

July 14, 2017

Annette Hebert, Chief
California Air Resources Board
Emissions Compliance, Automotive Regulations & Science Division
9500 Telstar Avenue
El Monte, CA 91731

Toyota Comments on Electrify America’s Supplement to the California ZEV Investment Plan – Cycle 1

Dear Ms. Hebert:

Toyota appreciates the opportunity to comment on Electrify America’s Supplement to the California ZEV Investment Plan Cycle 1 issued June 29, 2017. As mentioned in our comments on ARB’s guidance to Volkswagen’s (VW) California Zero Emission Vehicle Commitment, Toyota fully supports California’s technology neutral approach to vehicle electrification and strongly agrees with ARB’s view that the VW investment plan should follow the same principle and support the rollout of both plug-in and fuel cell technologies. With that in mind, it appears the issues raised in our previous comments (attached for your reference) regarding fuel cell electric vehicles (FCEVs) were not addressed.

In particular, Electrify America’s response on page 29 regarding brand neutrality indicates a bias against FCEVs. Toyota believes that if outreach activity focuses exclusively, or in large part, on certain technologies within the core of the Settling Defendant’s vehicles or services, it inherently does not fulfill the definition of “brand neutral.” In addition, the seemingly purposeful vagueness of Electrify America’s statement to include fuel cell technology “where appropriate” gives us pause. CARB should require that Electrify America have an objective metric to determining that both PEV and FC technologies are promoted in a similar manner.

Regarding ZEV Infrastructure, we disagree with Electrify America’s analysis of the supply-demand gap as a rationale for declining to invest in H2 infrastructure. Unlike PEVs, which are mainly charged at home and for which public infrastructure is important for improving customer acceptance, FCEVs require retail infrastructure *in advance* of vehicle deployment, since it is the only method for refueling. Electrify America rationalizes their exclusive focus on PEV infrastructure with a claim (without supporting evidence) of a 90 percent supply-demand gap for PEVs, while also claiming no gap for FCEVs.

Electrify America draws its conclusion by mischaracterizing the January CARB/CEC AB8 Joint Staff Report. While the Joint Staff Report may indicate sufficient H2 fueling capacity (see Table 5) through 2020, the more salient point of the Staff Report was a lack of capacity by 2021 and the need to increase

Table 5: Stations, Fueling Capacity, and Projected Fuel Demand

	2017	2018	2019	2020	2021	2022
Quantity of Open Retail Stations	50	58	66	74	82	90
Total Nameplate Capacity (kg/day)	9,380	10,820	12,260	13,700	15,140	16,580
FCEV Fuel Demand (kg/day)	4,400	7,200	9,200	12,800	23,700	30,300


Source: ARB

station deployment prior to this time. It is also important to note that the station numbers used in Table 5 are optimistic. To date, only 28 stations are open in California, putting the trend well below the state's target of 50 by the end of 2017. We expect this unfavorable trend to continue beyond 2017. If we consider a more realistic station build out, the supply–demand gap is expected even earlier than 2021.

Finally, H2 station deployment takes time, and even with the metrics stated by Electrify America, investments in the first phase would come on line at the time when the capacity is most needed.

If you have any questions regarding this matter, please contact Michael Lord at (310) 787-5644 or michael.lord@toyota.com.

Sincerely,

A handwritten signature in black ink that reads "Tom Stricker". The signature is written in a cursive style with a large, stylized "T" and "S".

Tom Stricker
Vice President
Product Regulatory Affairs
Toyota Motor North America, Inc.



December 16, 2016

Annette Hebert, Chief
California Air Resources Board
Emissions Compliance, Automotive Regulations & Science Division
9500 Telstar Avenue
El Monte, CA 91731

Dear Ms. Hebert,

Toyota Comments on California's Guidance Regarding VW's California Zero Emission Vehicle Commitment

Toyota appreciates the opportunity to comment on ARB's guidance to Volkswagen's (VW) California Zero Emission Vehicle Commitment (the "Commitment"). We fully support California's technology neutral approach to vehicle electrification and strongly agree with ARB's view that the VW investment plan should follow the same principle and support the rollout of both plug-in and fuel cell technologies. As ARB has recognized, both battery and fuel cell technologies will be critical and necessary to meeting the state's clean air and climate goals, and Toyota supports the use of Plan funds to expand the market for both.

ZEV Infrastructure (Category 1)

For the first 30-month investment plan, Toyota believes that the greatest impact on ZEV market development would be investments in ZEV infrastructure. This is particularly the case for the recent launch of fuel cell vehicles, and the significant and immediate needs for hydrogen infrastructure that will not be met completely or as quickly as needed with existing state funds. In fact, unlike electric charging, which is now available more readily at homes and businesses and other locations, hydrogen infrastructure is reliant on significant investment in public infrastructure. Picking winners and losers by funding only electric charging investments runs counter to ARB's decades-long goals and approach to zero-emission technologies.

Education and Outreach (Category 2)

In a similar vein, Toyota recommends that VW work through existing organizations such as the successor of the PEVC (Veloz) and the CaFCP to promote both PEV and FC technology.

If you have any questions regarding this matter, please contact Michael Lord at (310) 787-5644 or michael.lord@toyota.com.

Sincerely,



Tom Stricker
Vice President
Product Regulatory Affairs
Toyota Motor North America, Inc.