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 revised straw proposal. The proposal, stakeholder call 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. Submissions are requested by close of business on May 26, 2020.

<table>
<thead>
<tr>
<th>Submitted by</th>
<th>Organization</th>
<th>Date Submitted</th>
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<tbody>
<tr>
<td>Tyler Moore 602-250-2167</td>
<td>Arizona Public Service</td>
<td>5/26/2020</td>
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Please provide your organization’s overall position on the Variable Operations and Maintenance Cost Review revised straw proposal:

- [ ] Support
- [x] Support w/ caveats
- [ ] Oppose
- [ ] Oppose w/ caveats
- [ ] No position

Please provide your organization’s comments on the following issues and questions.

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 (page 7). Please explain your rationale and include examples if applicable.

   APS would like CAISO to strongly consider allowing the inclusion of retirement unit costs that are associated with MWh production, starts, or run-hours to be included as variable maintenance. The charges associated with capital investments in plant and equipment that do not result in betterment and are a result of increased MWh, starts, or run-hours should be recoverable in default and negotiated variable maintenance.
adders. The capital expenditures that are incurred from increased MWh production, starts, or run-hours from participating in wholesale markets should be recovered from market revenues even if they are classified as retirement units. The capital costs that are recovered from customers should reflect only the maintenance activities required to serve native load requirements. APS supports that expenditures related to betterment and those that are fixed regardless of Mwh, run-hours, or starts should not be included. However, only defining costs based on accounting practices for retirement units that vary across utilities, inaccurately excludes costs that are relevant to be recovered as variable expenses.

Please provide your organization’s position on establishing definitions for the O&M cost components as described in section 4 (page 7). (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

Oppose with caveats

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 (page 12). Please explain your rationale and include examples if applicable.

APS supports the refined VO adder values and technology types considered. We would like to note the impact of zero liquid discharge (ZLD) facilities as a potential need to require a negotiated VO adder at plants with this equipment and suggest CAISO consider the option to have “default add-ons” if possible to reflect costs of this equipment without the need to negotiate.

Please provide your organization’s position on the ISO’s proposal to refine variable operations adders as described in section 4 (page 12). (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

Support

3. Proposal Component C: Calculate Default Maintenance Adders

Please provide your organization’s feedback on calculating default maintenance adders as described in section 4 (page 15) as well as in the supporting calculations
posted as a separate file. Please explain your rationale and include examples if applicable.

Please indicate your organization’s preference for Option 1 versus Option 2. The ISO particularly wants to understand stakeholders’ preferences regarding the balance between making assumptions about unit conversions versus the number of technology groups covered by default maintenance adders. If a different option is preferable, please indicate in detail your organization’s preferred option.

APS believes option 1 is best out of the two options proposed. Regarding the sources of data used in option 2, one of which is APS’ 2017 IRP it should be noted that these maintenance values are estimates provided by manufactures and not actual costs incurred by APS with plants residing in Arizona or the west. Thus, one must also evaluate the validity of any external source utilized which becomes more difficult as the amount of sources used increases.

Alternatively, we would like to propose another option not considered in CAISO’s proposal. The alternative option would be to utilize costs from negotiated VO and variable maintenance adders for technology types on file with DMM. Because the current options cross-validate and take the lower of the value calculated from external sources and the DMM interpolated values, is it possible for those technologies with sufficient data to utilize a default generated by the DMM negotiated values? This method has two primary benefits;

1. If the default value is set too low there will be an increase in negotiations which will raise the default value until scheduling coordinators no longer find it necessary to negotiate. The default value can then be reviewed to be lowered as part of the triennial review, since scheduling coordinators won’t have similar motivations to negotiate if the default is too high.

2. The default values do not rely on external sources of data and are reflective of units within the Western Interconnection participating in the CAISO/EIM wholesale market which minimizes the need for assumptions and risks of using invalid data sources. As the resource mix, dispatch trends, and other cost variables change the default will move in-line with these variables, either from negotiations moving the default up, or from the triennial review process lowering the default back down.

With this approach there would be some details to work out surrounding what is sufficient amount of negotiated adders to calculate a default, and how to convert default cost to resource level costs based on size of unit and other factors. But, these aren’t substantially different than the topics required in this initiative under the current options proposed.
If your organization has additional sources of maintenance cost data that it would like the ISO to consider, please provide these sources.

Not at this time.

Please provide your organization’s position on calculating default maintenance adders as described in section 4 (page 15) as well as in the supporting calculations posted as a separate file. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

Oppose with caveats

4. Implementation of Proposal

Please provide your organization’s feedback on the suggested implementation details described in section 4 (page 24). Please explain your rationale and include examples if applicable.

APS has no comment regarding the implementation details.

Please provide your organization’s position on the suggested implementation details described in section 4 (page 24). (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

Support.

Additional comments

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