

**COMMENTS OF THE STAFF OF THE CALIFORNIA
PUBLIC UTILITIES COMMISSION
REGARDING THE 2018-2019 TRANSMISSION PLANNING PROCESS
PRELIMINARY POLICY AND ECONOMIC ASSESSMENT FOLLOWING THE
NOVEMBER 16, 2018 STAKEHOLDER MEETING**

November 30, 2018

The Staff of the California Public Utilities Commission (“CPUC Staff”) appreciates this opportunity to provide comments on the 2018-2019 Transmission Planning Process Preliminary Policy and Economic Assessment discussed at the California Independent System Operator Corporation’s (CAISO) November 16th, 2018 stakeholder meeting. Our comments address the following topics:

1. CPUC Staff requests that CAISO share with stakeholders additional details regarding the proposed production cost modeling of large storage.
2. CPUC Staff looks forward to coordinating with CAISO on allocating to specific locations the 2000 MW of energy storage included in the CPUC transmitted IRP 42 MMT portfolio to allow for its inclusion in future TPP analysis.
3. CPUC Staff would like to bring to CAISO’s attention that slide 18 contains an inaccurate statement regarding the portfolios provided by IRP to CAISO for TPP purposes.
4. CPUC Staff would like to highlight that the MIC data used to represent import levels is temporally inconsistent with the Highest System Need Scenario under the new deliverability assessment methodology.
5. CPUC Staff greatly appreciates CAISO’s expansive effort on studying LCR areas and congratulates CAISO on producing an impressive amount of insightful analysis.

Complete comments are found on the following pages.

1. CPUC Staff requests that CAISO share with stakeholders additional details regarding the proposed production cost modeling of large storage.

CAISO states in slide 10/312 that, *“Production cost modeling benefits of large storage was being considered as a potential sensitivity – but now required to address certain (system) economic study requirements.”*

CPUC staff acknowledges that additional study of storage can demonstrate new meaningful results. However, CPUC staff seeks to better understand the objective of this production cost modeling work and how the study results are intended to be used in this or future TPP process or various procurement process. CPUC staff requests that CAISO share additional information regarding this PCM work with stakeholders prior to the finalization of draft TPP results, which are to be presented at the January 31, 2019 CAISO TPP stakeholder meeting. Specifically, CPUC staff request that the information address modeling assumptions, type of outputs that will be produced, the timeline of the effort, and the purpose/use cases of this work. Additionally, it is unclear to CPUC staff whether this study is intended only for planning purposes or for procurement authorization.

2. CPUC Staff looks forward to coordinating with CAISO on allocating to specific locations the 2000 MW of energy storage included in the CPUC transmitted IRP 42 MMT portfolio to allow for its inclusion in future TPP analysis.

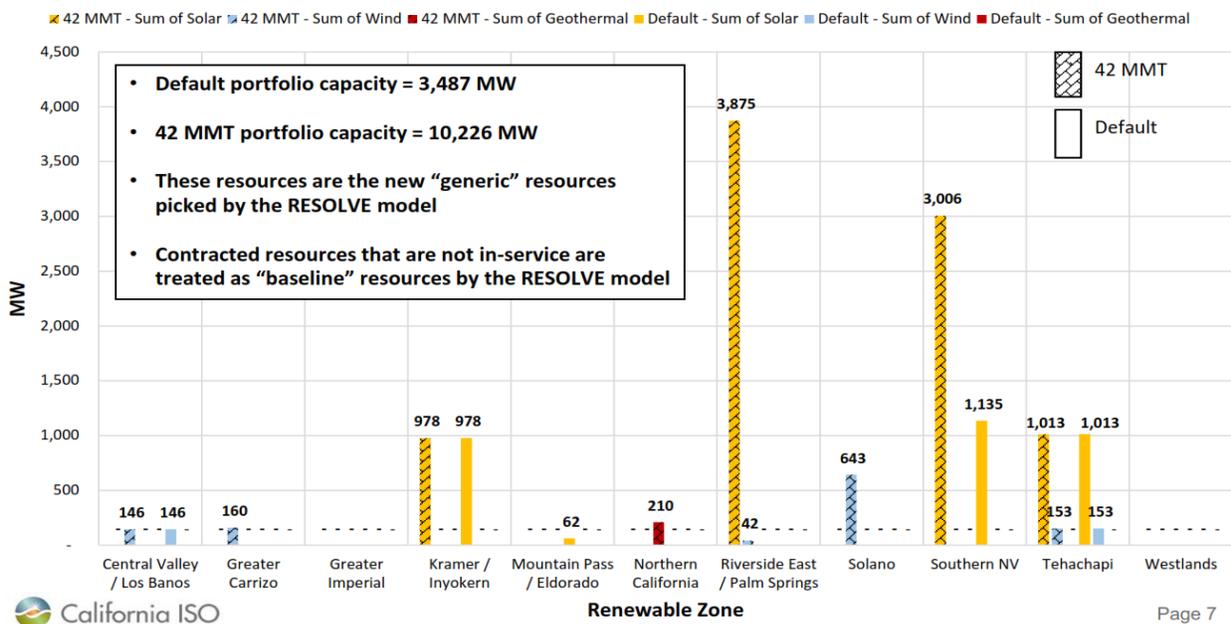
CAISO states in slide 17/312 that, *“2,000 MW of energy storage selected in the portfolio is not modeled in the initial PCM run due to lack of locational information; the results are expected to inform us about optimal locations that could help reduce renewable curtailment.”*

