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California Energy Commission

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1516 Ninth Street

Sacramento, CA 95814-5512

Via email to docket@energy.state.ca.us

Comments of the California Center for Sustainable Energy regarding the California Energy Commission's Draft *2012-2013 Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program*

The California Center for Sustainable Energy (CCSE) would like to thank the California Energy Commission (Energy Commission) for the opportunity to provide these public comments regarding the Draft *2012-2013 Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program* (Draft Investment Plan) and for its continued investments supporting regional alternative fuel readiness and planning. CCSE is pleased to provide comments pertaining to the following topics in the Draft Investment Plan:

- I. Continued Energy Commission support of the Air Resources Board's Clean Vehicle Rebate Project to meet the forecast demand for plug-in electric vehicles (PEVs) in California and further enable the long-term benefits of these vehicles in meeting the state's energy and greenhouse gas (GHG) reduction goals
- II. A proposed program design for future Energy Commission support of residential plug-in electric vehicle supply equipment (EVSE) infrastructure funding
- III. Regional alternative fuel readiness and planning efforts to support small- and medium-sized vehicle fleet operators in accessing gaseous fuel vehicle incentives and to assist in regional planning of gaseous fueling infrastructure

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I. Energy Commission Support of the Air Resources Board's Clean Vehicle Rebate Project

The Clean Vehicle Rebate Project (CVRP) has achieved significant success in promoting battery electric, plug-in hybrid electric vehicles. To date, programmatic outreach and educational efforts have delivered CVRP-branded information to over 15,000 Californians through public workshops, auto shows, original equipment manufacturer (OEM) ride-and-drive events and other direct outreach activities, ensuring consumer awareness of the CVRP and helping to build the market in California for these clean vehicles. Additionally, since its launch in March 2010, the CVRP webpage has received 168,000 unique hits.

With funding from both the California Air Resources Board and the Energy Commission, the CVRP has distributed over 5,700 rebates, valued at over \$18.8 million. Thanks to the \$2 million contributed by the Energy Commission in FY 2010-2011, the CVRP was able to meet market demand for these vehicle rebates at a critical growth point for the PEV market. Based on projected demand for calendar year 2012, CCSE anticipates consumer demand to outstrip available funding by July 2012 (see Figure 1), due in large measure to the new market deployment and eligibility of plug-in hybrid electric vehicle (PHEV) models such as the Toyota Prius and Chevrolet Volt and continued deployment of Type 1.5 (vehicle range less of 75-100 miles) and Type II (vehicle range greater than 100 miles) battery electric vehicles (BEVs). CCSE applauds the Energy Commission for committing funds to the CVRP for FY 2012-2013 and anticipates that these funds will play a critical role in the continued, uninterrupted growth of the PEV market.

