

**COMMENTS OF THE STAFF OF THE
CALIFORNIA PUBLIC UTILITIES COMMISSION
ON THE CALIFORNIA TRANSMISSION PLANNING GROUP'S
DEVELOPMENT OF A 2011 STUDY PLAN**

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June 2, 2011

Introduction

On March 14, 2011 The Staff of the California Public Utilities Commission (CPUC Staff) submitted comments on the California Transmission Planning Group's (CTPG) development of a 2011 study plan. Those comments included the request that resource cases studied by the CTPG this year should include renewable resource scenarios developed and utilize for the CPUC's Long Term Procurement Plan (LTPP) proceeding. These CPUC cases provide the foundation for the California Independent System Operator's (CAISO) current 33% RPS integration studies and are expected to be incorporated into the CAISO's Transmission Planning Process (TPP) for the 2011-2012 Transmission Plan cycle. Regarding another topic, CPUC Staff comments to the CTPG in March also requested reporting of generator capacities and loading levels used in CTPG power flow and stability studies, aggregating generators in an appropriate and informative manner. This would facilitate assessment and comparison of assumptions and results, not only among different CTPG study cases, but especially relative to other studies, such as the CAISO's TPP and integration studies, as well as TEPPC studies.

In responding to CPUC Staff comments from March, the CTPG requested certain clarifications regarding the above comments, and CPUC Staff's comments below provide that clarification.

Simultaneous Output Assumed for Distributed PV and Other Renewable Resources

In responding to CPUC Staff's request that the CTPG study plan for 2011 include renewable resource cases developed for the CPUC's LTPP proceeding and utilized in CAISO studies, the CTPG stated that "... *if the CTPG decides to undertake an evaluation of the LTPP's "Environmentally-Constrained" generation development scenario [which includes high levels of distributed PV generation] it will be necessary to determine what the expected simultaneous*

output of these resources will be for the month and hour the CTPG chooses to simulate in its power flow studies. The CPUC staff's assistance in defining the simultaneous output of these resources would be appreciated."

CPUC Staff recommends that for determining the appropriate level (and probability level) of simultaneous output to be assumed for distributed PV and in fact for all solar and wind resources, the CTPG should especially rely on detailed representation of hourly and intra-hourly output patterns developed for the CAISO's 33% RPS integration study. Additionally, implementation of the CPUC's Environmentally Constrained (high-DG) case in the CAISO's TPP should inform the CTPG's modeling of DG locations. CPUC staff would like to be included in discussions with CAISO and CTPG regarding how the above information will be used for transmission planning studies.

Transparent and Useful Reporting of System Resource Mix and Dispatch

In March, CPUC Staff requested that for its study cases the CTPG provide a synopsis of the generation mix and its utilization (e.g., generator injection levels in power flow cases) to facilitate stakeholder understanding of the kind of generation futures being represented and how these futures compare to assumptions and results in other studies such as the CAISO's TPP and integration studies, and also TEPPC studies. The CTPG Technical Study Team then requested CPUC Staff provide "*suggestions as to how 'within-California' areas should be defined for purposes of aggregating the technology-specific generation output modeled in the CTPG's power flow cases.*"

CPUC Staff recommends that generation capacities and injection levels in power flow cases be reported at a level of aggregation corresponding to those aggregations used in the CAISO's 33% RPS integration study and more generally used to structure TEPPC west-wide data. Under this approach, for reporting purposes generators would be aggregated into 8 areas within California corresponding to 8 "load bubbles" as follows: PG&E Bay, PG&E Valley, SMUD, Turlock ID, SCE, LADWP, SDG&E and Imperial ID. Furthermore, transmission flows would be reported for interfaces among these 8 areas and also between each of these 8 areas and surrounding out-of-state "load bubbles" as defined in the TEPPC data base, such as BPA, Pacificorp West, AZ Public Service, and Salt River Project (e.g., BPA-to-PG&E Valley flow). If

ongoing study results and their assessment indicate that further breakdown would be useful, such as to represent certain local areas, this refinement could be added.

Finally, a technology breakdown might include: nuclear, combined cycle, simple cycle combustion turbine, fossil steam, hydro, pumped storage, wind, solar thermal, solar PV, other renewable and other.

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