



Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Tel: 415-703-1584
www.publicadvocates.cpuc.ca.gov

COMMENTS OF THE PUBLIC ADVOCATES OFFICE ON THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR'S 2020-2021 TRANSMISSION PLANNING PROCESS - PRESENTATIONS AND STAKEHOLDER MEETINGS

March 13, 2020

Introduction

The Public Advocates Office is California's independent consumer advocate with a mandate to obtain the lowest possible rates for utility services, consistent with reliable and safe service levels, and the state's environmental goals.¹ The Public Advocates Office submits the following comments and recommendations on the California Independent System Operator's (CAISO) 2020-2021 Transmission Planning Process (TPP): 1) the CAISO should include incremental costs of energy storage in the assessment of alternatives, 2) the CAISO should conduct studies on the potential use of energy storage in local capacity areas and provide its findings to stakeholders, 3) the CAISO should explain the methodology of how it will model approximately 600 megawatts (MW) of out-of-state wind resources, 4) the CAISO should work with the California Public Utilities Commission's (Commission) Energy Division (ED) staff to model and map energy storage in the Integrated Resource Plan (IRP) sensitivity portfolios, and 5) the CAISO should include sensitivity analysis in its economic assessment studies.

Discussion and Recommendations

1. The CAISO should include incremental costs of energy storage as part of comparing it to competing transmission reliability mitigation alternatives.

The CAISO indicated it would follow the ED staff's suggestion to not include the full capital cost of energy storage in the assessment of alternatives when considering portfolio-selected storage as a mitigation option for reliability issues.²

The Public Advocates Office supports using energy storage as a mitigation measure without including the full capital cost in such assessments because storage costs will be paid for by load-serving entities (LSEs). The Commission provided portfolio includes more than 2,000 MW of energy storage that would be procured by LSEs.³ Some of this storage will be sited in

¹ Cal. Pub. Util. Code § 309.5.

² Reliability Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, p. 19.

³ Reliability Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, p.7.

local areas as part of the procurement mandate. Therefore, it is reasonable to assume that the cost of energy storage will primarily be borne by the individual or group of LSEs. However, the Public Advocates Office recommends that the CAISO include the incremental costs⁴ of energy storage when comparing it with competing reliability mitigation alternatives to understand the impact of the additional cost of storage to ratepayers.

2. The CAISO should conduct studies on the potential use of energy storage in local capacity areas and provide its findings to stakeholders.

The CAISO plans to evaluate the potential use of energy storage to address transmission reliability issues in all local capacity requirement (LCR) areas.⁵

The Public Advocates Office supports the CAISO's proposed evaluation of energy storage in LCRs. New studies would enable the CAISO to determine the location and level of local energy storage challenges, as well as how much energy storage CAISO can site in local areas and sub areas if there are no challenges. Therefore, the Public Advocates Office recommends that the CAISO obtain relevant information from ED staff to conduct these studies and to provide its findings, conclusions, and recommendation to stakeholders.

3. The CAISO should explain the methodology of how it will model approximately 600 MW of out-of-state wind resources in its sensitivity analysis.

The CAISO presented policy driven-sensitivity portfolio #1 in the TPP, which is a reference system portfolio of the 2019-2020 IRP that includes approximately 600 MW of out-of-state wind resources.⁶ The CAISO presented this sensitivity portfolio in general terms and did not provide information on whether the out-of-state wind resource will connect to the CAISO's existing transmission line or to a new transmission line.

The Public Advocates Office requests that the CAISO provide additional information on how it will access this out-of-state wind resources. Specifically, the CAISO should clarify whether it will model the out-of-state wind resources by "injecting" the resources at one of the existing CAISO tie-points or whether the CAISO plans to model the new transmission upgrade required to access the wind resource.

⁴ Incremental cost is the additional cost associated siting the storage in a specific local area versus locating it elsewhere.

⁵ Overview Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, p. 7.

⁶ Policy-driven Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, p. 10.

4. The CAISO should work with ED staff to model and map energy storage in the IRP sensitivity portfolios.

In the TPP, the CAISO presented the concept of generic energy storage mapping⁷ and modeling based on the Commission's base and sensitivity portfolios in the IRP.⁸ While the CAISO indicated that the ED staff has not mapped the generic storage resources to specific locations,⁹ it states that, per the Commission's recommendation,¹⁰ the CAISO will consider energy storage mapping and modeling as potential mitigation options for transmission reliability needs as identified in the TPP.¹¹ Furthermore, the CAISO indicated that ED staff is in the process of mapping generic storage to specific locations for the sensitivity portfolios.¹²

The Public Advocates Office encourages the CAISO to coordinate with the Commission's ED staff to model the entire storage capacity mapped at specific locations in the sensitivity portfolios. The Public Advocates Office requests that the CAISO update stakeholders regarding the initial and adjusted mapping of the storage resources.

5 The CAISO should include sensitivity analysis in its economic assessment studies.

The CAISO indicated that it would perform its typical economic planning study as part of the 2020-2021 transmission planning cycle to identify potential congestion and related economic transmission projects. Also, the CAISO stated that it will apply its transmission economic assessment methodology (TEAM) to assess congestion analysis, study request evaluations, and economic assessments and will use the same assumptions to conduct reliability assessment and policy driven transmission analyses.¹³

The Public Advocates Office recommends that the CAISO include sensitivity analyses in TEAM to evaluate how transmission congestion patterns and the transmission project's economic viability are impacted by inherent risk and uncertainties.

⁷ Storage mapping provides an overview by looking into the technological component of each project and mapping at which level it is related to the electricity grid. The mapping approach helps inform further decisions on storage in grid development and the interactions between both.

⁸ Policy-driven Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, pp. 16-17.

⁹ Policy-driven Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, p. 16.

¹⁰ 2019-2020 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning, Rulemaking 16-02-007, February 21, 2020.

¹¹ Policy-driven Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, p.16.

¹² *Ibid.*

¹³ Economic Assessment Unified Planning Assumptions & Study Plan, 2020-2021 Transmission Planning Process Stakeholder Meeting, February 28, 2020, p. 2.

Conclusion

The Public Advocates Office recommends that the CAISO include incremental costs of energy storage; obtain relevant information to conduct studies on the potential use of energy storage in local capacity areas and provide its study findings to stakeholders; provide additional information on out-of-state wind resources; work with ED staff to model and map energy storage in the IRP sensitivity portfolio; and include sensitivity analysis in the economic assessment.

If you have any questions regarding these comments, please contact Lina Khoury at either Lina.Khoury@cpuc.ca.gov or 415-703-1739.