## Comments of Calpine Corporation on

# **VOM Default Costs**

Dated: December 26, 2018 Comments Submitted: January 14, 2019

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## Summary:

Calpine appreciates the opportunity to comment on the applicability of the Nexant study to the CAISO's estimates of Variable Operations and Maintenance expenses (VOM). While Calpine supports the continued use of default VOM values, those suggested in the Nexant study do not appear to reasonably represent the costs of operation in California, and if adopted would result in a significant workload for generators and the CAISO to negotiate resource-specific values.

### **VOM** is not defined in the tariff.

Calpine's initial review of the tariff confirms the observations by Nexant that there is no indisputable definition of (VOM) Costs in the tariff. In fact, Nexant states that there "are no standard definitions for what operations and maintenance costs should be considered variable vs. what costs should be considered fixed." Nonetheless, Nexant concludes that only costs "that directly varies with MWh production" are reasonably considered as VOM. The ISO, in the tariff or BPM should define the cost categories included and excluded from the definition of VOM.

#### "Other Maintenance" Costs are Excluded from VOM

Nexant identifies a class of costs that are excluded from both VOM and Major Maintenance (MM). These costs, which include routine maintenance necessary for continued operation, are real and ongoing costs of prudent and reliable operations that should be considered to be either MM or VOM. The CAISO should consider and clarify the recovery mechanism for these "Other Maintenance" costs.

#### **VOM Estimates are Based on Inapt References.**

Even if one were to agree to Nexant's classification of costs, the PJM and NYISO natural-gas unit cost-of-new-entry reference studies do not appear to reflect significantly higher California costs. Specifically, the report indicates that

these "ISO CONE Reports" were the source of the data for natural gas-fired generation (p12).

This reference is inapt since California has some of the most restrictive environmental standards in the nation. The cost of environmental compliance in California, and the related variable costs are therefore entirely different than those of those eastern states. While Nexant does identify cost differences with and without Selective Catalytic Reduction (SCR) systems, Calpine believes the costs included in the reference studies are inadequate. In addition, Calpine's experience is that water and water treatment costs in California can be multiples of the cost of water elsewhere in the nation. In fact, water by far is the most significant contributor to VOM cost at most CCGT plants.

#### Readily Accessible RMR and More Relevant Data Should Be Used.

Again, even assuming that Calpine agrees with the classification of costs (in spite of "Other Maintenance" costs going unrecovered) the ISO should review the VOM in the negotiated RMR contracts<sup>1</sup> for three Calpine units as a litmus test for the reasonableness of the Nexant estimates.

The settled VOM for these units is based on historic costs and significantly higher than the costs reflected in the Nexant study. These costs are \$1.52/MWh for a CCGT which is roughly 6 times the SCR costs represented by Nexant. The approved VOM for Calpine's aeroderivative combustion turbines (LM6000) were \$2.59 and \$4.16/MWh, respectively, which is twice the Nexant estimate and not far from the current tariff VOM rates for that technology.

#### The CAISO Should Maintain the Negotiated Option

Calpine has collaborated with the ISO to establish negotiated VOM rates for a limited set of resources, including our geothermal units at the Geysers. The ISO should clarify that it will honor these previously negotiated rates and should allow them remain in place without disturbance.

However, if the Nexant estimates are adopted as default values, the ISO should be prepared to negotiate VOM costs for virtually every gas-fired resource and potentially all of the 800 generators in California. It seems quite clear to us that the Nexant estimates will require that all of Calpine's units be individually negotiated.

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<sup>&</sup>lt;sup>1</sup> The values for VOM can be found in the settlement agreements filed in dockets ER18-240 and ER18-230