

**DOCKETED**

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**Docket 19-ALT-01, Comments on the Draft Staff Report, 2020-2023  
Investment Plan Update for the Clean Transportation Program**

*Additional submitted attachment is included below.*

March 19, 2020

Ms. Patty Monahan  
Commissioner and Presiding Member of the Clean Transportation Program  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA

Re: Docket 19-ALT-01, Comments on the Draft Staff Report, 2020-2023 Investment Plan Update for the Clean Transportation Program, California Energy Commission, Publication Number CEC-600-2020-001-SD

Dear Commissioner and Presiding Member Monahan:

As a Member of the Advisory Committee, I am pleased to provide these comments on the Draft Staff Report, 2020-2023 Investment Plan Update for the Clean Transportation Program.

The format for these comments follows the specific questions asked by the Staff of the Commission in their March 3, 2020 presentation to the Advisory Committee summarizing the Draft Staff Report. The staff questions are repeated below in **RED** color font, followed by my comments.

I want to commend the Commission Staff for their thoughtful work in producing this excellent Draft Report.

## **I. Context and Proposed Priorities**

**A. Is there additional context that we should factor into our decision-making on priorities?**

The Draft Staff Report does a good job in summarizing the context for the priorities, including the important statutory and regulatory goals for GHG reduction, criteria air pollution, toxic air emissions, as well as Zero-Emission Vehicles and Infrastructure.

Not for this report specifically, but one thing I have always thought would be helpful for the public to understand why state government is undertaking specific energy and environmental actions and programs, would be to link those actions and programs back to the fundamental health and welfare policies and impacts that underlie them. What are the health impacts of breathing air that does not meet state or federal standards for clean air? What are the human health and welfare impacts of future forecasted levels of GHG emissions? How do these impacts differ by population group, income, geography, etc? As a more specific example, how does increasing penetration of ZEVs tie back to these health and welfare impacts? As the former CEO of several non-profit

organizations, I have worked to try to explain why specific programs and policies are important to the general public and specific groups. And in most cases this comes down to a description of impacts on human health. But getting data on these health impacts, and being able to link the expected outcomes of specific programs back to health impacts, has proved to be extremely difficult. I would like to see developed, somewhere in State government (perhaps Department of Health Services in partnership with CalEPA?) the capability, database(s), and modeling, to do this sort of analysis and reporting.

**B. Do we have the right program funding priorities (ZEVs, ZEV infrastructure, near- and zero-emission fuels, equity)?**

Yes, these are the right program priorities, with needed emphasis on Zero-Emission Vehicles and Infrastructure.

**C. Are we missing any important activities?**

It does not appear so. However, within the identified priority investment opportunities, particularly ZEV charging infrastructure, I do have some questions about how staff intends to handle (through the solicitations or otherwise) issues including:

- Ongoing upkeep and maintenance of funded charging infrastructure
- Any restrictions on charges for electricity (or other fees) at these facilities
- Any provision for load management, “smart charging”, or communication
- Any provision for signage, and availability on EV charger maps
- Any requirements for data collection
- Any regulatory incentives for these installations

Also, at the Advisory Committee Meeting there were questions about whether Title 24 Building Codes might be able to help in increasing the number of ZEV infrastructure, wither now or in the future? Perhaps staff could address these issues in the next version of the Draft Report.

**D. How should we approach the new concept of multi-year funding allocations?**

The multi-year funding allocation concept is a good addition to the Investment Plan because it provides all stakeholders with valuable information about the future direction and priorities of the Clean Transportation Program. However, the CEC should also make clear that the future funding levels are not “set in stone” or guaranteed; and that these can change over time as circumstances evolve. It is important for the CEC to retain flexibility in current year funding amounts to be able to respond to new information and/or unforeseen issues.

## **II. Proposed Light-Duty EV Charging Infrastructure and eMobility**

### **E. Is front-loading our investments in this category the right approach?**

Yes. The technology is ready and available. Front-loading is needed to support California's goals in several areas. However, the CEC should retain flexibility in future years to make additional investments if conditions warrant that action. This may be particularly true for: (1) equitable eMobility projects; and (2) innovative and pre-commercial charging technologies.