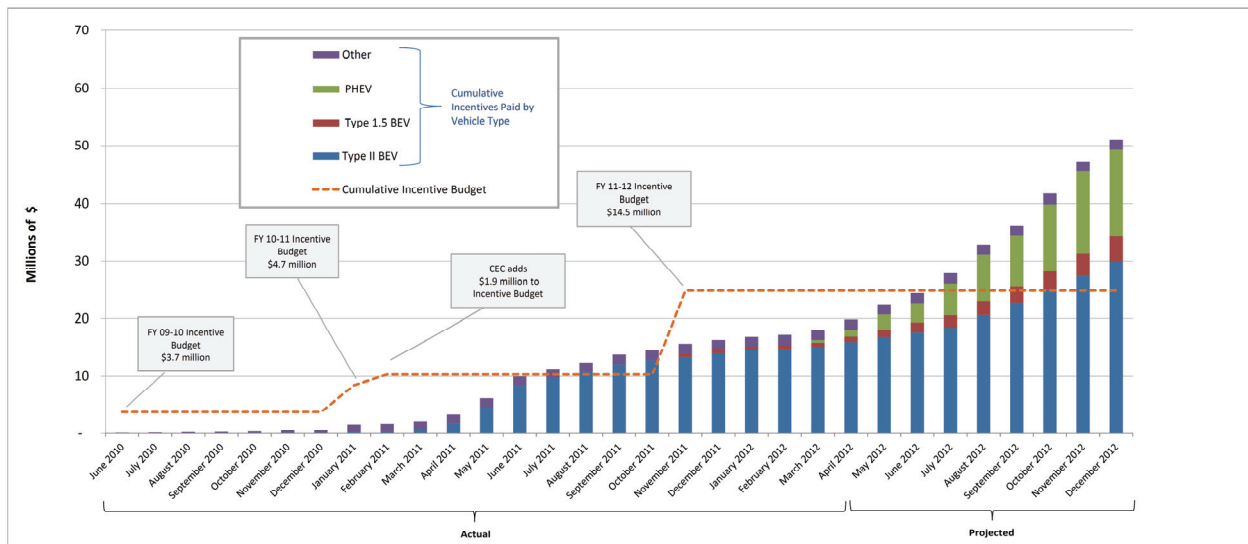


Figure 1. Historic and Projected CVRP Rebate Application Requests and Available Funding

II. Energy Commission Support of Residential Electric Vehicle Supply Equipment (EVSE) Infrastructure

According to a February 2012 survey of California PEV owners, conducted by CCSE in partnership with the Air Resources Board, approximately 91% of the survey's 1,300 respondents had installed Level 2 (240V) residential EVSE. With most PEV charging occurring at residential locations, the efficient, streamlined, and low-cost deployment of residential EVSE will continue to play a critical role in consumer adoption of PEVs, as the increased convenience and faster rate of charging made possible by these units will facilitate greater utilization of and higher consumer satisfaction with PEV technology, as well as provide consumer safety benefits. Moreover, the availability of residential Level 2 EVSE promotes the efficient integration of PEVs with the electricity grid by enabling owners to delay charging until off-peak hours.

Furthermore, according to survey data collected by CCSE and ARB, over 60% of respondents with residential Level 2 EVSE reported receiving an equipment and/or installation subsidy, and among this group, roughly two-thirds stated that the existence of the subsidy played a role in their decision to install a residential Level 2 EVSE. The installation of Level 2 EVSE, however, involves far more than merely purchasing equipment. Municipal permitting (with widely varying and sometimes seemingly arbitrary requirements), possible electrical and service upgrades, multiple EVSE vendors and products, contractor appointments and negotiations, safety issues, utility interaction regarding PEV purchase notification, EVSE installation, and access to PEV Time-of-Use (TOU) rates, as well as other concerns often make the process of residential Level 2 EVSE installation challenging for the average consumer.

Through our administration of consumer incentive programs designed to encourage the adoption of clean, renewable, sustainable, and efficient energy technologies, including the California Solar Initiative, the Self-Generation Incentive Program, Energy Upgrade California, and the Clean Vehicle Rebate Project, CCSE has ascertained that the availability of incentives alone rarely leads to a desired rate of consumer adoption of a particular clean energy technology. Rather, successful deployment of clean energy technologies requires that strong coordination and education efforts be matched with rebates and incentives. Accordingly, CCSE encourages the Energy Commission to consider the potential role independent administration may play in future EVSE residential infrastructure funding. The table below outlines the benefits of such a program design for residential customers:

Advantages of Independent EVSE Incentive Program Administration for Residential Customers

<u>Program Design Element</u>	<u>Benefits</u>
Impartial Administrator	<ul style="list-style-type: none"> • Consumers develop trust through transparent administration process, including cost transparency • Education regarding the incentive process, technology and installation from a non-vendor with no financial stake in making a sale provides peace of mind to consumers • Reduces barriers to market entry by keeping pace with rapid technology innovation and new entrants, e.g., integrators
Dedicated Outreach and Education Component	<ul style="list-style-type: none"> • Single point source of program information, including real-time program funding levels, provided via clear and accurate methods to potential program participants • Consistent program messaging, with the ability to tailor outreach efforts to each region to meet consumer demands
Manufacturer-Neutral	<ul style="list-style-type: none"> • Ensures consumers have no limitations on product choice • Allows consumers to take advantage of latest technologies available on the market
Single Statewide Program	<ul style="list-style-type: none"> • Ability to cost-effectively leverage outreach and marketing efforts • Consumers in all regions have equal access to the incentive program • Provides opportunity to conduct follow-on surveys and research easily and cost-effectively

An overarching benefit of independent administration of an EVSE Infrastructure incentive program, as outlined above, is the ability to provide fuller access, consistent messaging, and full transparency to California's various investments in PEV market development. Coordinating marketing and outreach efforts with already proven incentive programs, such as the CVRP, will also increase active participation by residential customers and employers, thereby growing the overall market.

