



Stakeholder Comments

2018-2019 Transmission Planning Process (TPP) November 16, 2018 Meeting

Submitted by	Company	Date Submitted
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CESA appreciates the opportunity to comment on the key updates provided by the California Independent System Operator (CAISO) at the November 16, 2018 stakeholder meeting for the 2018-2019 Transmission Planning Process (TPP).

Local Capacity Requirements (LCR) Potential Reduction Study

CESA supports the efforts of the CAISO to proactively and more comprehensively identify cases where conventional transmission and preferred resources such as energy storage could serve as economic local capacity alternatives to gas-fired generation in certain priority locations. This study effort will better ensure that cost-effective solutions are selected to meet local capacity requirement (LCR) needs, as well as to focus on mitigating local pollutant impacts (*e.g.*, NO_x) on disadvantaged communities (DACs) – an important focus of resource planning here in California. CESA supports the continued study process and looks forward to reviewing the final results that will be published in the Draft 2018-2019 Transmission Plan on January 31, 2019. However, CESA offers a few areas of comments on the update provided at the stakeholder meeting for further clarification and/or key considerations for the CAISO to ensure a robust study.

First, CESA recommends that the CAISO not just focus on gas-fired generation plants that are greater than 40 years old in this study but to also consider a nuanced but easy evaluation of gas

retirement factors, such as where a resource will be within its 10-year major maintenance cycle. Gas plants younger than 30 years old in age should potentially be evaluated if a major maintenance decision could lead to or factor into a retirement decision within the study time frame. CESA believes this approach may yield more pragmatic information, and could prevent the CAISO from overlooking other key opportunities for the procurement of transmission or preferred resource alternatives. CESA bases these views on anecdotal discussions of how major-maintenance decisions, even for younger plants, can materially inform the retirement of such plants. CESA welcomes discussion on if this criterion is applicable, and generally asserts it will be more nuanced than the 40-year only threshold. In addition, there may be opportunities to assess the capacity factor of gas plants to determine the likelihood and cost-effectiveness of retirements or hybridization.

Second, CESA requests greater detail on the preferred resource composition and characteristics for alternative solutions proposed by the CAISO. Some of this can be informed by the publication of hourly load profiles and limiting factors across different contingencies in the local capacity areas and sub-areas studied, but some detail on the mix of preferred resources assumed to address the underlying local capacity need would support stakeholder review of the forthcoming full study. Key stakeholder review may be needed to assess the assumed present and future costs, the operational profile and characteristics, and the potential hybrid configurations of preferred resources. For example, a key area of improvement for the Moorpark Sub-Area Local Capacity Alternative Study, published on August 16, 2017, was around the outdated energy storage cost assumptions used to conduct the economic assessment of different alternative solutions. Similarly, while the economic assessment was generally not shared at the November 16, 2018 stakeholder meeting, some of these underlying assumption details would help stakeholders understand the resulting assessment and potentially provide constructive and reasonable feedback on potential adjustments needed.

Third, CESA appreciates that the CAISO will include hybrid solutions in this study, but it is unclear from this analysis on whether the CAISO will also consider the hybridization of the gas plants being assessed. To address LCR needs and reduce local emission impacts to DACs, the CAISO should not only consider transmission and preferred resource alternatives but also hybrid gas plant alternatives (*i.e.*, gas plus energy storage). As demonstrated through Southern California Edison's (SCE) procurement and installation of a hybrid enhanced gas turbine (EGT) in response to Aliso Canyon reliability issues in December 2016, such a resource is able to significantly reduce particulate emissions and water usage from fewer starts and run hours while also providing critical operational reserves and frequency response. Furthermore, in the 2016-2017 TPP cycle, the CAISO conducted a supplemental analysis of the risks of early economic retirement of the gas fleet. This analysis highlighted the critical reliability issues in the

near term, including the potential deficiencies in operating reserves (e.g., spinning reserves).¹ Energy storage resources, including hybrid gas-storage resources, can play a critical role in addressing some of these possible deficiencies.

Hybrid gas-storage systems can be modeled with a 0 Pmin when “offline” and providing reserves, while the paired energy storage system would be providing Local RA capacity and provide the “runway” needed to bring the gas plant online when needed to provide capacity during critical contingencies. In the context of examining not only the first or second contingencies but also the “worst limits” in this study, hybrid gas-storage systems have the potential to address each level of need while also reducing local pollutant impacts in DACs.

CESA thus recommends that the CAISO include hybrid gas-storage alternatives as part of the potential resource mix and quantify the value of providing not just LCR benefits but also other ancillary service benefits of resource alternatives in this study. CESA is happy to provide feedback on how these resources can be configured and operationally represented for the purposes of this study.² In addition, to the extent possible, CESA encourages the CAISO to identify potential operational reserve needs from retiring gas plants and to consider the potential operational reserve benefits of energy storage replacement and/or gas-storage hybridization.

Fourth, CESA seeks clarification from the CAISO on the assessment of the Santa Clara sub-area, which was noted as being selected because all of the gas-fired generation in the area is needed. CESA is unclear on the interplay between assessment of the Santa Clara sub-area and the most critical contingency tied to the loss of the Pardee-Santa Clara 230 kV line followed by the loss of the Moorpark-Santa Clara 230 kV Lines #1 and #2, which creates a 102 MW local capacity deficiency in 2023, according to the *2023 Long-Term Local Capacity Technical Report*. While the voltage collapse issue was highlighted as the issue in the 2023 report and the overload on the remaining line was identified as driving the LCR need, CESA seeks greater understanding of this grid need. In particular, as CESA understands it, the California Public Utilities Commission (CPUC) has already adopted the LCR needs for this area, so it is unclear on how this identified LCR need will come into play in the CAISO-CPUC process. Further explanation would be very helpful.

¹ *Supplemental Sensitivity Analysis: Risks of early economic retirement of gas fleet*, ISO 2016-2017 Transmission Planning Process, published on January 4, 2018.

<http://www.aiso.com/Documents/SupplementalSensitivityAnalysis-Risksofearlyeconomicretirementofgasfleet.pdf>

² The CAISO may also refer to Gridwell Consulting’s *Hybrid Storage Technology* assessment published in July 2018. https://docs.wixstatic.com/ugd/fe68bf_ff74a8c24c6d4907b8bea661be9f99df.pdf

Finally, CESA requests a small modification to characterization that the Pardee-Moorpark 230 kV Transmission Project (approved by the CAISO Board in March 2018 and expected to be in-service by 2021) avoided the need for a new 262 MW gas-fired facility in the Moorpark area from the stakeholder meeting presentation. CESA would just like to add that the transmission line reduced LCR need but the combined portfolio of preferred resources is expected to help meet the rest of the LCR deficiency and avoid the 262-MW Puente Plant.

Conclusion

We appreciate CAISO's consideration of CESA's comments and look forward to ongoing participation in the TPP.