

DOCKETED	
Docket Number:	19-TRAN-02
Project Title:	Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure
TN #:	232840
Document Title:	HD transit FCEB stakeholders California Fuel Cell Partnership Comments - HD transit FCEB stakeholders CaFCP comments Zero-Emission Transit Fleet Infrastructure Deployment (docket 19-TRAN-02)
Description:	N/A
Filer:	System
Organization:	HD transit FCEB stakeholders California Fuel Cell Partnership
Submitter Role:	Public
Submission Date:	4/24/2020 2:51:53 PM
Docketed Date:	4/24/2020

Comment Received From: HD transit FCEB stakeholders California Fuel Cell Partnership

Submitted On: 4/24/2020

Docket Number: 19-TRAN-02

HD transit FCEB stakeholders CaFCP comments Zero-Emission Transit Fleet Infrastructure Deployment (docket 19-TRAN-02)

Additional submitted attachment is included below.



California Fuel Cell Partnership
3300 Industrial Blvd., Suite 1000
West Sacramento, CA 95691
(916) 371-2870

www.cafcp.org
info@cafcp.org

April 24, 2020

Esther Odufuwa
California Energy Commission
1516 9th St
Sacramento, CA 95814

Re: HD transit FCEB stakeholders CaFCP comments: Zero-Emission Transit Fleet Infrastructure Deployment (docket#: 19-TRAN-02)

Dear Ms. Odufuwa,

We applaud the California Energy Commission (CEC) initiative to invest in essential heavy-duty zero-emission transit bus fueling infrastructure needed by transit agencies to address Innovative Clean Transit requirements in the years ahead. After funding the heavy-duty hydrogen bus fueling infrastructure for AC Transit's fuel cell powered transit bus fleet, CEC facilitated the implementation of the current retail hydrogen station infrastructure for light-duty fuel cell electric vehicles, and we look forward to CEC's continued lead role in achieving the State's 2025 milestone for retail stations¹. Thank you for the opportunity to provide this feedback to the Draft Solicitation Concept for Zero-Emission Transit Fleet Infrastructure Deployment.

During the April 10 workshop, you requested stakeholder feedback on the draft solicitation presented. The following response reflects areas identified by the heavy-duty transit fuel cell electric bus (FCEB) stakeholders of the California Fuel Cell Partnership (CaFCP). This feedback is based on two decades of lessons learned by our members with hydrogen infrastructure for both transit bus fleets and passenger vehicles, in California and around the world. The letter focuses on two main topics; balance and flexibility, with the long-term intent to pave the path to success of all zero-emission bus technologies.

1. Balancing the overall state infrastructure investment portfolio

Based on a high-level assessment of state agency approved investments for heavy-duty ZEV fueling infrastructure, it appears that the investment portfolio is unbalanced. The CaFCP 2019 roadmap *Fuel Cell Electric Buses Enable 100% Zero Emission Bus Procurement by 2029*² identified the need for action by state and regional legislators and agencies to counter-balance the SB350 Transportation Electrification mandate that provides over \$600 million California Public Utilities Commission-approved (CPUC) utility investments for medium- and heavy-duty charging infrastructure only and not medium- and heavy-duty hydrogen fueling infrastructure.

By making the majority of this solicitation investment available to assist with the construction of hydrogen infrastructure for transit, CEC has the opportunity to contribute to a more comprehensive state infrastructure investment portfolio. This enables transit planners to balance their fleets with battery electric options when their operations allow, while utilizing hydrogen FCEBs to provide full coverage for all

¹ Per Executive Order B-48-18: <https://www.ca.gov/archive/gov39/2018/01/26/governor-brown-takes-action-to-increase-zero-emission-vehicles-fund-new-climate-investments/index.html>

² Available at: <https://cafcp.org/sites/default/files/2019-CaFCP-FCEB-Road-Map.pdf>

circumstances, including harder-to-fulfill longer routes, extreme temperatures and resiliency for emergencies³.

