



DATE February 14, 2013
TO: California Energy Commission Commissioners and Staff
FROM: Bill Van Amburg, Executive Vice President

California Energy Commission

DOCKETED

13-ALT-02

TN 72650

FEB 14 2014

Re: Docket No. 13-ALT-02 - 2014-2015 Investment Plan Update

**Clean Transportation
Technologies and Solutions**

www.calstart.org

Board of Directors

Mr. John Boesel
CALSTART

Mr. Michael Britt
United Parcel Service

Mr. Jack Broadbent
Bay Area Air Quality
Management District

Ms. Caroline Choi
Southern California Edison

Ms. Karen Hamberg
Westport Innovations

Mr. Brian Olson
QUANTUM Technologies
World Wide Inc.

Mr. Puon Penn
Wells Fargo Bank

Dr. Jeff Reed
Sempra Energy Utilities

Mr. Paul Rivera
Ricardo

Mr. Dipender Saluja
Capricorn Investment
Group

Mr. Paul Smith
New Flyer Industries Limited

Mr. George Survant
Time Warner Cable

Mr. Stephen Trichka
BAE Systems

CALSTART appreciates the opportunity to provide input on the California Energy Commission's (CEC) FY 2014-2015 AB 118 Investment Plan. It is clear that the CEC's investments in this area are really driving progress across many important fuel and vehicle technologies. This program is an essential tool in our efforts to clean up the transportation sector. We would like to thank staff for efforts to date and are providing input here to strengthen the draft plan and ensure that these investments help the state meet near- and long-term goals.

As a fuel- and technology-neutral nonprofit organization with members throughout the clean transportation technologies industry, CALSTART is uniquely positioned to help inform investment priorities and strategies. We provided comments on an earlier draft of the plan on November 14, 2013. Relevant excerpts from those comments are quoted in this document. As separate attachments, we are also submitting recent slides presented to the Advisory Committee. We are also submitting a commercialization study on zero emission drayage trucks, which can act as a guide for zero emission freight demonstrations.

Medium and Heavy Duty Vehicles

As noted in our previous comments and detailed in the CalHEAT report, we see a need for continued – and indeed, for accelerated - RD&D investments in medium and heavy duty vehicle technology. In the next investment plan, and over the next several years, this includes work in a few critical areas. Categories are below, and please see attached slides for more detail.

- Zero emissions goods movement, with a strong focus (based on regional need and a willingness to support projects) in Los Angeles County around the ports, moving beyond prototype and into pre-production, production intent, and early production.
 - I-710 commercialization study highlights several key truck powertrain architectures that need focused demonstrations (Extended Range Electric Vehicle, Battery Electric Vehicle, and Plug-in Hybrid Electric Vehicle)
 - Zero emission yard hostlers, as an early enabler of this capability
 - Catenary and in-road power; high power electric recharging
- Ultra-low, near-zero emission goods movement through the San Joaquin Valley to move beyond laboratory stage and into pilot demonstrations and pre-production; a prime opportunity is a large scale validation deployment of low-NOx engines in line-haul trucks
- Greater electrification of goods movement vehicles statewide to move toward early production and reduce costs, via incentives and development programs to deploy currently available technology and improve next generation designs

OFFICES IN :

48 S. Chester Ave PASADENA, CA 91106 • 626.744.5600 • FAX: 626.744.5610 | 14062 Denver West Pkwy Suite 300 LAKEWOOD, CO 80401-3188 • 303.825.7550 • FAX 626.744.5610
501 Canal Blvd., Suite G RICHMOND, CA 94804 • 510.307.8700 • FAX: 510.307.8706 | 161 E. Michigan Ave., 6th Floor, Suite B KALAMAZOO MI 49007 • (626) 744-5603
68 Jay Street, Suite 201 BROOKLYN, NY 11201 • (860) 729-5700



- Large-scale zero emission bus pilot deployments (this is a category that can advance heavy zero emission technologies and infrastructure with applicability to the freight sector)
- Cleaner off-road equipment, including locomotives, construction equipment, and other off-road mobile sources

As noted in our previous comments, we believe CEC should “Allow for an array of technology development and demonstration projects from proof-of-concept prototypes to pre-production advanced trucks and buses. CalHEAT broke the M-HDV sector into six categories and developed different technology adoption cycles for each sector. In accordance with that roadmap, we would encourage the CEC to consider the clear need for innovation and investment across all stages of the technology development and deployment spectrum. The needs in the bus and off-road sector are similar, spanning the entire innovation process. We believe a broader, more flexible program would be better able to help the state meet emission reduction goals.”

We support staff’s identification of the need to reserve and target some funding for critical enabling technology that can support broader electrification.

In order to maximize the effectiveness of the medium- and heavy-duty demonstration dollars, we also recommend funding for technical evaluation and support, industry connections and pathway assessment, and stakeholder coordination. A relatively small investment could allow CEC to tap additional industry expertise to help prioritize investments and build teams to take on technological issues and augment and support its staff.

We believe CEC’s investments in M-HDV technology development, demonstration, and deployment are vitally important. Without smart and sustained public investment in this sector, we will not see the sort of private sector innovation that is needed to clean up the M-HDV sector. We support the funding allocation for this area and believe the recommendations outlined above and detailed in the accompanying documents would help ensure maximum return on investment.

On the subject of vehicle purchase incentives, we believe there is still room to improve the efficiency and transparency of the CEC’s natural gas truck incentives.

Alternative Fuel Infrastructure and Planning

CEC’s investments in infrastructure and related efforts are very important as we look transform California’s fleet. We recommend investigating options for linking infrastructure and vehicle funding to create a “one-stop shop” for fleets. A specific example is for CEC funds to be used to buy down e-truck recharging infrastructure, and for ARB funds to be used for the vehicle incentives themselves. Through a combined incentive, with which the agencies have past successful experience, a large barrier to adoption of e-trucks could be addressed in a highly effective fashion that is streamlined and efficient. Similarly, zero emission bus deployments (whether hydrogen fuel cell or battery electric) will require infrastructure support.



On the subject of infrastructure planning, in addition to regional planning support we recommend investment in a coordinated statewide effort to expand workplace charging. While home charging will remain the most common location for PEVs to charge, we see workplace charging as the second most important. Availability of workplace charging has been shown to incentive people to purchase or lease PEVs.

The number of companies that offer workplace charging remains small. In order to significantly grow this number we believe a coordinated statewide effort of education and outreach is needed in the state. PEV planning has traditionally been done on a regional basis. However the issues that are relevant to address workplace charging are very much the same throughout the state, regardless of the region. Coordinated statewide outreach to workplaces has the potential to engage a broad number of companies to adopt workplace charging at their sites.

* * * * *

Thank you for the opportunity to provide comments on the FY14-15 investment plan. We believe these comments, together with the accompanying documents, can help to maximize the return on investment for this vitally important program.