California has a number of successful third-party-administered incentive programs in addition to the CVRP, including the Air Resources Board's Hybrid Voucher Incentive Program (HVIP), which provides vouchers to help California fleets purchase hybrid and zero-emission trucks and buses, and the California Public Utilities Commission's California Solar Initiative (CSI), which

directs incentives for solar photovoltaic system installations to customers of the state's three largest investor-owned electric utilities.

CCSE encourages the Energy Commission to consider the benefits of independent administration for future residential EVSE infrastructure funding. We are happy to provide any additional information regarding our observations and experiences and welcome comments and feedback.

III. Regional Readiness and Planning in Support of Gaseous Fuel Vehicles and Infrastructure

Previously in 2011, CCSE provided comments to the Energy Commission in support of the *2011-2012 Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program*. Specifically, CCSE advocated for future Investment Plans to fund regional planning efforts designed to coordinate the planning and implementation of gaseous fuel vehicle and infrastructure development (see Draft *2012-2013 Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program*, page 38). In order to illustrate the need for such regional planning efforts, CCSE presented information regarding the diverse fleet of vehicles operating in the Otay Mesa region of southeastern San Diego, the location of the largest commercial land border port in the United States, with over 700,000 annual commercial truck crossings at the port of entry. As reported by CCSE, adoption and deployment of alternative fuel vehicles in this fleet of over 1,500 medium- and heavy-duty vehicles has failed to materialize for a number of strategic reasons, including, but not limited to, the lack of familiarity and understanding among fleet owners and operators, especially those of small fleets, about the availability of state funding programs designed to promote alternative fuel vehicles.

Building upon its experience in Otay Mesa and other regions, CCSE believes that a multitude of barriers to adoption can be successfully addressed through targeted and regionally-coordinated planning and outreach efforts. For example, since early 2011, CCSE has gained extensive experience working with small- and medium-sized fleet operators at the San Diego International Airport through our administration of the San Diego International Airport Vehicle Rebate Program (AVRP), a technology-neutral and metrics-based alternative fuel and clean vehicle program designed and managed by CCSE (<http://energycenter.org/index.php/incentive-programs/airport-vehicle-rebate-program/about-avrp>).

Through our experience in administering the AVRP, CCSE believes that coordinated planning and outreach efforts are integral components to accompany and complement available incentive and vehicle subsidy programs, such as the Energy Commission's Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) Buy-down Incentives for Natural Gas and Propane Vehicles. Specifically, CCSE's experience highlights the need for a coordinated program design directed toward small- and medium-sized fleet operators interested in gaseous fuel vehicles.

Through a grant from the Reformulated Gasoline Settlement Fund (www.cypresfunds.net), CCSE has worked directly with over 400 small- and medium-sized ground transportation fleet operators at the San Diego International Airport in support of the Airport's goals to reduce GHG emissions from ground transportation service fleets. Over the past 12 months, CCSE has conducted extensive outreach efforts and provided direct vehicle rebates and other incentives to shuttle, taxi, and livery companies for the purchase of alternative fuel and clean vehicles. Many of the vehicles eligible for the AVRPP also are potentially eligible for additional incentives through the Energy Commission-funded Buy-down Program. However, based on this work with San Diego International Airport fleet customers over the past year, CCSE has generally found the following:

1. Many small fleet customers are unaware of the Buy-down Program
2. Small fleet customers that are aware of the Buy-down Program do not know how to access potential incentive funding for vehicle purchases
3. Small fleet customers often do not believe that rebate savings actually accrue to the consumer
4. Local vehicle dealers had not applied for and were not eligible for the Buy-down Program funds

As an example, all propane and compressed natural gas (CNG) vehicles eligible for the AVRPP fell within the vehicle categories of the Buy-down Program. However, none of the shuttle company operators wishing to purchase propane and CNG vehicles were aware of potential Buy-down Program funding prior to CCSE's outreach to them. Primarily, this lack of information is attributed to the fact that the majority of airport-based fleets lack dedicated staff to research these types of incentive programs. To address this challenge, CCSE helped to identify dealers and OEMs that applied for Buy-down Program funds, and made extensive efforts to direct small fleet customers to these entities whenever possible. However, these efforts were often complicated by the fact that no local dealers in San Diego had applied for or were scheduled to receive Buy-down Program funding.

