

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



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Order Instituting Rulemaking to
Consider Alternative-Fueled Vehicle
Programs, Tariffs, and Policies.

Rulemaking 13-11-007
(Filed November 14, 2013)

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

The California Independent System Operator Corporation (the ISO) hereby files these comments in accordance with the scope and schedule established by the Assigned Commissioner's Scoping Memo and Ruling (ACR) dated July 16, 2014.

I. Introduction

On November 22, 2013, the California Public Utilities Commission (CPUC) issued Rulemaking 13-11-007 to address issues related to the expanding use of alternative-fuel vehicles in California.¹ The ISO supports the CPUC's initiative to examine how to expand the use of alternative fueled vehicles, including the use of vehicle to grid applications. In its comments, filed in February 2014, the ISO urged the CPUC to focus on adopting policies to encourage managed charging to align charging of electric vehicles with the seasonal and real-time needs of the electric grid to the extent feasible.

¹ *Order Instituting Rulemaking to Consider Alternative-Fueled Vehicle Programs, Tariffs, and Policies.* (Order Instituting Rulemaking 13-11-007).
<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K996/81996327.PDF>

Although the ACR states that this proceeding will not address wholesale market participation,² the CPUC must recognize that the policies it develops can have a positive or negative impact on the high voltage electricity grid. In this respect, the ISO applauds the ACR's emphasis on managed charging and exploring how to value electric vehicle charging in terms of its impact on the electricity system. This inquiry is consistent with track 1 of California's Vehicle-Grid Integration Roadmap.³

II. The Commission should adopt the proposed guiding principles

The ACR sets forth the following four guiding principles to apply to issues and activities within the scope of this proceeding:

- Promote the deployment of safe and reliable AFV grid infrastructure designed to meet transportation and energy service needs while maximizing ratepayer benefits and minimizing costs to all utility customers.
- Target near-term solutions that complement the use of preferred energy resources and utilize the grid efficiently.
- Incorporate and enhance policies from other, related Commission proceedings to promote efficient program implementation and use of ratepayer funding.
- Enable and incorporate the full range of values from VGI in a new program as part of the Commission's overall AFV efforts while remaining technology neutral and allowing for business model innovation.

² The ISO continues its work with Sothern California Edison and the Department of Defense as well as others to integrate electric vehicles as grid resources participating in the ISO's wholesale energy and ancillary services markets.

³ See, California's Vehicle-Grid Integration Roadmap at 6.
<http://www.caiso.com/Documents/DraftVehicleGridIntegrationRoadmap.pdf>

The ACR proposes that the CPUC adopt these guiding principles in an interim decision. The ISO supports adoption of these principles to guide decision-making in this proceeding.

III. The CPUC should adopt rules that promote the nexus between electric vehicle charging and grid conditions

In addition to requesting comments on whether the CPUC should adopt the proposed guiding principles, the ACR seeks comment on four questions. The ISO encourages the CPUC, in answering these questions, to emphasize managed or incentivized charging by electric vehicles that support the needs of the grid or, at a minimum, add no significant burden to the grid. The ISO includes its brief responses to each question below.

- Should the Commission consider an increased role for the utilities in PEV infrastructure deployment and, if so, what should that role be? If the Commission should consider utility ownership of PEV charging infrastructure, how should the Commission evaluate “underserved markets” or a “market failure” pursuant to D.11-07-029? What else should the Commission consider when evaluating an increased role for utilities in EV infrastructure deployment?

The Commission should acknowledge the critical role that utility distribution companies will have to ensure that adequate grid infrastructure exists to accommodate electric vehicle charging and, in some cases, to send appropriate signals to end use customers with respect to the impact of electric vehicle charging on both the high-voltage transmission system and the distribution system.

- What education and outreach activities must the utilities provide to support further customer PEV adoption? What existing resources are available for these activities and what additional resources are needed?

Any outreach and education activities undertaken by the utilities should include information about the impacts of charging on the electricity grid and encourage managed charging. The ISO believes that heightened awareness of the connection between charging electric vehicles and the impact on distribution and transmission systems will enhance the ability of the utilities, auto manufacturers, charging providers and end use customers to explore options to facilitate vehicle charging in a manner that compliments seasonal and real-time grid conditions. The ISO recommends that the CPUC's public advisor's office maintain a role in overseeing any utility outreach that occurs.

- How should the Commission mitigate the impact of demand charges, if at all, on entities pursuing transportation electrification?

The CPUC can mitigate impact of demand charges on entities pursuing transportation electrification by developing rules that apply demand charges in a way that discourages charging during peak system conditions but also that incentivizes charging when most beneficial to seasonal and real-time grid conditions. To achieve this outcome, the CPUC should consider development of dynamic rate mechanisms.

- How should the Commission identify and consider in this proceeding best practices achieved and lessons learned from current AFV pilot project results?

The CPUC should assess and describe best practices to achieve the following in terms of underlying objectives: reduce costs to consumers by charging during optimal times (e.g. reduce consumption during peak periods and increase consumption during over-generation conditions). The CPUC should devote resources to share best practices and lessons learned through its website.

IV. Conclusion

Although this proceeding will not address the participation of electric vehicles in wholesale markets, the ISO plans to participate to explore the benefits that electric vehicle charging may provide to the reliability of the electric system. The ISO believes the ACR recognizes these potential benefits. The ISO intends to continue to examine issues involving wholesale market participation by electric vehicles through its own processes. For purposes of this proceeding, the ISO encourages the CPUC to adopt the guiding principles set forth in the ACR and continue to emphasize the importance of managed or incentivized electric vehicle charging as this proceeding continues.

Respectfully submitted,

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