

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

Order Instituting Rulemaking to Continue the
Development of Rates and Infrastructure for
Vehicle Electrification.

Rulemaking 18-12-006
(Filed December 13, 2018)

**OPENING COMMENTS OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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Table of Contents

I.	Introduction.....	1
II.	Discussion.....	1
	A. <i>Strategic Transportation Electrification Plans</i> Question 2: “What additional guidance is needed to inform how existing planning processes for IOUs and regulatory development efforts at other State agencies should be leveraged to develop TEPs [Transportation Electrification Plans]?”	2
	B. The Commission Should Coordinate with Other State Agencies on Forecasting versus Strategic Plans.....	3
	C. General Comments on the Transportation Electrification Framework Overview Scope ...	4
III.	Conclusion.....	5

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I. Introduction

Pursuant to Rule 14.6 of the Commission’s Rules of Practice and Procedure and Administrative Law Judge Doherty’s February 14, 2020 e-mail ruling, the California Independent System Operator Corporation (CAISO) hereby provides its opening comments on Energy Division staff’s draft Transportation Electrification Framework (TEF) proposal. Specifically, these comments address the TEF Overview, Investor-Owned Utility (IOU) Transportation Electrification Plan (TEP) Development, IOU Roles, and Near-Term Investment Priorities (Sections 2, 3.1, 3.2, 3.3, 4, and 5). The CAISO recommends that the Commission direct IOUs, and encourage other jurisdictional load serving entities, to provide transportation electrification information at a level of granularity appropriate for transmission planning, and engage directly in the California Energy Commission’s Integrated Energy Policy Report process for demand forecast development.

II. Discussion

The CAISO appreciates the thoughtfulness of Energy Division staff’s draft proposed Transportation Electrification Framework (TEF) and the opportunity to comment. The CAISO’s comments focus on questions from Section 3 of the TEF, regarding *Strategic Transportation Electrification Plans*, with an emphasis on coordination with existing planning processes, including the CAISO’s processes. The CAISO also provides brief comments on scope and coordination with other entities.

A. *Strategic Transportation Electrification Plans* Question 2: “What additional guidance is needed to inform how existing planning processes for IOUs and regulatory development efforts at other State agencies should be leveraged to develop TEPs [Transportation Electrification Plans]?”

The CAISO strongly agrees with Energy Division staff’s goal that “[e]ach IOU’s planning process should incorporate ongoing efforts at other state agencies and within other resource planning processes that the IOU is conducting itself to ensure the TE [transportation electrification] portfolios leverage existing modeling and forecasting results and inform future data collection, analysis, and planning strategies.”¹ The Commission also should recognize that efforts to incentivize and successfully adopt transportation electrification should be coordinated and shared with the California Energy Commission (CEC). IOUs should provide transportation electrification data to the CEC through its demand forecast development process in the Integrated Energy Policy Report (IEPR), which includes forecasts of transportation electrification.

This connection is critical because the IEPR process produces the single managed forecast set, which the Commission and the CAISO use as a fundamental input in a wide range of planning and procurement processes.² Specifically, the Commission uses the single managed forecast set in its integrated resource planning (IRP), resource adequacy, and distribution planning processes. The CAISO uses the single managed forecast set in its annual transmission planning process (TPP), maximum import capability allocation, local capacity technical study, and flexible capacity needs assessment. Most of these CAISO processes then support Commission procurement decisions. For example, the CAISO typically receives Commission developed IRP resource portfolios to use in the TPP to determine whether transmission upgrades are needed to support the IRP portfolios. The CAISO’s local capacity technical study and flexible capacity needs assessment are provided to the Commission to help determine the need for local and flexible resource adequacy procurement, respectively. Consequently, the IEPR is foundational to all of the state’s collective planning and procurement processes. It is therefore critical for the IOUs and all

¹ TEF, p. 16.

