

DOCKETED

| | |
|-------------------------|--|
| Docket Number: | 19-TRAN-02 |
| Project Title: | Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure |
| TN #: | 246126 |
| Document Title: | Ford Motor Company Comments on MD - HD ZEV Infrastructure Funding Allocation |
| Description: | N/A |
| Filer: | System |
| Organization: | Ford Motor Company |
| Submitter Role: | Public |
| Submission Date: | 9/15/2022 9:22:40 PM |
| Docketed Date: | 9/16/2022 |

Comment Received From: Ford Motor Company
Submitted On: 9/15/2022
Docket Number: 19-TRAN-02

Ford Comments to Docket No CEC 19-TRAN-02

Additional submitted attachment is included below.



Ford Motor Company
One American Road
Dearborn, Michigan 48126

September 16, 2022

California Energy Commission
Fuels and Transportation Division
1516 Ninth Street
Sacramento, California 95814

Re: Docket No. CEC 19-TRAN-02 Comments on MD/HD ZEV Infrastructure Funding Allocation

Ford Motor Company (Ford) hereby submits our comments to the California Energy Commission CEC 19-TRAN-02 docket regarding grant funding solicitation concepts related to the Project Title: Medium- and Heavy-Duty Zero Emission Vehicles and Infrastructure.

We appreciate the opportunity to comment on the Proposed CEC Funding. This funding provides key resources to expand the State's hydrogen economy which is critical to support the vision and goals for California to achieve zero emission transportation.

Hydrogen fuel cell technology has tremendous potential to power larger, heavier commercial vehicles while still delivering zero tailpipe emissions. As an example, Ford is piloting F-550 Hydrogen Fuel Cell Utility Trucks through the US DOE SuperTruck3 program. Ford has established collaborations with businesses to demonstrate how our Ford Pro business coupled with fuel cell propulsion systems might address application gaps across multiple functional disciplines. A commercialized version of these types of vehicles will require hydrogen fueling capability in excess of 10 kg per fill.

There is growing industry consensus around the value of hydrogen fuel cells in difficult to decarbonize applications like Medium- and Heavy-Duty vehicles where payload and uptime (fast fill) are critical attributes.

Ford recognizes that there will be a portfolio of zero emission products required to meet consumer and business needs. The retail refueling infrastructure also needs to ensure that it is prepared to support the broad portfolio of hydrogen fuel cell vehicles. As it is today, the California marketplace is dominated (almost exclusively) by hydrogen infrastructure that supports light-duty vehicles having hydrogen storage capacities under 10kg of hydrogen.

Ford recommends that CEC consider linking funding for all hydrogen stations to the ability to refuel a broader range of hydrogen fuel cell vehicles (beyond just "up to 10kg"). In turn, the additional hydrogen refueling flexibility to support dispensing "up to 25-30kg" of hydrogen might then further activate the hydrogen fuel cell market for larger vehicles and bring more OEMs, vehicle makes and models to California.



Of course, Ford recognizes that this increased flexibility is likely to translate into higher costs for the build-out of the infrastructure. Although, we believe it is well worth the additional cost as California enables a larger electrified fleet segment. Consider today, the approximately 50 light-duty stations capable of “up to 10kg” refueling; those same stations are incapable of completely filling capacities greater than 10kg and thus, the likelihood of consumers and businesses to opt-into purchasing hydrogen fuel cell zero emission technologies to fulfil their greater functional needs simply would not occur.

What complicates the situation further - it is unlikely that a new hydrogen station to satisfy >10kg refilling would be built in such close proximity to the existing light-duty stations and modifying existing stations is likely to cost more than if the flexibility was originally built. Thus, either of these scenarios would lead to not having adequate infrastructure to support hydrogen fuel cell vehicles with >10kg hydrogen fuel tanks. Again, ultimately, resulting in the customer simply not purchasing the fuel cell vehicle, which is reasonably expected to remain the case for decades or until such time that the refueling capability is introduced.

Taking a step back, let us imagine if ALL stations (both LD and HD) included the ability to refuel hydrogen fuel cell vehicles with hydrogen capacities “up to 30kg.” This could open the infrastructure portfolio to many more vehicles and to many more additional consumers and businesses to have the confidence to shift their fleets and purchase hydrogen fuel cell vehicles. Simply put, absent this critical infrastructure, hydrogen fuel cell vehicle expansion continues to be limited to certain vehicle types.

Ford remains committed to reducing greenhouse gas emissions from every aspect of our business, including the emissions from our products. We have charted a course for our future that includes billions of dollars of investments to increase the portfolio of hybrid and fully electric vehicle models on the road during this decade. Ford sees a role for hydrogen fuel cell vehicles as well, although there is great concern that adequate refueling infrastructure is proceeding too slowly and is inadequate.

The Proposed CEC Funding opportunity and future California efforts can pave the road to support and accelerate hydrogen fuel cell vehicle growth. It is recognized that there are great challenges inherent in the effort to shift the California marketplace and the vehicle fleet toward more electrified and fuel cell technology. Consumers decide which vehicles to purchase based on a whole host of factors, one critical factor remains in the ability (or lack thereof) to re-energize, re-charge, or re-fill the vehicle.

We are committed to working with California, CARB, CEC, and other key stakeholders toward the goal of zero emissions. If you have any questions and/or clarifications regarding these comments and recommendations, please feel free to contact me, Dominic DiCicco at ddicicco@ford.com.

Thank you for your time and attention to these comments.

Sincerely,

Dominic DiCicco

Dominic DiCicco
Manager, Environment and Energy Policy
Ford Motor Company