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Rebel Comments on MDHD Infrastructure Concepts

Additional submitted attachment is included below.

Attn: Ms. Michelle Vater
Supervisor, Freight and Transit Unit
California Energy Commission
715 P Street
Sacramento, California 95814

Washington, DC, 7/30/2024

Subject: Comments regarding Docket #19-TRAN-02 (Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure)

Dear Ms. Vater:

We write to provide comments regarding Docket #19-TRAN-02 (Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure). Rebel is serving as the contractor responsible for carrying out a business case analysis, sponsored by the Governor's Office of Business and Economic Development (GO-Biz), that analyzes the economic impacts for a transit agency transitioning to fuel cell electric buses (FCEBs) in the North State Super Region. Through this project, GO-Biz and Rebel are rigorously examining the operating budget impacts for a reference case study, Humboldt Transit Authority (HTA), that is converting its fleet to fuel cell electric buses (FCEBs). The upcoming Clean Transportation Program (CTP) solicitation cycle provides an excellent opportunity to simultaneously address transit agencies' needs and advance CEC's mission. However, based on the CEC's July 2024 workshop on pre-solicitation concepts, there is no clear way for transit agencies to leverage CTP funding for the operational costs associated with achieving full fleet electrification and deployment of the necessary supporting infrastructure by 2040.

Preliminary results of the business case study show a large short-term operating deficit for fleet transition driven by high fuel costs, high fueling station operations and maintenance (O&M) costs, the impact of evaporative losses of liquid fuel ("boil off"), costs of workforce training, and other contributing factors. These results are applicable to HTA, as well as other transit agencies that are early FCEB adopters. We have seen firsthand that concern about long-term operating budget deficits is a key barrier preventing transit agencies from making the necessary investments in vehicles and infrastructure, and that these concerns are well-supported by the findings of this forthcoming study.

There is strong alignment between transit agency needs with respect to ZEV transition and CEC's stated objectives for the CTP. Increasing the CTP's strategic focus on transit agencies through the suggested modifications included below, or through a new and distinct funding concept, would have the following key benefits:

- **Speed of deployment:** Many transit agencies, such as HTA, have shovel-ready projects that have already gone through extensive due diligence and stakeholder engagement, allowing for rapid deployment of ZEV infrastructure.
- **Ability to unlock complementary funding:** Operating funding can significantly increase leveraged impact per funding dollar; for every dollar of operating funding provided, transit agencies can leverage significant other federal and state resources already dedicated to capital

funding that otherwise could not be spent. This "unlocking" function can help spur more investment in projects to maximize impact.

- **Amplified emissions impacts:** Infrastructure for zero-emission public transit can amplify greenhouse gas (GHG) reductions by investing in systems that reduce vehicle miles traveled (VMT) as well as shifting vehicles and fuels to zero-emission, increasing the environmental impact of funding dollars.
- **Trusted funding recipients and partners:** Transit agencies are experienced and responsible recipients and stewards of public funds, often deploying projects that require significant monitoring and data collection.

This letter seeks to provide the requested feedback on draft solicitation concepts 2 and 5, leveraging the timely and relevant insights from the ongoing state-sponsored business case study for zero-emission vehicle and infrastructure deployment.

Concept 2: Implementation of MDHD ZEV Infrastructure Blueprints 2.0

Q1: What is missing from this concept that should be included?

The ongoing study of the transit agency business case for FCEB deployment clearly indicates that near-term operating costs are a key barrier for transit agencies that can prevent the investment in MDHD ZEV infrastructure that the CEC is seeking to catalyze. This view appears to be shared by the CEC based on the inclusion of funding lane 2 under concept 5, which explicitly recognizes that O&M cost constraints may stymie progress.

Based on this finding, the omission of operational costs from funding eligibility (which may include, but are not necessarily limited to, station operation and maintenance, fuel procurement, transportation, and storage, and other "soft" costs) is an important element that we would urge the CEC to reconsider. As stated previously, we would strongly encourage the CEC to deploy CTP funding resources for operational costs that could rapidly "unlock" capital investment in transit agencies' MDHD ZEB infrastructure projects.

In addition to considering the eligibility of operational costs, we would encourage the CEC to consider opportunities to both streamline funding application and administration and enhance the predictability of funding. These opportunities may include testing an alternative funding structure such as first-come-first-served, multi-year awards, or predictable, recurring funding opportunities.

Q2: Is the list of "Eligible Applicants" adequate?

The pre-solicitation presentation noted that projects that will implement ZEV charging and/or hydrogen refueling infrastructure projects identified in final blueprint planning documents resulting from GFO-20-601 as well as "other blueprints for MDHD ZEV Infrastructure not funded by CEC provided that the blueprint meets the set criteria in GFO-20-601" would be eligible for funding under this solicitation concept. This extension of eligibility beyond CEC-funded blueprints is a significant step towards making this funding concept better suited for transit agencies as applicants. However, the list of "Eligible Applicants" could be improved and clarified in several ways:

- **Ensure eligibility via transit agencies' approved planning documents:** Transit agencies are conducting rigorous planning for their ZEV transitions and specific MDHD ZEV infrastructure projects. The planning required for federal and state funding of specific ZEV transition projects (e.g., TIRCP, Low-No), paired with comprehensive transition planning submitted to CARB to satisfy Innovative Clean Transit (ICT) requirements provides a solid foundation for feasible, actionable, public-minded ZEV infrastructure planning. We would urge the CEC, in the spirit of coordination raised in question 8, to test the concept of streamlining eligibility for transit agencies by basing it on planning and project documentation required for other funding and regulatory programs relevant to transit agencies. For example, the CEC could explore a joint or "add-on" application between TIRCP and CEC blueprint funding for transit agencies with a completed ICT transition plan. By doing so, the CEC would avoid the use of public funds on potentially duplicative planning efforts, enhance interagency coordination, and reduce barriers to funding for transit agencies while maintaining key standards for project quality and readiness.

