

Variable Operations and Maintenance Cost Review Working Groups - Stakeholder Comments

Submitted by	Company	Date Submitted
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Southern California Edison (SCE) offers the following comments on the California Independent System Operator (CAISO) Variable Operations and Maintenance Cost Review (VOMCR) Working Groups¹.

Working Group 1 - Gas Resources

The maintenance costs excluded from the proposed VOM adder values should be included as a separate adder or included in the proposed VOM. These maintenance costs are incurred while maintaining equipment (preventative and/or corrective) to facilitate satisfactory operating condition. For accurate cost representation, and thus efficient dispatch, these maintenance costs should also be included in the commitment cost calculation.

SCE agrees with the maintenance cost categorization on page 13² in the presentation. SCE suggests adding “Attemperator System including liners and nozzles” as one of the “Other Maintenance – Variable” items. The CAISO should note that the maintenance cost examples provided have mixed characterization (i.e., \$/start, \$/factored fired hour, \$/h, \$/MWh), and

¹ <http://www.caiso.com/Documents/Presentation-VariableOperations-MaintenanceCostReview-GasResourcesWorkingGroup.pdf>
<http://www.caiso.com/Documents/Presentation-VariableOperations-MaintenanceCostReview-StorageResourcesWorkingGroup.pdf>
<http://www.caiso.com/Documents/Presentation-VariableOperations-MaintenanceCostReview-Solar-WindResourcesWorkingGroup.pdf>
<http://www.caiso.com/Documents/Presentation-VariableOperations-MaintenanceCostReview-HydroResourcesWorkingGroup.pdf>
<http://www.caiso.com/Documents/Presentation-VariableOperations-MaintenanceCostReview-OtherResourcesWorkingGroup.pdf>

² <http://www.caiso.com/Documents/Presentation-VariableOperations-MaintenanceCostReview-GasResourcesWorkingGroup.pdf>

thus, a great diversity in dimensions of units of measurement. Given such dimensional diversity, SCE is concerned with the difficulty of the task of calculating an appropriate adder that accurately represents all costs. However, SCE does find the examples to reasonably capture most of the VOM costs experienced by units, and thanks the CAISO for the attention to detail. Finally, SCE agrees that the CAISO should clearly define major maintenance and VOM in the CAISO Tariff and identify other issues with the values.

Working Group 2 - Storage Resources

Since accurate cost representation for NGRs is being considered within the Energy Storage and Distributed Energy Resources initiative, then the VOM adders and other maintenance costs should be properly accounted for within this VOMCR initiative. The other maintenance costs for the Energy Storage system, including, but not limited to, refrigerant refill, coolant refill, fan replacement, pump replacement, bypass valve replacement, door gasket replacement, harness inspection or replacement, torque and calibration checks, cabinet cleaning and cabinet ventilation system inspection should all be considered.

Working Group 3 - Solar and Wind Resources

The maintenance costs including, but not limited to, roof maintenance related to PV system, vegetation management for the ground-mount system, dust cleaning, install software upgrades, replace air filters, inverter inspection and maintenance, panel inspection, panel replacement (breakage, for example, due to foreign objects) and electrical inspection, testing and repairs should all be included. These costs should be included on page 13 in the presentation.