

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE  
STATE OF CALIFORNIA**

Order Instituting Rulemaking to Modernize  
the Electric Grid for a High Distributed  
Energy Resources Future

Rulemaking 21-06-017  
(Filed June 24, 2021)

**REPLY COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR  
CORPORATION ON PRELIMINARY SCOPE AND SCHEDULE –  
HIGH DISTRIBUTED ENERGY RESOURCES**

**I. Introduction**

The California Independent System Operator Corporation (CAISO) submits its reply comments on the *Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future* (OIR).

**II. Discussion**

The CAISO provides reply comments and responses to questions posed by Energy Division staff at its September 22, 2021 Workshop (Workshop).

**A. Reply Comments**

The CAISO agrees with San Diego Gas & Electric Company’s (SDG&E’s) proposal to include reliability as a guiding principle for the OIR. Specifically, SDG&E defines reliability as “Prevention of risks to system reliability and recognition of the utility’s obligation to serve.”<sup>1</sup> The CAISO agrees that reliability should be a guiding principle across the various tracks in this OIR, especially when considering distribution system operator (DSO) responsibility (Track 1), distribution planning (Track 2), and smart inverter operationalization (Track 3).

The CAISO agrees with opening comments emphasizing the reliability role of a DSO and its ability to interface with CAISO operations, planning, and markets across a variety of operating conditions.<sup>2</sup> In a high DER future, the CAISO should focus on wholesale market and

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<sup>1</sup> Opening Comments of SDG&E, p. 4.

<sup>2</sup> Opening Comments of PG&E, p. 2; Opening Comments of SCE, p. 6; Opening Comments of SDG&E, p. 8.

transmission functions and coordinate with an equally reliable DSO partner. The CAISO agrees with opening comments that the scope of the DSO discussion should assume that DSOs have certain core capabilities and responsibilities such as meeting safety and reliability mandates, distribution grid operations, distribution grid planning, maintenance, and potentially construction.<sup>3</sup> For example, situational awareness is key if the DSO is to effectively coordinate real-time events (both during daily normal operations and emergency events) to ensure there is coordination with the CAISO in order to meet the safety and reliability mandates for both the distribution and transmission system. All of these capabilities and expertise are critical to the successful integration of DERs. As noted below in response to questions, the CAISO supports a compromise schedule to accommodate a new Track 1 to discuss priority near-term activities and does not delay a Proposed Decision on DSO roles and responsibilities beyond Q2 2024.

The CAISO provides clarification regarding The Climate Center’s definition of DER. The Climate Center argues that the “first defining criterion for DER is the point of interconnection (POI), which is the state-jurisdictional electric distribution system as distinct from the FERC-jurisdictional CAISO grid.”<sup>4</sup> The CAISO clarifies that any resource intending to sell in a wholesale market is FERC-jurisdictional regardless of POI.<sup>5</sup> Each California investor owned utility has a FERC-jurisdictional Wholesale Distribution Access Tariff (WDAT) for this reason.

The CAISO disagrees with Southern California Edison’s (SCE’s) proposal to include barriers to operationalizing DERs in the scope of the OIR. In opening comments SCE describes potential barriers to DER growth and provides three examples: (1) long lead time or day-ahead transmission related commitments; (2) rules that govern the resource adequacy program and wholesale market participation; and (3) interconnection timelines.<sup>6</sup> Regarding the first example, the CAISO requests SCE clarify what it means by “long lead time or day-ahead transmission

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<sup>3</sup> Opening Comments of PG&E p. 2, p. 5; Opening Comments of SCE, pp. 6-7; Opening Comments of SDG&E, p. 8.

<sup>4</sup> Opening Comments of The Climate Center, p. 6.

<sup>5</sup> See, e.g., *Nat’l Ass’n of Regulatory Util. Comm’rs v. FERC*, 964 F.3d 1177, 1186 (D.C. Cir. 2020) (“FERC bears the responsibility of regulating the wholesale market, which encompasses ‘both wholesale rates and the panoply of rules and practices affecting them.’”) (quoting *FERC v. Electric Power Supply Ass’n*, 577 U.S. 260, 277 (2016)); see also *Participation of Distributed Energy Resource Aggregations in Markets Operated by RTOs and ISOs*, 172 FERC ¶ 61,247 at PP 38-44 (2020).

<sup>6</sup> Opening Comments of SCE, p. 10.

related commitments.” The CAISO is not aware of any day-ahead transmission commitments that would prevent the operation of DERs. SCE seems to imply that all DERs have transmission related “commitments” or that all DERs must participate in the wholesale market. This is neither true nor a requirement.

The issue raised by the second example is out of scope for this proceeding. The Commission Energy Division’s draft DER Action Plan 2.0 (Action Plan) expressly lists resource adequacy and wholesale market issues under Track 3: Market Integration.<sup>7</sup> As clarified by Commission Houck and presented by Energy Division staff at the Workshop, issues in scope for this OIR fall into Track 2: Grid Infrastructure of the Action Plan.<sup>8</sup> The issues raised by SCE should be redirected to the appropriate proceedings that will address Track 3 issues of the Action Plan. As currently written, the Action Plan lists three current and pending proceedings, as well as CAISO stakeholder initiatives, as related venues to Track 3.<sup>9</sup>

Lastly, SCE points to “interconnection” barriers with reference to the CAISO and the Federal Energy Regulatory Commission. The CAISO assumes SCE is only referring to the CAISO-jurisdictional interconnection process (as opposed to Rule 21 or the WDAT process) and therefore concludes that this issue is also out of scope for this OIR and should be appropriately addressed in a CAISO stakeholder process or WDAT revision. SCE’s focus on wholesale processes assumes all DERs must interconnect to the transmission grid or participate in the wholesale markets, which is not necessarily true.

