BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.	Rulemaking 16-02-007 (Filed February 11, 2016)

REPLY COMMENTS OF ORMAT TECHNOLOGIES, INC. ON PROPOSED DECISION ADOPTING PREFERRED SYSTEM PORTFOLIO AND PLAND FOR 2017-2018 INTEGRATED RESORCE PLAN CYCLE

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COMMENTS OF ORMAT TECHNOLOGIES, INC. ON PROPOSED DECISION OF ALJ FITCH ADOPTING PREFERRED SYSTEM PORTFOLIO AND PLAN FOR 2017-2018 INTEGRATED RESORCE PLAN CYCLE

In accordance with Rule 14.3 of the Commission's Rules of Practice and Procedure, Ormat Technologies, Inc. (Ormat) hereby submits these reply comments on the proposed decision (PD) of Administrative Law Judge Fitch, dated March 19, 2019.

General Comments

Ormat is pleased that most commenters support the use of the revised Reference System Portfolio as the 2017-2018 Preferred System Portfolio. Our reply comments focus on issues regarding resource adequacy deliverability and the replacement of capacity due to the retirement of the Diablo Canyon Nuclear Power Plant.

Mischaracterization of the implications of Full Capacity deliverability versus Energy Only status

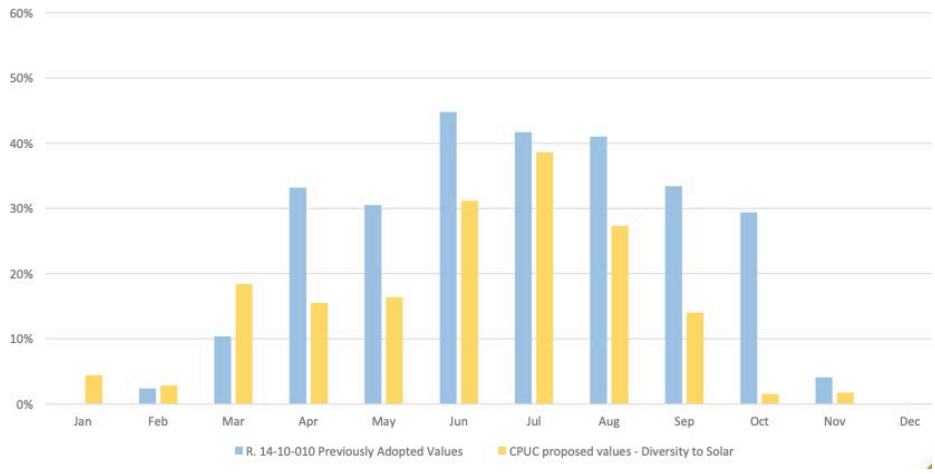
One of the tenets of the model used to develop the proposed Preferred System Portfolio and Plan is the intent to maximize use of the current transmission system by utilizing Energy Only (EO) Resource Adequacy status when it is sufficient to access the generation and thus avoid costly transmission upgrades needed to provide Full Capacity Deliverability Status (FCDS). Several parties objected to this intent or suggested that it would be commercially untenable.

First Solar[1] and SEIA[2] incorrectly characterizes EO interconnection as proffering an inferior status to the resource, making it "non-firm power." In fact, deliverability status is **not** considered by the CAISO in the actual operation of the transmission system. The only function of FCDS is to determine eligibility to provide Resource Adequacy capacity. Any transmission congestion in resource scheduling would be resolved in the same way as part of the congestion management process irrespective of the deliverability status of the resources involved. In other words, EO does not provide inferior access to the transmission grid; it is not non-firm power. Indeed, contrary to First Solar's assertion[3], EO status does not increase the "risk of curtailment" versus FCDS.

The related concern expressed that LSEs are unwilling to contract with EO resources has been generally true in the past. However, the conversion to Effective Load Carrying Capability (ELCC) for determining Net Qualifying Capacity (NQC) for solar and wind generation is substantially reducing the capacity value of utility-scale PV generation. As noted in the Energy Division ELCC proposal attached to a February 13, 2019, ALJ Ruling in R.17-09-020,[4] changing net load conditions have led to a reduction in the capacity value of solar PV as shown in the Figure 1 below. To the extent this modification is adopted, the RA value of a given amount of solar capacity would be significantly reduced in most months, reducing the value of requiring FCDS for solar resources and the value of transmission upgrades needed to provide that FCDS.

[1] First Solar Comments on Proposed Decision at 4
[2] SEIA Comments of Proposed Decision at 4
[3] First Solar Comments at 5
[4] See http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M265/K376/265376517.PDF

Figure 1 - Proposed Monthly Solar ELCCs[5]



By acknowledging its intent to prefer that high load factor resources receive limited FCDS capacity, the PD makes a reasonable differentiation.

> Both SEIA[6] and LSA[7] object to the PDs finding that
>
> [t]o the extent possible, new geothermal and wind resources were changed to be fully deliverable since these are higher capacity value resources that would typically bid into resource solicitations as providing resource adequacy.[8]

The PD's finding that these resources have "higher capacity value" is quite reasonable. A base load geothermal resource of a given size delivers the same amount of renewable energy as a solar PV resource three times larger, while using a third of the transmission capacity. Thus, from a capacity perspective, the geothermal resource does provide a higher value – more Megawatt hours per MW of capacity – than a comparable solar PV resource.

Resource considerations for the replacement of Diablo Canyon are timely and important.

[5] Energy Division Proposal presentation at 16
[6] SEIA Comments at 4
[7] LSA Comments at
[8] PD at 117

A number of parties[9] expressed support for the PD's finding that replacement for the output of Diablo Canyon should be incorporated in future IRPs. Expanding the obligation to all LSEs within the CAISO, as proposed by PG&E[10], may be a reasonable revision to the PD. Whichever entities are responsible for identifying GHG-free replacement for Diablo Canyon, that replacement should take the baseload benefits of replacement into account.

Conclusion

Ormat appreciates the opportunity to provide these replies to comments responding to the March 18, 2019 proposed decision regarding the 2017-2018 IRP cycle.

Respectively Submitted,

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[9] Joint Parties, GPI, CEERT and PG&E
[10] PG&E Comments on PD at 7