CPUC Staff requests that CAISO speak to the potential methodologies that may be used to allocate the energy storage geographically for production cost modeling. Would the allocation be based on curtailment, system or local needs, or other factors? CPUC Staff also asks that CAISO clarify whether it plans to conduct additional PCM runs within the 2018-19 TPP cycle with the addition of the 2000 MW of energy storage. If so, to what extent does CAISO plan to use the results produced to inform the busbar allocation of energy storage for the 2019-20 TPP cycle?

3. CPUC Staff would like to bring to CAISO’s attention that slide 18 contains an inaccurate statement regarding the portfolios provided by IRP to CAISO for TPP purposes.

The following slide title found on slide 18/312 is inaccurate, *“Default portfolio modeled in the year-10 TPP reliability case is a subset of the 42 MMT portfolio which includes FCDS and EODS resources.”* The

Default portfolio is not necessarily a subset of the 42 MMT portfolio. Although the 42 MMT portfolio does reduce GHG emissions beyond the emission reductions resulting from the Default (50% RPS), the 42 MMT portfolio does not start with the resources selected under the Default portfolio and build on that with incremental resources. Instead, it starts from scratch and includes resources that best meet numerous constraints. For this reason, in a few renewable zones, the amount of certain generic resource types decreases when moving from the Default portfolio to the 42 MMT portfolio. For example, Mountain Pass/Eldorado contains 62 MW of new generic solar resources under the Default Scenarios but 0 MW under the 42 MMT Scenario. This is visible in the graph contained on that slide, included below for convenience.



4. CPUC Staff would like to highlight that the MIC data used to represent import levels is temporally inconsistent with the Highest System Need Scenario under the new deliverability assessment methodology.

In the Highest System Need Scenario (slide 30/312) intermittent generators are set to a relatively high level of output (80th percentile), to “ensure higher certainty of wind and solar being deliverable during the time window.” Could the CAISO explain in more detail why this is more appropriate than using 50% exceedance as a more likely level of output from intermittent generation? This Scenario also uses MIC data to represent import levels. This may be inconsistent since MIC levels are developed based on the hours of 1pm to 5pm, which does not align with the 5pm to 10pm of the Highest System Need Scenario. CPUC Staff suggest that CAISO consider potentially using a 50% exceedance at the

selected hours for import levels. Additionally, CPUC Staff requests that CAISO clearly define “exceedance” in future written materials.

5. CPUC Staff greatly appreciates CAISO’s expansive effort on studying LCR areas and congratulates CAISO on producing an impressive amount of insightful analysis.

The local capacity requirements potential reduction study results are very insightful and are a key first step to determining the value of reducing local capacity requirements. In order to make this analysis more transparent and actionable, CPUC staff requests that the CAISO provide a summary of the results, potentially using a table that highlights trends across the LCR areas and subareas. CPUC Staff look forward to working with CAISO on moving this effort forward.

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