

Informal Comments of the CAISO Department of Market Monitoring on the first four Track 3B.2 Slice-of-Day Workshops

R.19-11-009

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The Department of Market Monitoring (DMM) of the California Independent System Operator Corporation (CAISO) appreciates the opportunity to provide informal comments on topics presented in the Track 3B.2 resource adequacy workshops on Structural Elements and Resource Counting under the Slice-of-Day framework.

SCE’s variation of the slice-of-day framework seems to be a viable option that warrants further consideration.

DMM reiterates its support of the principles and evaluation criteria for a resource adequacy framework as directed by the CPUC in D.21-07-014.¹ The resource adequacy design that emerges from these workshops for delivery year 2024 must be durable and adaptable to the changes to the electric grid and resource mix that will occur as California transitions to meeting 60% of its retail electricity from renewable generation by 2030. In particular, the CEC/CPUC/CARB and other entities have estimated that to meet this target, a significant increase in solar and storage capacity will be needed on the system.² The interactions between these two resource types will be increasingly important to meet load across the day. Solar generation will be critical for serving load midday, but solar generation in excess of load midday

¹ *Decision on Track 3B.2 Issues: Restructure of the Resource Adequacy Program*, July 15, 2021: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M393/K334/393334426.PDF>

² *2021 SB 100 Joint Agency Report – Achieving 100 Percent Clean Electricity in California: An Initial Assessment*, California Energy Commission/CPUC/CARB, March 2021: <https://www.energy.ca.gov/publications/2021/2021-sb-100-joint-agency-report-achieving-100-percent-clean-electricity>

will also be critical for charging storage capacity to meet load at net load peak and through the night.

Some participants have argued that the resource adequacy design can assume that the integrated resource planning process will result in sufficient clean energy and storage being constructed in California to meet these challenges.³ However, as discussed more in the next section, it is not clear how a resource adequacy framework that only counts resources' contributions to peak gross load and peak net load would ensure that the clean energy and storage capacity necessary for meeting load overnight in 2030 and beyond remain under contract to California load serving entities, and that those resources are ultimately made available to the CAISO markets. In the absence of a robust resource adequacy program that considers the energy needed to charge storage resources and the storage capacity needed to meet load through the night, there does not appear to be a mechanism to assure that the critical energy and capacity will be made available to CAISO. These resources that were constructed through the IRP process may instead sign contracts, or California load serving entities who have them under contract may instead sell their energy and capacity, to support high priority exports to other balancing areas. Compared to resource adequacy frameworks that only count resources' contributions to peak gross and/or peak net load, PG&E's slice of day framework and interesting new variations of it can be designed to provide much better assurance that load serving entities will contract with, and make available to the CAISO, resources that could collectively meet energy requirements across all hours of the day.

³ *Resource Adequacy Seasonal Slice Proposal*, Gridwell Consulting presentation at November 1, 2021 Slice-of-Day workshop, p. 21.

DMM shares the concerns expressed by some participants that slices of day larger than 1 hour could significantly undercount the contribution of operationally-limited resources – such as solar and demand response– towards meeting load requirements and charging storage resources. DMM also understands the concerns raised by some participants that having 24 different requirements and products for each season could be overly administratively burdensome. Therefore, DMM believes that SCE’s variation of PG&E’s slice-of-day concept, the 24-Hourly Slices framework, has a lot of potential for striking the right balance between these competing concerns while requiring each LSE to make sufficient resources available to CAISO to meet its energy and capacity needs across all hours of a month or season. We encourage the working group process to continue to develop all details necessary for making the 24-Hourly Slices framework a viable final concrete proposal to be considered by the Commission.

Counting methodologies should capture the reliability contribution of solar in terms of its ability to charge storage resources.

As described in the section above, solar generation will be critical for serving load midday, but solar generation in excess of load midday will also be critical for charging storage capacity to meet load at net load peak and through the night. It will be important that counting rules for solar reflect the reliability contribution that solar provides to charge storage resources.

Solar resource adequacy values should be non-zero to the extent that solar resources’ generation is necessary to charge storage resources that are relied upon for meeting reliability requirements. There was discussion in workshops about solar ELCC values approaching zero if marginal ELCC values are used to develop solar QC values. If solar QC values approach zero, yet these resources’ output is necessary for meeting demand midday and for charging storage, then there could be risk that these solar resources are not contracted with load serving entities. If

this capacity is not contracted with LSEs, or otherwise not shown to the CAISO as resource adequacy capacity, then these resources will not be bound by must offer obligations to the CAISO and could be eligible for export outside of the CAISO market. Resources without a contract with a CAISO load serving entity, or load serving entities that have contracted resources but not shown them as resource adequacy capacity, could instead sell the energy or capacity to out of state load serving entities to support high priority exports out of CAISO.

DMM appreciates the opportunity to participate in the resource counting and structural elements workshops and looks forward to continued discussions on other proposals under this rulemaking.

Respectfully submitted,

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