2. Flexibility within individual solicitation requirements

In the context of each California transit agency working towards a target of operating a 100% zero-tailpipe emission bus fleet by 2040 and “each transit agency has its own unique set of operating parameters” assumption, we encourage CEC to be flexible with the requirements for submitted proposals. To achieve the most significant progress towards the 2040 regulatory targets with the current available investment funds, the solicitation should allow for flexibility in the following areas:

a) Cost share

Where initial light-duty retail hydrogen infrastructure solicitations allowed for up to a 80/20 cost share ratio (80% by state/20% by applicant) with supplemental funding for 3 years of infrastructure operational cost (OPEX) to start the market, the currently draft proposal for a 50/50 cost share ratio should provide transit agencies flexibility in how to meet these requirements. For example, if transit agencies can use operational costs for their FCEBs and infrastructure as cost share this would allow flexibility in achieving the required cost share requirement that meets each transit agency’s own unique fleet operational situation.

b) Fueling capacity of fueling infrastructure versus number of zero-emission buses

The intent to require an equal number of buses that matches the fueling capacity of the fueling infrastructure could indeed contribute to the number of zero-emission buses rolled out, but requiring the simultaneous acquisition of 50 buses is unachievable considering each transit agency’s unique fleet acquisition schedule and related federal rolling stock funding availability to transit agencies. For this reason, we recommend that CEC decouples the infrastructure fueling capacity requirement number from the number of buses required. As shown in the rollout of the new SunLine Transit Agency and Orange County Transportation Authority FCEB fleets and supporting infrastructure, it is feasible to implement hydrogen fueling infrastructure with capacity to fill 50 FCEBs (with a fueling performance equivalent to CNG bus fueling) while initially operating a smaller fleet. A CEC requirement that the fueling infrastructure should have fueling capacity of 50 or more buses while requiring a fleet size of 10-20 buses will give transit agencies flexibility in their vehicle acquisition and funding schedules. Having the fueling capacity in place ahead of need will enable these agencies to grow their bus fleet in alignment with available funding.

c) Private access

While we agree with keeping hydrogen infrastructure investment to provide all its value to transit agencies, individual transit agencies may be interested in allowing others to use their fueling infrastructure to generate complementary revenues to break-even on their budget. Flexibility for transit agencies to propose specific solutions for outside-the-fence access should be allowed, thereby allowing each agency the ability to pursue the most optimal economical and logistical transit revenue service possible for their region. An example is implementation of a dispenser outside the fence for waste collection trucks to fuel, such as currently happens at several California transit agencies.

³ Such as resilience in case of natural disaster, FEMA ordered evacuations and FCEBs as back-up of electric grid.

In the context of previous feedback, we submit the following questions:

- Given that CPUC has stated that CPUC-regulated utilities could not cover cost of hydrogen fueling infrastructure (in this case for heavy-duty transit), but only charging infrastructure, how will CEC use this direction in using preferential treatment for hydrogen proposals to balance out SB350 related investments for transit bus charging infrastructure?
- How will heavy-duty FCEB hydrogen fueling infrastructure technology be assured of representation in the outcomes of the solicitation?
- What is CEC's definition of "transit" used for this solicitation and are eligible applicants the same entities as those subject to the Innovative Clean Transit rule?
- What is the potential for additional funding in this category?

This funding initiative has the potential to facilitate broader hydrogen and electricity fuel applications towards establishing the holistic, decarbonized energy system that California needs.

Thank you for the opportunity to provide feedback to CEC's draft solicitation concept. We look forward to continuing our collaboration as we work with all stakeholders towards a self-sustaining, heavy-duty, zero-emission transit bus market.

Respectfully,

A handwritten signature in black ink, appearing to read "Nico Bouwkamp", with a stylized flourish below it.

Nico Bouwkamp
Technical Program Manager
California Fuel Cell Partnership