Effective Flexible Capacity Ratings Process Clarification

Submitted By	Company Name	Date
Nuo Tang	San Diego Gas & Electric	May 28, 2019

SDG&E appreciates the opportunity to comment on this initiative.

Proposed Tariff Modifications

SDG&E appreciates the CAISO's goal to ensure clarity in its Tariff language but notes that the CAISO has traditionally left such clarifications to the business practice manuals (BPM). As such, SDG&E recommends that the CAISO to create BPM language to ensure market participants can understand how the Tariff should be implemented. SDG&E believes that the clarification to the formula of resources with start-up time less than or equal to 90 minutes may have been unnecessary if the BPM included the formulas. As such, SDG&E believes the CAISO should develop more robust BPM language for effective flexible capacity to complement its Tariff sections.

SDG&E recommends that CAISO to indicate that sufficient physical storage capacity for hydroelectric generating units should be 6 hours or more per day. As currently drafted, it is unclear if the 6-hour requirement spans a day, week or month. Additionally, it is unclear the impact to the EFC value for hydro resources based on the CAISO's proposed EFC calculation change. As the CAISO notes, currently the EFC is determined based on the amount of capacity from which the resource can produce energy over a 6-hour period based on the physical storage capacity, not exceeding NQC. The CAISO proposes to change the methodology for Hydro resources to use the general formula of other dispatchable resources dependent on the 90-minute start up time. As such, the EFC value is no longer tied to the resource's storage capacity and may result in a higher EFC value due to the ramp rate and not limited by storage capacity. SDG&E is uncertain if the CAISO proposal will achieve its intended goal.

Proposed Formula for Battery Calculation

The CAISO proposes a new EFC calculation for non-Regulation Energy Management batteries that is different than the current generic EFC calculation. This calculation is more aligned with the operational characteristics of energy storage resources. SDG&E believes this new formula is inconsistent with the existing Tariff language and may require Tariff modifications. Specifically, the current Tariff language in Section 40.10.4.1 mentions "the MW output range the resource can provide over three hours of charge/discharge while constantly ramping." The new formula includes a variable of charging efficiency not defined in the Tariff and does not limit the EFC to be within a three hour window. SDG&E requests the CAISO to include this change as part of its Tariff modification to FERC.

Additionally, SDG&E is concerned that such a change in the EFC would also impact the RA Availability Incentive Mechanism settlement calculation. The CAISO has not demonstrated that the current RAAIM methodology can account for the potential doubling of the EFC value of a resource and a bidding of such a resource. SDG&E requests the CAISO to provide market participants with a working example of how

RAAIM would be settled if this proposal were implemented along with an implementation plan to allow for market simulation.