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Flexible Resource Adequacy Criteria Must Offer Obligation Phase 2 – Sept 2017 Workshop

SDG&E appreciates the CAISO holding the FRACMOO 2 workshop on September 26, 2017. SDG&E provides the following comments to help develop the proposal for the longer-term solution to flexible needs.

While the presentation during the workshop indicated that ramping needs have increased and are expected to increase, it is unclear which need or product, the portfolio will be deficient respective to the CAISO forecast. This is a key objective that's identified by the CAISO in page 5 of the presentation. Understanding the deficiencies will provide the incentives for resources to be built and enable retention of the existing resources. For example, the CAISO notes its CPS1 score is trending down. However, the CAISO did not provide an idea for when the CPS1 score will consistently be below 100%. Therefore, SDG&E does not understand if the CPS1 score trend is in urgent need of fixing or several years out and would benefit from longer term fixes.

SDG&E requests the CAISO to provide additional details for why range of dispatched regulation decreased from 2016 to 2017. What events occurred during April to December 2016 caused the range to decrease.

SDG&E reiterates its recommendation for the CAISO to split the discussion into three parts.

1. Flexibility assessment
2. Energy market solutions
3. Capacity market solutions

Flexibility assessment

SDG&E requests the CAISO to be clearer in its flexibility assessment with regards to inflexible resources. Many renewable resources are now bidding into the CAISO markets. Does the CAISO exclude these renewable resources from the net load calculation? Are the pmins of long start resources part of the refined equation? What are the flexible capacity needs during hours of over generation? The CAISO should also provide graphs depicting a spring day where the CAISO experiences over-generation as well as long ramp times to provide a full picture of the challenges.

Because the EFC of certain resources, such as energy storage, are limited to the NQC; the CAISO may be overstating the forecasted minimum net load and undervaluing the portfolio of resources that provides EFC. SDG&E recommends the CAISO to consider whether the charging portion of resource should be

included in the assessment as the charging portion would raise the minimum net load of the day. The EFC volume or generation output would help meet the ramp as renewable production decreased throughout the day.

Energy market solutions

SDG&E believes the CAISO must come up with solutions in the energy markets to address both downward and upward flexibility. The day-ahead market forecast results only in hourly blocks while the 15 minute market results are not hourly. The CAISO should consider 15 minute day-ahead awards so that the deviation to the FMM is closer.

The CAISO should also revisit lowering the bid floor to provide additional market signals to reduce the amount of self-scheduled generation in day-ahead. This should help reduce the over-generation concerns the CAISO may face as more renewables are installed. The CAISO should not be curtailing renewable generation because the CAISO is unable to manage the optimization between fossil based must-take generation. Rather, the CAISO should be optimizing the fleet and provide economic signals for resources to not generate.

The CAISO notes that forecast error between post-IFM may only be addressed by resources available in real-time. SDG&E requests the CAISO to provide information on whether insufficient resources are actually unavailable for CAISO to dispatch in real-time and when the CAISO expects to see such deficiencies occur in the future where it may have to take backstop procurement action through RMR or CPM. This would provide stakeholders a perspective of how big the problem is currently and in the future.

Capacity market solutions

SDG&E disagrees with the CAISO that the flexible capacity need should be measured using a non-coincident day. There is no rational reason to procure more flexible RA than needed in one single day. The CAISO's planning criteria is to meet RA needs in one day, not the difference of max and min of an entire month. If the CAISO's objective for FRACMOO 2 is to develop an efficient linkage between RA and energy market, this does not accomplish that goal.

SDG&E believes the proposed products are too vague at this point and additional opportunities must be provided to allow discussion. SDG&E does not understand whether the DA product's self-schedule into RTM helps or hurts the CAISO's uncertainty and forecast error. Why do neither the 15 minute nor 5 minute products count towards regulation? What are the requirements and MOO for the regulation product?

SDG&E believes a framework that would be submitted into the CPUC proceeding should include well documented and transparent reliability study methodology, detailed definition of capacity products to be procured, how such products will be dispatched to meet the needs, how stakeholders would have certainty the procured portfolio meets the needs in the year-ahead and month-ahead showings, what

changes must the CAISO make in its processes to accommodate for these new products and how will the CAISO address existing contracts procured for the existing flexible RA paradigm.

SDG&E believes the solution must be a package of changes and not just changes to the capacity product itself. Without changes to the CAISO's energy market, the CAISO will not resolve the issues by procuring more unneeded capacity. SDG&E recommends the CAISO to hold additional workshops to discuss details of the CAISO's concepts and vision.