



Stakeholder Comments Template

Variable Operations and Maintenance Cost Review Working Group – Gas Resources

This template has been created for submission of stakeholder comments on the VOM Cost Review working group for gas resources that was held on July 15, 2019. The workshop, stakeholder meeting presentations, and other information related to this initiative may be found on the initiative webpage at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/VariableOperations-MaintenanceCostReview.aspx>.

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on **July 26, 2019**.

Note: Upon submission, please indicate if you would like your comments to be confidential.

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

- 1. Appendix A to this template contains a list of maintenance activities for gas-resources. What maintenance activities are missing from this list that should be included for consideration?**

Middle River Power (“MRP”) owns and/or manages approximately 2,000 MW’s of renewable and natural gas facilities throughout CA and appreciates the opportunity to provide comments on the Variable Operations and Maintenance Cost Definition Report. MRP supports the effort to provide additional detail and clarity on categories related to variable and major maintenance costs. Maintenance activities vary across natural gas resources and as a result, MRP supports the comments as well as the additional details and categories provided by Portland General Electric Company (PGE). PGE’s clarifications and additions to Appendix A, not included in these comments, provide necessary details to further progress this effort.

- 2. Appendix A also allocates the maintenance activities to three cost components (Major Maintenance [green], Other Maintenance – Variable [yellow], Other Maintenance – Fixed [red]). Please review and note whether you disagree with our proposed allocation and why.**

MRP believes categories outlined by the CAISO are important to the overall process but need additional refinement. MRP agrees with PGE that “maintenance activity costs are most easily classified as costs related to “wear-and-tear” from dispatch and “other” costs that ensure stand-by dispatchability”. Generally, wear-and-tear should be considered a variable cost. Fixed costs are those that ensures reliability and not based on a specific operating profile. However, other factors contribute to classifications including age, equipment type, run requirements and overall maintenance agreements which necessitate the need for additional analysis.

- 3. Please provide any comments or updates you may have to the definitions of Major Maintenance Costs, Variable Operations Costs, and General and Administrative Costs, if any, listed in the July 2, 2019 report found on the stakeholder initiative website.**

MRP endorses the Variable Operations Cost and General and Administrative Cost definitions outlined with the July 2, 2019 report. Dividing Major and Other Maintenance is not always clear cut. As mentioned above, varying operating profiles for specific equipment creates varying costs and should be evaluated accordingly. Relying on historical data and costs is no longer appropriate based in significant operating profile changes in the current market. Further, MRP supports PGE’s designation that failure mechanism may impact maintenance activity. Currently, facility repairs are based upon required per operating hour or per start up, depending on the dominant failure mechanism. Most contracted maintenance agreements have provisions for costs that reflect operating hours or starts to reflect unit degradation.

Since most maintenance strategies are now based on run hours or starts, MRP suggest a detailed analysis should be performed to appropriately differentiate Variable Costs, Major Maintenance and Other Maintenance. Proper treatment for specific categories based on equipment and operating profiles is key to the long-term viability of projects and overall system reliability.

- 4. Please provide any comments or updates to the categories/sub-categories of generation technologies for VOM adders. Should the “Combined Cycle and Steam” or “Combustion Turbine & Reciprocating Engine” categories currently found in the CAISO BPM for Market Instruments be further disaggregated into sub-categories (e.g. CC H Frame, CC F Frame, E Class CT, H Class CT)?**

As mentioned in our prior comments, VOM Costs are highly dependent upon plant configuration, location, chemical usage, water supply, discharge requirements, taxes and many other factors. MRP acknowledges the difficulty of classifying a highly variable group resources into a handful generic cost categories. As an example, two Frame Combined Cycle Gas Turbines (“CCGT”) may have very different costs simply based on their configuration and location. Further, MRP acknowledges costs differ base on unit class and should be accounted for accordingly. MRP highlighted in prior comments there are many variations between project configurations that should be addressed. As a result, MRP supports additional refinement and differentiation of Gas and Steam Turbine Classes as costs are being evaluated.

- 5. Please offer your feedback on structure of this stakeholder initiative and working groups.**

MRP appreciates that the CAISO has taken a detailed look at the process after the prior comments were submitted on the Nexant report and is continuing a detailed and methodical stakeholder process.

Additional comments: MRP has none at this time.