CCSE recognizes the Energy Commission's intent to disburse funding directly to vehicle manufacturers and dealers in order to stimulate the market more efficiently. However, in CCSE's experience, an incentive program design involving direct disbursement to either an OEM or vehicle dealer is less than optimal for reaching small- to medium-sized fleets. Though appropriate for larger fleets, the design of the Buy-down Program is not well-suited for small- and medium-sized fleets that lack dedicated fleet managers, the resources to research and stay abreast of Energy Commission incentives, the ability to track which dealers receive program funds, and the ability to make a purchase decision without a guaranteed rebate.

For smaller fleets that lack these resources, CCSE recommends the establishment of a complementary Regional Readiness and Planning program that includes funds for regional outreach, education and marketing in support of the Energy Commission's ARFVTP Buy-down Incentives for Natural Gas and Propane Vehicles. Ideally, such a complementary program would accomplish the following:

1. **Allow greater transparency, awareness and certainty through multiple channels regarding the availability of incentive funds.** Through coordinated and regionally-targeted outreach, Buy-down Program funds can be leveraged in a greater capacity to stimulate new market demand, rather than to simply incentivize fleets already inclined to purchase alternative fuel vehicles. Additionally, a coordinated outreach program provides valuable information to fleet managers regarding other incentives available that could ultimately affect their decision to purchase alternative fuel vehicles.
2. **Increase consumer trust.** Dealer-based incentive programs are fraught with mistrust due to perceptions, whether justified or not, that dealers inflate vehicle prices and thus capture the benefits of incentive funding. Moreover, consumer mistrust frequently intensifies when consumer choice is limited. A complementary outreach and education program could provide unbiased, transparent, consistent messaging, enabling greater consumer trust in the incentive program and, in turn, greater diversity in program participation.
3. **Establish a coordinated, regionally-based approach to ensure that all fleets throughout the state have access to local dealers and education.** CCSE's experience has shown that lack of local dealer participation hinders market demand. For example, in the San Diego region, no local dealers actively sought Buy-down Program funds. San Diego fleet customers wishing to take advantage of the incentive program required significant assistance from CCSE to identify dealers in other parts of the state that would offer them vehicle incentives.
4. **Develop regional marketing, outreach, education in a coordinated package of incentives to address the multiple barriers to adoption.** CCSE's overwhelming experience with San Diego International Airport-based fleets has been that access to rebates is just one, and often not even the most critical, barrier to adoption. Over the last 12 months, CCSE has been asked by fleets for assistance with financing, Americans with Disabilities Act (ADA) requirements, group/pooled buying opportunities, technician training, insurance, accessing existing public and private fueling installations, vehicle technology comparisons, and access to demos and/or ride-and-drives across fuel types. All of these barriers often require information beyond what a vehicle dealer is able to provide, especially one that is not local.
5. **Address alternative fuel infrastructure planning needs to ensure that fueling is available in advance of vehicle demand.** Because of the long lead times for building of CNG and propane fueling stations due to permitting and other environmental requirements, access to fueling must be available at the time of vehicle purchase for a smaller fleet operator to be confident that they are making the right vehicle technology investment. In the case of the San Diego International Airport, the significant delays in building a second CNG station and in development of the first propane station in the region resulted in low demand for CNG vehicles and no demand for propane vehicles – even though ground has been broken on both stations.

In summary, CCSE believes a complementary Regional Readiness and Planning program to support the Energy Commission's ARFVTP Buy-down Incentives for Natural Gas and Propane Vehicles could greatly enhance and encourage the adoption of gaseous fuel vehicles in small- to medium-sized fleets. As our experience with the AVRTP shows, the simple availability of vehicle incentive funding is not sufficient to address all of the multiple barriers to adoption. Successful deployment of clean transportation technologies will require strong coordination, facilitation, and outreach in lockstep with vehicle rebates.

We are gratified to have the opportunity to engage with the Energy Commission on these endeavors, which are critically important for California's transition to a clean energy economy.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Andrew McAllister", with a horizontal line extending from the end of the signature.

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