposal” in these comments.

The CAISO’s goal of developing default variable operating (“VO”) and variable maintenance (“VM”) adders that both ensure that generating units recover their variable costs and reduce the need for the CAISO and market participants to negotiate those adders is a laudable one. MRP, however, does not believe the CAISO’s proposal will simultaneously accomplish those two things.

In summary, MRP has these concerns about the CAISO’s proposal:

- The CAISO provides proposed VO and VM adders but does not present sufficient detail for market participants to fully understand how the proposed adders were developed.
- MRP does not share the CAISO’s premise that variable cost adders scale linearly with unit MW size.
- While the CAISO has expanded the technology types (to 17) compared to the current technology types (ten), this distinction may not be granular enough,

depending on how the CAISO addresses complexities like multiple machines in a single Resource ID.

- While the CAISO has proposed a transition to the new approach, MRP wants to ensure that the CAISO will not impose default VO and VM adders on resource owners without allowing adequate time for those owners to negotiate their own adders.

To aid MRP's understanding of the CAISO's proposal, MRP requests that the CAISO confirm:

- That, where the CAISO has proposed adders that allocate variable maintenance costs on both a run-hour basis and a start-up basis (for example, for combined cycle gas turbines) that the CAISO intends the unit to recover its variable maintenance costs through the combined application of *both* adders;
- That, if a generating unit owner found the proposed default adders to be unacceptable and wanted to negotiate adders instead, the generating unit owner could negotiate an adder that applied either on a start-up basis or on a run-hour basis, but did not have to be applied on both a start-up basis and a run-hour basis (*e.g.*, if a CCGT owner wanted to negotiate a VM adder that was incurred only on a start-up basis).

## 1. Proposal Component A: Establish definitions for the O&M cost components

Please provide your organization's feedback on establishing definitions for the O&M cost components as described in section 4.1. Please explain your rationale and include examples if applicable.

The CAISO's proposed definition of VO costs ("...the costs of consumables and other costs that vary directly with the electrical production of a Generating Facility, specifically excluding both maintenance and fuel costs<sup>1</sup>) is reasonable.

The CAISO's proposed definition of VM costs is:

[T]he costs associated with the repair, overhaul, replacement, or inspection of a Generating Facility that adhere to the following conditions:

1. Such costs must be associated with the electrical production of the Generating Facility such that the costs vary with respect to run-hours, electricity output, and/or the startup of the generating unit.
2. Such costs should reflect going-forward costs that are expected to be incurred within the Lifespan of the unit.<sup>2</sup>

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<sup>1</sup> Straw Proposal at page 9.

<sup>2</sup> Straw Proposal at page 10.

MRP finds this to be a reasonable starting point for a definition of variable maintenance costs; however, the second aspect of the proposed definition warrants further discussion. MRP notes that a generating unit's lifespan is a subjective value that is not given to precise quantification and which depends, in part, on the extent and degree to which the unit is maintained. Variable maintenance costs that are correlated to a unit's energy production, run-hour operation or number of starts which keep a unit in reliable operation and that have the corollary, but hard-to-measure, benefit of extending a unit's "lifespan" should not be excluded from the definition of variable maintenance costs.

Please provide your specific feedback on adding the following condition to the definition of Variable Maintenance Costs (as per page 10 of the straw proposal): "*Such costs should not represent significant upgrades to the unit or significantly extend the life of the unit.*"

MRP believes that further discussion regarding this condition is warranted. Whether or not this condition is necessary or prudent depends on parties' interpretation of the terms "upgrades" and "significant". These terms should be more precisely defined before this condition is applied to excluding certain costs from what the CAISO considers to be variable maintenance costs.

Please provide your organization's position on establishing definitions for the O&M cost components as described in section 4.1. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

While MRP supports the CAISO's goal of creating default adders that would reduce the need for and number of negotiated adders, MRP's perception of the proposed default VO and M adders is that the proposed approach is unlikely to reduce the number of company- and unit-specific negotiations.

