August 24, 2017

From: Henry McIntosh, SDG&E

To: Kim Perez, CAISO

Subject: SDG&E's Comments on Methodology Discussion in the TEAM Documentation Update (August 10, 2017)

Thank you for the opportunity to comment.

Slide 14 in the August 10, 2017 presentation, "Economic Planning- TEAM Overview and Review of Documentation Update" discusses the benefit evaluation of "Owned ... wind and solar resources under contract with an ISO load serving entity to meet the state renewable energy goal." In the second bullet, the presentation continues with a discussion of the same treatment for "…other generators under contract of which the information is available for [the] public…." This language is clear with respect to existing resources and planned resources for which a Purchase Power Agreement (PPA) exists, but leaves an ambiguity for future resources where no PPA exists.

SDG&E reiterates its view that generic renewable resource additions included in study cases to meet CAISO Load Serving Entities' (LSEs) Renewable Portfolio Standard (RPS) requirements, will be contracted to CAISO LSEs. Accordingly, these renewable resources should not be treated as "merchant" generators and the producer surplus associated with these generators should be credited to CAISO LSEs when computing the Net Consumer costs for each study case. Failure to treat this producer surplus as accruing to the benefit of CAISO consumers can significantly distort economic comparisons between cases, especially where there are a large number of generic resources with very low or even negative variable costs (since the magnitude of the producer surplus for these resources is generally large compared to conventional fossil-fired plants).

As a general matter, SDG&E does not believe it is necessary to know the particulars of Purchase Power Agreements (PPAs) between a renewable resource owner and a CAISO LSE in order to determine the approximate amount of producer surplus that will be credited to CAISO LSEs. Rather, it should be assumed that all of the producer surplus accrues to the benefit of CAISO LSEs in exchange for a fixed $/MWh payment which covers the renewable resource's projected capital costs (including a return on investment), fixed O&M costs and variable O&M costs (if any). Public estimates of these costs for various years in the future are available. This approach obviates the need to identify counterparties and to obtain copies of PPAs.

Based on our review of the CAISO's current GridView production cost model, it appears that the CAISO is, in fact, treating the producer surplus from generic renewable resource additions as accruing to the benefit of CAISO consumers. If this modeling is consistent with how the CAISO intends to treat the producer surplus from generic resources in its study work going forward, SDG&E recommends that the CAISO clarify its TEAM documentation accordingly.

SDG&E also suggests that CAISO make generic replacement or refurbishment assumptions for those renewable resources which reach the end of their economic life during the study horizon. Again, it is not necessary to know the particulars of a PPA, or even whether a PPA exists, in order to apply these assumptions.

We note that where the fixed costs of renewable resources are identical between cases, it is not necessary to project these fixed costs since the delta between cases will be zero.

Finally, SDG&E agrees with the list of potential economic benefits that should be considered when determining Net Consumer Costs (e.g., capacity benefits such as transmission additions that reduce Local Capacity Requirements (LCRs) or generation additions that count towards LCRs or System capacity requirements, transmission additions that provide deliverability benefits, etc.).