

TO: California Energy Commission

FROM: Susan Shaheen, PhD, Co-Director
Transportation Sustainability Research Center
University of California, Berkeley

RE: 12-ALT-02: 2013-14 Investment Plan Update

DATE: March 14, 2013

Thank you for the opportunity to comment on CEC's 2013-14 Investment Plan Update. The investment plan outlines promising opportunities in California for increasing a variety of alternative fuels and technologies.

My comment pertains to the potential initiatives that fall within the "Emerging Opportunities" and "Charging Infrastructure" components of the Investment Plan. As the current draft update plan notes, adequate charging infrastructure is critical to encouraging the deployment of electric vehicles (EVs). Today, EVs face the challenge of operating within an environment of limited charging infrastructure. It is key that they be located in areas where there is demand. At the same time, there is the additional challenge of accelerating consumer exposure and adoption to new technologies, which come with up-high front costs and uncertainty regarding range.

There are new approaches/services to increasing consumer exposure to EVs and infrastructure, which can simultaneously advance the multiple objectives of infrastructure expansion. One system design is EV carsharing (i.e., short-term vehicle use) deployed at suburban business parks and neighborhoods, as well as regional rail transit stations. For instance, I have been working with several industry partners to deploy a pilot project of EV carsharing using the Toyota iQEV vehicle at several business parks and a transit station(s) in the East Bay. This project would place charging infrastructure in large parking lots that are used by suburban commuters. Furthermore, the project is geared towards placing infrastructure at a local Bay Area Rapid Transit (BART) District station(s) in the East Bay, which would serve the same carsharing vehicles in a shared station car application. While this project is not fully funded, at present, several partners include Toyota, the BART District, a recognized carsharing operator, a major suburban employment center, the Bay Area Air Quality Management (BAAQMD), and an East Bay city have given their support, permission, and various forms of in-kind contributions.

This type of project meets several of the higher-level objectives of the CEC through the advancement of clean forms of transportation. To start, it would build charging infrastructure in a highly auto-oriented, yet public transit connected, environment in the East Bay. Further, it would deploy EVs for use by employees and residents in the area. This would expose a car-buying population to the technology/service.

Finally, as an ongoing carsharing operation, this system would begin to shift travel patterns towards EV-use and less dependence on personal vehicle ownership.

EV and suburban carsharing are emerging business models, which require the coordination of many different entities. I encourage CEC to consider supporting such systems as an innovative approach that can advance the objectives of infrastructure expansion and consumer exposure. These initiatives, through deployment and evaluation can have near-term impacts and also help to inform the design of new business models of carsharing, station-based vehicle access, and fractional ownership (i.e., shared-use of a vehicle among a few or more households), which in the long run could considerably reduce our dependence on personal vehicle ownership.