



October 21, 2019

Chair Mary Nichols  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Subject: Heavy duty vehicle investments**

Dear Chair Nichols:

The [Los Angeles Cleantech Incubator](#) (LACI) appreciates the opportunity to provide comment on the *Proposed Fiscal Year 2019-20 Funding Plan for Clean Transportation Incentives*.

LACI is a nonprofit organization that is creating an inclusive green economy by unlocking innovation through working with startups to accelerate the commercialization of clean technologies; transforming markets through partnerships with policymakers, innovators and market leaders; and enhancing communities through workforce development, pilots and other programs.

In Spring 2018, LACI convened the [Transportation Electrification Partnership](#), an unprecedented multi-year partnership among local, regional and state stakeholders to accelerate transportation electrification and zero emissions goods movement in the greater Los Angeles region in advance of the 2028 Olympic and Paralympic Games.

In Fall 2018, LACI partnered with the California Air Resources Board (CARB), California Energy Commission (CEC), and the San Pedro Bay Ports to issue an [RFI on Zero Emissions Trucks, Infrastructure and Pilot Concepts for Goods Movement](#). With almost 40 respondents across startups and incumbents, vehicle manufacturers and infrastructure providers, the RFI demonstrated significant product development in the battery electric drayage truck space.

**As such, we are pleased that CARB is thinking holistically and long-term on the transition to zero emissions vehicles, and we offer strong support on these specific proposals for heavy-duty vehicles:**

[Advanced Technology Demonstration and Pilot Projects](#)

We support the proposal to allocate dedicated funding that is focused on pre-commercial demonstrations and pilot projects of nascent technologies, in particular the proposals for the Zero Emissions Drayage Truck Pilot (\$20 million) and the Golden State Carbon Challenge (\$10 million).

[Zero-emissions drayage truck pilot \(\\$20 million\)](#)

In the abovementioned RFI, we asked industry respondents about their readiness to participate in a 50-to-100 zero emissions on-road drayage truck deployment at the San Pedro Bay Ports. Seven vehicle manufacturers, both incumbent and startup, replied in the affirmative, with at least six offering battery

electric solutions. Subsequent responses to RFI questions around product launch timeline indicated that 2020 and 2021 would be feasible, and that the deployment of EV charging infrastructure at locations that align with drayage duty cycles (third party logistics yards, truck stops, as well as via non-stationary zero emissions charging options) would be an essential factor in the success of early adopters.

Based on this information, we strongly support the large scale deployment of zero emissions drayage trucks in larger numbers than previously demonstrated. We estimate that a pilot of this nature will require \$10-\$20 million in vehicle funding and an additional \$10-\$20 million in infrastructure funding (excluding utility upgrades) to create sufficient charging opportunities for the vehicles. We strongly support the proposed allocation of \$20 million from CARB for this pilot, and encourage CARB to collaborate closely with the CEC to provide for coordinated infrastructure funding.

#### Golden State Carbon Challenge (\$10 million)

LACI is very supportive of an inducement prize to promote the development of technologies that are needed to further the state's zero emissions transportation goals. LACI runs two global startup competitions each year—with modest prize amounts—to advance clean energy and transportation goals, and we have seen firsthand that prize programs can spur meaningful innovation. A more substantial prize amount, as proposed, has the potential to drive significant technological innovation.

We further support the proposal to utilize a stage gate system to award multiple recipients per challenge and winnow them down as they achieve certain milestones. Such an approach has several advantages, including managing for geographical equity, spreading risk and keeping entrants focused on reaching the next milestone.

We would, however, recommend that CARB expand the focus of the Challenge to include not only zero emissions off-road equipment, but also zero emissions on-road trucks, given the scale of the changes needed in that sector. On-road options could include specific challenges (e.g. at truck that can travel 150 miles on one charge) or a systems level challenge (e.g. transporting a package emissions free from port inland warehouse to residential porch).

#### Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)

LACI strongly supports the proposed allocation of \$142 million to the HVIP program as well as the proposal to focus this limited funding on zero emissions technologies. Providing funding certainty for manufacturers and fleets of zero emissions technologies is critically important at this early point in the development of the market. As the state's cornerstone incentive program, HVIP is an essential driver in moving the zero emissions market towards broader commercialization. We fully support the proposed focus on zero emissions technologies and thank CARB for reassessing the program objectives at this critical point in time.

Thank you for the opportunity to provide comment on these proposed changes to the heavy-duty vehicle investments. Please do not hesitate to contact me if you have any questions.

Sincerely,



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