### **F. How should we balance (or prioritize) project types?**

- Charging infrastructure deployment
- Equitable eMobility projects
- Innovative and pre-commercial charging technologies

The correct priority order is as listed above. Charging Infrastructure Deployment is the most important priority, and should receive 85-95% of annual funding. Emobility projects are also an important component of the Clean Transportation Program and the Investment Plan because of their needed contributions to disadvantaged and rural communities. In the area of Innovations in Charging Technologies, there appear to be several technology areas that can provide substantial benefits to consumers and the electricity system. The Commission should seriously consider priority investment in the areas of:

- Demand-side management
- Technologies to facilitate the use of excess electricity (overgeneration) for charging during daytime (including "price-signal" and other charging triggers)
- Vehicle-grid integration
- Smart charging

## **III. Proposed Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure**

### **G. Is the proposed funding approach (decrease in FY 2020-21; increase in the following 2 ½ FYs) the best approach for the MD-HD sector?**

Yes. Although there is significant opportunity for reduction of GHG, criteria pollutant, and toxic air contaminants from this sector, additional data and analysis is needed to determine which investments will provide the greatest benefits in relation to costs, including: emissions reductions; benefit to disadvantaged communities; technological development.

H. Which of the following concepts should be prioritized? Are there others that should be considered?

- Freight demonstration infrastructure
- Planning blueprints
- Transit bus infrastructure
- Marine and rail infrastructure
- School buses + infrastructure (currently not proposed for funding)
- Innovative charging/refueling

In my opinion, the priority ranking should be:

1. **Transit Bus Infrastructure**, particularly for those sites where evaluation and planning has already been done and found to be feasible and cost-effective. I listed this as top priority because of the additional benefits to mobility and potentially to disadvantaged communities.
2. **Freight Demonstration Infrastructure**, particularly for those sites where evaluation and planning has already been done and found to be feasible and cost-effective. I listed this as a high priority not only because of the benefits of technological development and emissions reduction, but also because of the benefits potentially to disadvantaged communities.
3. **Planning Blueprints**, because of the need for additional data and analysis (particularly site specific) before funding is provided, as explained in my answer to Question G above.
4. **School Buses and Infrastructure (currently not proposed for funding)**. I did not list this higher on the priority list for this Investment Plan because there is already a funding source for ZEV school buses, although oversubscribed. It is my hope that additional funds could be made available through the School Bus Replacement Program or other sources for ZEV school buses and infrastructure.
5. **Marine and Rail Infrastructure**, particularly for those sites where evaluation and planning has already been done and found to be feasible and cost-effective.
6. **Innovative Charging and Refueling Solutions**. Lower priority.

I. How should we account for the impact of current and anticipated MD/HD CARB regulations (e.g. Innovative Clean Transit; Advanced Clean Trucks)?

This should be included in both the overall analysis and evaluation described in my response to Question G, and in any specific Planning Blueprints. Funding/investment in technologies/activities made in advance of compliance with MD/HD CARB regulations is to be encouraged, as are investment in technologies/activities which facilitate and/or accelerate compliance.

#### **IV. Proposed Hydrogen Refueling Infrastructure**

J. AB 8 (2013) requires \$20 million annually until there are at least 100 publicly available hydrogen stations. Once 100 retail hydrogen stations are open, should funding continue?

Given limited public-sector resources, this is a valid question, which calls-out for honest analysis of costs and benefits, particularly in comparison to other transportation technologies and fuels. Further, this analysis should also include consideration of the end-use applications of hydrogen as a transportation fuel, since some applications will likely be more cost effective than others. The analysis should also include evaluation of other funding sources.

I see that the CEC did have a public workshop scheduled “to gather information on the market status of hydrogen as a transportation fuel and on fuel cell electric vehicles” on March 18, 2020, which was subsequently cancelled due to the COVID-19 situation. I do not know if this workshop was intended to gather any of the information I reference above, but this would seem to be a good starting point for the analysis and evaluation I describe above.