## **B. Responses to Workshop and Staff Questions**

In the subsection below, the CAISO reproduces the questions posed in the Workshop presentation prior to providing the CAISO’s responses.

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<sup>7</sup> See Vision Element 3C of the Action Plan. California Public Utilities Commission Energy Division, *Draft CPUC DER Action Plan 2.0*, July 23, 2021, p. 16.

<sup>8</sup> California Public Utilities Commission, *Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future*, “DER Action Plan 2.0, Grid Infrastructure Track,” September 22, 2021, slide 6.; California Public Utilities Commission, *Draft CPUC DER Action Plan 2.0*, July 23, 2021, p. 22.

<sup>9</sup> California Public Utilities Commission, *Draft CPUC DER Action Plan 2.0*, July 23, 2021, p. 22.

## **Discussion Question #1**

**What near-term activities should be prioritized and how should the tracks or schedule be modified to prioritize them? Should a new Track 1 be developed for near-term activities?**

The CAISO supports a new Track 1 for near-term activities. As discussed in response Question 1f below, the Commission should include in the new Track 1 improvements in data sharing and identifying data that needs to be shared as a priority near-term activity. The CAISO broadly supports Compromise Schedule B,<sup>10</sup> which would start the new Track 1 as early as next year. Importantly, Compromise Schedule B does not delay the Proposed Decision on DSO roles and responsibilities beyond Q2 2024.

**a. Should the CPUC align forecasts used for distribution investment planning to reflect state electrification policy? If so, how should investor-owned utility (IOU) Distribution Planning Processes (DPPs) change to reflect these forecasts?**

A process alignment effort between the Commission, California Energy Commission (CEC), California Air Resource Board (CARB), and CAISO staff already exists to ensure forecasts used in procurement and planning processes reflect the impacts of adopted stated policies. This collaboration has led to the development of a “single forecast set” which is used in the Commission’s integrated resource planning (IRP) process, resource adequacy program, and distribution planning per Decision (D.) 18-02-004.<sup>11</sup> The process alignment effort is critical because the CEC’s demand forecast is foundational to the major planning processes within the Commission and CAISO footprints, as well as state-wide planning. Furthermore, there are feedback loops between processes and organizations that require consistent and transparent assumptions such as coordination between distribution and transmission planning. The CAISO encourages the Commission to work closely with the CEC to ensure continued alignment and use of the single forecast set developed by the CEC.

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<sup>10</sup> California Public Utilities Commission, *Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future*, “Compromise Schedule B: New Track on Near-Term Priorities, DSO Study Informs Update to Grid Modernization Framework,” September 22, 2021, slide 29.

<sup>11</sup> For more details, see California Energy Commission, *Final 2020 Integrated Energy Policy Report Update Volume III: California Energy Demand Forecast Update*, “Choice of Single Managed Forecast Set for Planning Purposes,” pp. 19-22.

Beyond forecasting, there may also be a need for scenario planning. Forecasts attempt to predict a likely future by evaluating factors such as economic/demographic projections, impacts of demand-side policies, market forces, and other trends. On the other hand, scenarios look at a range of potential futures to help understand the divergence between each possible future. The CEC is also leading an effort to develop load forecasts to support scenario analyses incorporating state demand-side goals and that also reflects the state’s Senate Bill (SB) 100 electric generating system requirements.<sup>12</sup> The CAISO encourages the Commission to work closely with the CEC.

**f. How should data sharing between utilities and state agencies be improved (e.g., CPUC, CEC, CARB, CAISO)?**

The CAISO strongly supports improvements in data sharing and identifying data that needs to be shared as a priority near-term activity. First, the Commission should include all jurisdictional load serving entities and distribution operators in this data sharing effort. As explained in response to Question 1a, the CEC develops the forecast used in planning processes across the state. In its open stakeholder process, the CEC also engages with load serving entities and distribution operators across the state to understand from a “bottoms up” perspective a variety of demand side modifiers that impact the demand forecast. This can include the DERs discussed in this proceeding as well as the impact of time-of-use rates, energy efficiency, and fuel substitution. Therefore, including a broader set of stakeholders can improve data accuracy and identify emerging trends.

Second, the Commission should consider what activities and processes require DER-related data to foster their integration. In addition to the CEC’s forecasting needs, the CAISO also needs information about DER penetration, location, and performance to develop short-term forecasting for the CAISO to operate the transmission grid and market effectively and provide energy when and where needed. For example, if DERs are not producing energy to offset load (e.g., when there is cloud coverage over behind-the-meter solar), the CAISO must ensure grid-connected resources are providing electricity instead. Currently, the CAISO’s short-term forecasting must rely on third party vendors to provide visibility into both DER installed capacity and real-time output by zip code by technology type to improve real-time load forecast accuracy.

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<sup>12</sup> California Energy Commission, *Final 2020 Integrated Energy Policy Report Update Volume III: California Energy Demand Forecast Update*, “Future Energy Demand Scenarios to Assess Decarbonization Strategies,” pp. 39-40.

The Commission should prioritize data sharing with state agencies and the CAISO to ensure data necessary for real-time operations is readily available.

Lastly, the Commission should be open to identifying data that may not be currently available or readily accessible but is necessary to integrate a high penetration of DERs. Later tracks may need to discuss how to collect such data.

### **III. Conclusion**

The CAISO appreciates the opportunity to submit comments and looks forward to working with the Commission and parties.

Respectfully submitted

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