MRP incorporates by reference the comments that it submitted to the CAISO on the December 26, 2018 Variable Operations and Maintenance Cost Review Report.<sup>3</sup>

## 2. Proposal Component B: Refine Variable Operations Adders

Please provide your organization's feedback on the ISO's proposal to refine variable operations adders as described in section 4.2. Please explain your rationale and include examples if applicable.

MRP's concerns about the CAISO's proposal to create variable operations adders follow:

*First*, MRP requests that the CAISO clarify how generating units that consist of more than a single turbine will be treated. For example, if a generating unit operating under

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<sup>3</sup> The CAISO's December 26, 2018 Variable Operations and Maintenance Cost report is available at <http://www.caiso.com/Documents/VariableOperationsandMaintenanceCostReport-Dec212018.pdf>. MRP's comments are available at <http://www.caiso.com/Documents/MRPComments-VariableOperations-MaintenanceCostReview-DraftStudy.pdf>.

a single Resource ID consists of two smaller turbines, will the CAISO apply the proposed adders on a individual turbine basis, or on an aggregate basis?

*Second*, MRP requests that the CAISO clarify how it will treat multi-stage machines, such as combined cycles. Will the CAISO determine and apply default VO and M adders on a configuration basis, or on a turbine basis?

*Third*, in Table 2 of the Straw Proposal , the CAISO presented proposed VO adders in comparison to the current VO&M adders. Given that the CAISO is proposing to both adjust the underlying cost components of the VO adder, as well as pull out maintenance costs and create new “M only” adders, the comparison in Table 2 seems inapt. Perhaps the CAISO could publish how its proposed VO adders, which reflect the most recent cost survey information, would compare to its current VO&M adders with the minor maintenance piece excluded, so as to put the old and new adders on a comparable “VO” basis?

*Fourth*, In the last round of comments, MRP and a number of other companies expressed concern about whether the proposed VO costs reflected real-world costs of operating generating units in California, including such things as whether the proposed costs reflected California-specific water and chemical costs. MRP’s concerns about whether the proposed VO costs reflect California-specific costs remain.

*Finally*, MRP requests that the CAISO provide additional information to help market participants understand the derivation of the proposed VO adders. Such information would include:

- The number of units in each proposed technology type
- The assumed number of run-hour and starts for each technology type.

Please provide your specific feedback on the updated technology groups proposed in section 4.1. Specifically, please provide your feedback on the relative merits of greater accuracy in the estimation of default VO adders versus the complexity and burden of assigning resources to the more-detailed technology groups.

MRP acknowledges that the CAISO is seeking an efficient middle ground between having too many technology types and too few technology types. Of the two, having too many technology types is the lesser evil.

As noted in MRP’s comments on the December 2018 VO&M cost review, MRP is concerned that not distinguishing between air-cooled units and wet-cooled generating units in technology types is likely to result in VO and M adders that do not apply well to either category.

MRP also requests the CAISO identify into which category aeroderivative combustion turbines fall. MRP assumes these units would fall into the “advanced combustion turbines” category based on the December 2018 cost review, but requests the CAISO confirm this assumption.

Please provide your organization's position on the ISO's proposal to refine variable operations adders as described in section 4.2. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

MRP offers that, at this point, its position on the CAISO's proposal is best characterized as "oppose". The uncertainties regarding (1) the treatment of California-specific costs and (2) the applicability of technology types are too great to allow MRP to offer a "support" position at this time.

### 3. Proposal Component C: Calculate Default Maintenance Adders

Please provide your organization's feedback on calculating default maintenance adders as described in section 4.3. Please explain your rationale and include examples if applicable.

MRP remains skeptical of the CAISO-presented regression analysis that purports to establish a linear relationship between a machine's nameplate capacity and the machine's variable maintenance costs (Straw Proposal figure 3). First, the CAISO presented this regression analysis only for CCGT units but not for other technology types. Further, the relationship between unit size and variable maintenance (or other variable adders) needs to account for things such as operating configurations and how many smaller units make up an aggregate unit. As such, the concerns MRP noted above regarding how configuration and multiple machines making up a larger unit factor into the determination of variable operations adders also apply to variable maintenance adders as well.