- **Clear criteria for alternative blueprints:** The criteria for an eligible blueprint are not easily accessible, given their location in a past solicitation. The CEC may consider clearly listing these criteria and how eligibility can be verified prior to application for funding. If specific blueprints funded by other entities or produced for another purpose are likely eligible, these should be clearly identified.
- **Clarity on ineligibility due to prior funding:** The statement that "Projects that have received funding from another CEC grant funding opportunity (GFO) or block grant incentive program for the same project being proposed to this Solicitation" could be further clarified. Specifically, this statement could specify whether only funding via CEC block grant incentive programs would render a project ineligible, or whether funding via any block grant incentive program would be disqualifying.

Q5: Should Applicants be allowed to propose sites that are not included in their original blueprint?

Yes, applicants should be allowed to propose additional sites not included in their original blueprint. Given the dynamic nature of project planning and developments in the zero-emission economy, allowing appropriate flexibility for applicants to propose sites that best fit the goals of the solicitation would be advantageous both for applicants and for the public interest.

If applicants were to be allowed this flexibility, we would encourage the CEC to provide significantly more clarity about how such sites could be proposed and how they would be evaluated relative to sites originally included in applicants' blueprints.

Q8: What is the best way to ensure that CARB and CEC coordinate funding?

It is an admirable goal to strive for coordinated funding among the multiple state agencies that play critical roles in California's ZEV transition. In addition to coordination with CARB, we strongly encourage CEC to encourage coordination with other California agencies with a key role in zero-emission transition funding, especially Caltrans, CalSTA, and CTC. These agencies are key stakeholders in the zero-emission transition statewide, particularly for transit agencies.

In order to foster coordination among all of these agencies, as mentioned above in question 2, CEC may consider opportunities to test and/or deploy changes to the application process and administration of CTP funding jointly with or as an "add on" to existing ZEV infrastructure funding programs. Joint applications and joint funding administration would significantly reduce barriers to funding, especially for transit agencies with fewer resources available for seeking funding, and serve to effectively coordinate funding processes and requirements. As discussed above, one actionable opportunity to do so would be to allow planning and project documents for state-funded ZEV transition projects – e.g., through TIRCP – in combination with an ICT transition plan submitted to CARB, to confirm eligibility for blueprint funding. These potential modifications could aid in addressing the barriers faced by transit agencies in pursuing CEC funding opportunities previously identified by CALSTART as administrator of key CEC funding programs such as EnergIIZE.

In addition, the idea of offering operational funding for ZEV infrastructure, as discussed in the response to question 1 above, would be a significant step towards interagency coordination. Recognizing that both capital and short-term operational funding support are required for a successful ZEV infrastructure project would allow multiple funding sources to work together effectively and unlock investment in critical infrastructure.

Concept 5: Light-Duty Hydrogen Refueling Infrastructure

The CEC could consider clarifying the eligibility requirements for funding lane 2 within this concept. Specifically, the presentation stated that "Funding Lane 2 is open to any station developer who has paused development of their stations due to cost constraints". Although this language is accommodating, based on the solicitation concept title, we understand that it is possible that only light-duty or mixed-use stations would be eligible. However, we would encourage the CEC to clarify whether "any developer" would indicate that a developer of a MDHD hydrogen refueling facility (i.e., a transit agency) would be eligible for this funding lane. As discussed previously, many transit agencies as MDHD station developers are in precisely the position described in the solicitation concept and could unlock progress on station development with such a funding source.

Funding Lane 2 Q1: Will the proposed O&M funding of $500,000 per station be sufficient to continue operation of hydrogen stations?

The inclusion of funding lane 2 is an important indication of CEC's responsiveness to on-the-ground barriers to infrastructure deployment and operation. Based on the business case analysis for hydrogen refueling infrastructure conducted to date, O&M funding of $500,000 per station is unlikely to be sufficient for most operators. For transit agencies in particular, given the costs of station operation and maintenance and the relatively high cost of hydrogen fuel – particularly to more remote locations – the operational funding gap is expected to be significantly higher in the short term (e.g., millions of dollars per year, even for a small transit agency). In order to maximize the impact of this funding concept, CEC may consider increasing both the total funding allocated to funding lane 2 and the maximum O&M funding allowed per station.

In addition to the funding amount, CEC could consider opportunities to increase the reliability and predictability of operational funding over the short- to medium-term. Particularly for transit agencies, a one-time funding opportunity would be less impactful than a recurring funding opportunity in encouraging transit agencies to take on the recurring operational costs associated with a major capital investment in hydrogen refueling infrastructure. For operators determining whether business case challenges to station development can be overcome, the underlying drivers of cost constraints (e.g., relatively high O&M costs for newer technologies, high fixed costs, uncertain demand) are unlikely to be resolved in one year. Providing additional security of operational support over multiple years may be more effective in unlocking progress on infrastructure deployment and operation.

We recognize the enormous challenges in this work and commend CEC for its efforts and leadership in this area, particularly the Commission's active participation in the Interagency Working Group supporting the FCEB business case study that has generated the insights offered in this letter. We look forward to continuing to work with you, discussing these topics further, and advancing our shared goals.

Sincerely,

Leah Foecke and Zachary Karson

Rebel