I support the staff recommended funding amounts in the Draft Staff Report, pending the needed analysis and evaluation. These amounts can be amended next year, or the year after, once the analysis and evaluation is complete.

K. How much should the program focus on light vs. heavy duty hydrogen infrastructure, especially given new regulations on transit fleets?

An updated focus on heavy duty hydrogen infrastructure would appear to be more appropriate than the current light-duty focus. However, this question should be included in the analysis and evaluation described in response to Question J above.

#### **V. Proposed Zero- and Near Zero-Carbon Fuel Production and Supply**

L. We intend to fund zero and near zero carbon fuel production (includes net negative fuels). These fuels may be used in ZEVs or combustion vehicles. How should we balance GHG emission reductions and technology flexibility?

Although the amount of investment recommended by CEC staff in this category is relatively modest, I am struck by the large amount of incentive funding for these fuels which is coming from the LCFS: \$1.1 billion for biofuel producers and retailers in 2018! The Draft Staff Report says that, “CARB and CEC staff expects that the LCFS will serve as the state’s primary source of financial support for low-carbon fuel production and distribution.” And the Report notes significant sources of additional funding from the

California Department of Food and Agriculture, and the California Department of Resources Recycling and Recovery.

As a result of these other, clearly dominant, funding sources, it is critically important that funds from the Clean Transportation Program are used for activities/efforts which would not otherwise occur absent this funding source. At this point in time, it is not clear to me what these activities might be. Perhaps staff could provide some examples of projects that would fall into this category?

Having said the above, I believe the emphasis should be on GHG emissions reductions, both in the short- and long-term. With this guiding criteria, I do not object to the use of these zero, net negative, and near zero GHG fuels in combustion vehicles, particularly in the near-term.

M. We have traditionally funded grants to biofuel production facilities, but we are now considering expanding to address system barriers, like the lack of blending equipment for biodiesel. Is this the right direction?

I have no objection to a program expansion that would address system barriers. However, as stated above, this funding should not be used for activities to address system barriers that are already being addressed by incentives provided by LCFS or other state agencies.

N. What is the best way to scale up in-state production of renewable fuels? Are there other funding mechanisms besides grants to facilities that can be used to better scale up the market and allow CA businesses to thrive (e.g., loans)?

It would seem like LCFS would be well suited to accomplish this. Loans and other incentives through the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) may be other complementary mechanisms.

## **VI. Proposed Manufacturing and Workforce Training and Development**

O. What considerations and priorities should guide the program's investment into the ZEV manufacturing supply chain?

What other sources of funding and/or incentives are available through other state and local agencies, including GoBiz (Gov's Office) and the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA)?



**P. What approaches or priorities should we apply toward future investments in workforce development?**

Someone at the Advisory Committee meeting said to include the “worker voice” in determining future investments. I might add that the “employer voice” also be added; meaning that we should listen to California companies that are manufacturing these technologies and will need workers in the foreseeable future.

I am not an expert in the area of workforce training and development, but wouldn't a logical approach be to first develop the specific curricula needed, and then roll that out to students and others as employers are ramping up and looking for qualified workers? This maybe the ETAP model described on page 59 of the Draft Staff Report. And the Workforce Assessment for Zero-Emission Port Equipment, and Sustainable Freight Foundations Certificate, appear to be good steps towards needed workforce training in the promising fields of Freight, Marine, and Rail technologies using ZEVs and zero emission fuels.

**Q. We are choosing to fund manufacturing and workforce development in alternating years; is this the right approach?**

Yes, given the limited funding resources in the Clean Transportation Program. The CEC should also identify and coordinate with other funding and incentive sources in state government, federal programs, local governments, educational institutions, and the private sector.

I again want to thank the CEC and staff for the excellent work in the Draft Staff Report. I support the Investment Plan Allocations for FY 2020-2021 and Subsequent Years as contained in Table 5 on page 33 of the Draft Staff Report.

Sincerely,

David L. Modisette  
Member, Clean Transportation Program Advisory Committee

Cc: Patrick Brecht