For some technology types, the CAISO has proposed "blended" VM adders which are based on both run hours and starts. MRP agrees that a blending of per-start and per-run-hour adders may, for some resources, be the optimal way to recover costs which vary on these two different bases. For example, units may have requirements and costs in their Long-Term Service Agreements that are linked to the number of starts, while other balance of plant costs are better captured on a run-hour basis. MRP notes, however, that whether the blended per-start and per-run-hours adders will be effective will likely depend on the ratio of starts and run-hours – ratios that will change as the unit's operation changes (as, for example, the ongoing transition in CCGT operation from baseload units to cycling units). MRP notes that, given that the CAISO has information on the number of run-hours and starts, it may be optimal for the CAISO and unit owner to negotiate start and run-hour adders that can change as the ratio of starts to run-hour changes. While such adders are more complex than the CAISO proposes in the Straw Proposal, this kind of approach might be more durable and effective than static run-hour-based and start-based rates.

Please provide any additional sources of O&M cost information (cost estimates, OEM recommendations, etc.) which you think would be appropriate for the ISO to review during this stakeholder process. If you would like to provide resource-specific data, the ISO can receive this information confidentially.

MRP is currently considering following up with the CAISO to present confidential information on how the CAISO's proposed VO and VM adders would apply to units in MRP's portfolio.

Please provide your organization's position on calculating default maintenance adders as described in section 4.3. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

As with its position on the default VO adders, MRP would characterize its position on the Straw Proposal – acknowledging that it is a Straw Proposal - as “oppose”.

#### 4. Implementation of Proposal

Please provide your organization's feedback on the suggested implementation details described in section 5. Please explain your rationale and include examples if applicable.

The proposed schedule in the Straw Proposal calls for the CAISO to take its proposal to its Board of Governors in July 2020 and to “go-live” with its proposal in Fall 2020.

The CAISO proposes to allow variable cost adders that are in place by January 1, 2020, to remain in place subject to the conditions discussed in the BPM for Market Instruments.<sup>4</sup> The CAISO also proposes to allow variable cost adders that that will be negotiated under the current VO&M adder and Major Maintenance Adder (“MMA”) paradigm between now and the implementation of this proposal to remain in place for a year following the implementation of this proposal.<sup>5</sup> The last aspect of this proposal suggests that the CAISO intends to leave the current adders in place for no longer than a year (regardless of whether they are in place now or will be negotiated between now and the implementation of this proposal in Fall 2020), then require generating units to adopt the new proposed structure of VO and VM adders. MRP requests that the CAISO confirm MRP's understanding of the proposed transition.

MRP appreciates the CAISO's intent to provide a transition to its proposed VO and VM adder structure. The CAISO must provide adequate time for all market participants that do not want to adopt the proposed default values to negotiate mutually acceptable VO and VM adders and should not, in any instance, force generating unit owners to accept the proposed default adders if they do not wish to do so.

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<sup>4</sup> Straw Proposal at page 20. Footnote 7 references Exhibit 4-2 in the BPM for Market Instruments, which is a list of the Default VO&M values for ten technology types. Section 4.1 of the BPM for Market Instruments also lists a set of conditions and events that could trigger the CAISO reviewing and potentially renegotiating or terminating VO&M adders, including changes in the resource's Scheduling Coordinator, changes to the resource's attributes, changes in operating and maintenance costs, or any other material change. Footnote 7 also references Section L.6 of Attachment L. Section L.6 of Attachment L to the BPM for Market Instruments sets forth scenarios that could lead to the renegotiation of Major Maintenance Adders, which parallel the conditions and events described in Section 4.1.

<sup>5</sup> Straw Proposal at page 20.

Please provide your organization's position on the suggested implementation details described in section 5. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

Support with caveats, as noted above.

**Additional comments**

Please offer any other feedback your organization would like to provide on the Variable Operations and Maintenance Cost Review straw proposal.

MRP appreciates the opportunity to comment on the Straw Proposal.