² See California Energy Commission, Final 2019 Integrated Energy Policy Report, “Choice of Single Managed Forecast Set for Planning Purposes,” January 2020, p. 214. (CEC 2019 IEPR) Available at: https://ww2.energy.ca.gov/2019_energypolicy/

Commission jurisdictional load-serving entities to engage in the IEPR process for transportation electrification forecasting.

The Commission also should require that its load-serving entities provide information at a level of granularity that is most useful for a variety of planning processes, including the CAISO's TPP and grid operations. For example, the IOUs should provide as much geographic granularity as possible of transportation electrification load and hourly charging profiles by vehicle class type across all 8760 hours of the year. More granularity will improve the modeling results in the CAISO's transmission planning assessments, including study of local capacity areas. Furthermore, the TEF and IOU TEPs should differentiate and highlight requirements, efforts, and programs targeted to light-duty electric vehicles (EVs) separately from medium- and heavy-duty vehicle classes. Each class will likely have different grid integration impacts and grid participation opportunities. For example, light-duty EVs will likely be less concentrated geographically and will have less direct aggregated control capabilities. In these cases, sufficient TE charging infrastructure and strategic rate design will have a high impact on the ability to integrate high amounts of light duty vehicles in a way that complements grid conditions. On the other hand, medium- and heavy-duty EVs will likely be more concentrated geographically, more easily forecasted and controlled, and may be in a better configuration to provide grid services.

B. The Commission Should Coordinate with Other State Agencies on Forecasting versus Strategic Plans.

The TEF notes that the IRP will investigate more aggressive transportation electrification adoption scenarios because “the transportation energy demand reference case adopted through the CEC's IEPR has not historically projected the level of EV adoption needed to meet state goals. The Draft 2019 IEPR, for example, forecasts that 4.6 million light-duty EVs will be on the road by 2030. Only the ‘aggressive’ scenario shows the state meeting the 5 million ZEV adoption goal established in Executive Order B-48-18.”³ The Commission should distinguish between the CEC's forecasts—such as the single managed forecast set to be used in planning and procurement processes—versus strategic plans, which may be more appropriate for the IOU TEPs. The CEC provides a clear explanation of the difference:

³ TEF, p. 23. Footnote omitted.

The CEC's Transportation Energy Demand Forecast uses a suite of models . . . that incorporate consumer preferences, regulations, economic and demographic projections, projected improvements in technology, and other market factors to forecast transportation energy demand. The approach starts with current market conditions and forecasts transportation energy demand based on the projected inputs briefly described below. . . . No constraints are imposed for the forecast to meet a future target. In contrast, methods used by others for strategic planning begin with a target (such as a quantity of vehicles, fuels, or emissions goals to meet by a future year) and work backward from there to create intermediate goals for the intervening years. In this way, policy makers can use the forecast in conjunction with a corresponding strategic plan to assess progress toward statewide goals.⁴

The CAISO supports the Commission using the IOU TEPs as the strategic plans to determine the appropriate pathways to achieve the desired policy objectives. However, information provided to the CEC's IEPR for inclusion in the single managed forecast set should be strictly forecast-based, regardless whether policy objectives are met.

C. General Comments on the Transportation Electrification Framework Overview Scope

The CAISO includes two general comments regarding the scope of this proceeding. First, although the scope of the TEF does not include hydrogen-related infrastructure to support fuel cell electric vehicles, the TEF should acknowledge that hydrogen-based transportation is a state goal that will influence battery electric vehicle proliferation and needs.

As a second general scope comment, the CAISO strongly agrees with the TEF's requirement for the IOUs to coordinate with community choice aggregators (CCAs) as they develop their own EV strategies and infrastructure investments. Similarly, the Commission should ensure that updates to the TEF and IOU TEPs include all relevant state agencies, the CAISO, and appropriate stakeholders to provide feedback on the execution of the plans. In turn, the Commission should encourage the CCAs to engage in the CEC's IEPR process so the single managed forecast set reflects transportation electrification activities.

⁴ CEC 2019 IEPR, p. 223.

III. Conclusion

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

Respectfully submitted,

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