

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

Order Instituting Rulemaking Regarding Policies,
Procedures and Rules for Development of
Distribution Resources Plans Pursuant to Public
Utilities Code Section 769.

Rulemaking 14-08-013
(Filed August 14, 2014)

And Related Matters.

Application 15-07-002
Application 15-07-003
Application 15-07-006

(NOT CONSOLIDATED)

In the Matter of the Application of PacifiCorp
(U901E) Setting Forth its Distribution Resource Plan
Pursuant to Public Utilities Code Section 796.

Application 15-07-005
(Filed July 1, 2015)

And Related Matters.

Application 15-07-007
Application 15-07-008

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

I. Introduction

Pursuant to the Administrative Law Judge’s July 12, 2016 Ruling Regarding Comments on Track 2 Demonstration Projects, the California Independent System Operator Corporation (CAISO) files these comments regarding Center for Sustainable Energy’s (CSE) proposal for an integrated community and grid planning demonstration project. The CAISO supports CSE’s proposal as an important effort to integrate operational and planning activities between local government agencies, Utility Distribution Companies (UDCs), state agencies, and the CAISO. The proposal is uniquely capable of testing operational coordination to support higher levels of Distributed Energy Resource (DER) penetration, while also improving reporting and forecasting for DER growth scenarios for planning purposes. As a result, the CAISO strongly recommends that the Commission approve the CSE demonstration project.

II. Discussion

A. The CSE Demonstration Project Will Uniquely Address Operational and Planning Integration Issues between Local Government Entities, Utility Distribution Companies and the System Operator.

The CAISO previously filed comments in this proceeding recommending that the Commission address the coordinated operations and the roles and responsibilities at Transmission-Distribution interfaces (T-D interfaces), *i.e.*, the major substations on the electric system that connect the high-voltage grid operated by the CAISO with the distribution systems operated by UDCs. As the CAISO pointed out in previous comments, the rapid growth of DER in local distribution areas will have real-time impacts on the CAISO controlled grid that likely will be more volatile and harder to forecast than they are today. In addition, DER responses to CAISO dispatch instructions from the increasing numbers of DERs participating in the CAISO markets will have operational impacts on the distribution system. From both perspectives, it is important that the Commission, the CAISO, UDCs, and DER suppliers understand interactions at T-D interfaces and their impacts on planning and operational requirements.

By integrating local government agencies into the planning framework for DER growth, the CSE demonstration project will provide an important and unique perspective on these T-D interface interactions. As the Commission knows well, local governmental agencies continue to expand their influence over local energy decisions to reduce their environmental impacts and promote local economic development. The CAISO believes that the CSE demonstration project can provide critical experience and information regarding how these local government decisions can be integrated with distribution and transmission grid needs.

B. The CSE Demonstration Project Will Help Develop More Accurate DER Growth Scenarios.

The CSE proposal can also help develop more detailed and granular DER growth scenarios and related demand forecasts for incorporation into Energy Commission's Integrated Energy Policy Report (IEPR), whose long-term forecast is a crucial input for infrastructure planning and resource procurement. The CSE demonstration project should be structured to formulate T-D-interface-level DER growth scenarios that go beyond mere forecasts of autonomous end-use DER adoption, but also reflect the impacts of local government policies and initiatives. The CSE proposal notes that local governments may direct end-use consumer choices

“through policy in order to advance local goals and reflect grid conditions.”¹ The CAISO agrees and believes these types of local government policies and their expected outcomes can provide valuable load-shape information that can be incorporated into DER growth scenarios and future demand forecasts. This additional input from the local government entities should lead to increased accuracy and granularity in the IEPR demand forecast, thereby improving the planning assumptions the CAISO uses in its transmission planning process.

In previous comments in this proceeding, the CAISO noted specific questions that should be considered in developing DER growth scenarios. Some of those questions are reproduced below with specific comments regarding how the questions relate to the scope of the CSE demonstration project.

- What activities are best performed by the utilities (e.g., within the DRP process), the IEPR process (e.g., within the Demand Analysis Working Group), or by other parties in other venues?

The CES demonstration project will provide a unique circumstance in which a local government will work with a UDC to plan and accelerate deployment of DERs. The scope of the demonstration project should include a plan to project DER growth scenarios at the bus-level, with the explicit purpose of defining the roles of the local government and the UDC in developing these growth scenarios.

- What common methodologies should be established for maximizing consistency of approaches across the state?

The CSE project can serve as a test case to develop best practices that can be adopted by similar utility-local government planning collaborations on a statewide basis.

- Procurement activities (e.g., LTPP, RPS) and the CAISO’s transmission planning process require the scenarios to be at least as granular as the T-D substation, while the IEPR as performed today only goes to the climate zone. What is the best way to ensure sufficient confidence in the more granular results?

If successful, local government and UDC coordination can significantly improve the confidence in DER forecasts that are both more locationally granular and contain useful load-shape information. The CSE demonstration project should develop and track DER growth

¹ Comments of CSE Proposed A Demonstration Project, p. 3.

scenarios with the intent of specifying means to assess how well the scenarios bracket actual future DER growth.

- The scenarios should reflect bottom-up factors that may have little correlation with system needs or locational benefits from the system perspective, such as autonomous customer adoption driven by local demographics, climate zone, and local government energy and environmental initiatives.

Local government initiatives, such as community resource deployment, local solar adoption targets, and workplace EV charging installations, can enhance the predictability of bottom-up DER adoption and help guide such adoption to better align with grid needs. The CSE demonstration project provides a unique opportunity to design practical methods for local governments and utilities to formulate DER plans that meet their diverse needs and objectives.

III. Conclusion

In summary, the CAISO supports the CSE demonstration project because it will enhance the state's ability to develop meaningful DER growth scenarios to support long-term forecasting and infrastructure and resource planning. It will provide valuable information about how to plan and operate a grid that has high penetrations of diverse DER and provide a window into how DER growth scenarios can be developed to address both grid needs and local government policy objectives. The CAISO appreciates the opportunity to file these comments and looks forward to continued participation in this proceeding.

Respectfully submitted,

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