

Mail-Out #ECARS 18-01

TO: Automobile and Engine Manufacturers

FROM: Annette Hebert, Chief

DATE: April 10, 2018

SUBJECT: MANDATORY AND VOLUNTARY SURVEYS FOR FUEL CELL-,  
BATTERY-, PLUG-IN HYBRID-, ELECTRIC VEHICLE PRODUCTION  
PLANS

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Pursuant to requirements and goals of the Low Emission Vehicle regulations (LEV),<sup>1</sup> the Air Resources Board (ARB) is conducting mandatory and voluntary surveys on production plans for fuel cell electric vehicles (FCEVs), fuel cell plug-in electric vehicles (FC-PEVs), full-function battery electric vehicles (BEVs), and plug-in hybrid electric vehicles (PHEVs). Please respond with the requested information by May 3, 2018.

The individual survey data received from respondents will be kept confidential as provided under State law. The data you provide will be aggregated with information from other manufacturers to help the State plan for Zero Emission Vehicle (ZEV) infrastructure and guide funding for the Clean Vehicle Rebate Project (CVRP). This information may also be used to inform future regulatory efforts. Please note that underreporting of alternative fuel vehicles may affect the State's ability to adequately fund and plan for support of these vehicles as they enter the market.

As delineated under regulations adopted by the Board in October 2014, we are asking for your proposed production plans for FCEVs, FC-PEVs, BEVs, and PHEVs, for the model years 2019, 2020, and 2021. In addition, we are requesting you voluntarily provide production plans for model years 2022, 2023, and 2024.

When projecting your fuel cell and electric vehicle deployments, please consider the following ZEV policy and fiscal highlights:

- Governor Edmund G. Brown Jr. issued Executive Order B-48-18 in January 2018, directing the state government to work with the private sector and other appropriate

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<sup>1</sup> Automobile and engine manufacturers are required to submit information pursuant to part 1, section H.3.2 of both the "California Exhaust Emission Standards and Test Procedures for 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2009 through 2016 Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," amended December 6, 2012, and the "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," amended September 2, 2015.

levels of government to deploy at least 5 million ZEVs and PHEVs in California by 2030 and to install 200 hydrogen fueling stations and 250,000 EV chargers by 2025. To support these goals, the Governor's proposed budget for FY 2018-2019 provides \$235 million specifically to accelerate investments in the statewide network of hydrogen refueling and electric vehicle charging stations.

- In October 2015, the Clean Energy and Pollution Reduction Act of 2015 (SB 350) was signed into law. This legislation supports transportation electrification by encouraging electric utility investment in programs to accelerate widespread transportation electrification (e.g., PEV infrastructure). To date, the State's three largest investor owned electric utilities have approved pilot projects to install or fund 12,500 PEV connectors. Recently, these same utilities have approved or proposed projects to invest over \$1 billion in transportation electrification.
- AB 8 (Perea, Statutes of 2013, chapter 401) was signed into law in September 2013. This legislation requires the California Energy Commission (CEC) to allocate \$20 million or up to 20 percent of available Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) funds annually for hydrogen refueling infrastructure. This allocation will continue until there are at least 100 hydrogen-fueling stations, the market for hydrogen as a transportation fuel reaches sustainability, or the legislation expires in 2024. AB 8 also extended ARFVTP, which to date has allocated \$79.9 million towards EV charging infrastructure for almost 8,700 charging outlets at public and private sites in California.
- Currently in California there are 33 open retail hydrogen stations and an additional 31 stations in various stages of development. Information on the specific location and capacity of these stations is contained in Attachment 1. Attachment 2 is a map of California showing the locations and development status for all currently funded and open stations. Lastly, the specific status of all publically funded hydrogen stations can be found in the Governor's Office of Business and Economic Development (GO-Biz) tracking tool:

<https://app.smartsheet.com/b/publish?EQBCT=fac4e342471c43209456f6263f8968aa>

### **Battery Electric and Plug-in Hybrid Vehicles**

We are requesting that automobile manufacturers provide projected California sales and lease figures of BEVs and PHEVs for the 2019, 2020, and 2021 model years. Projections should specify the model year, manufacturer, vehicle name, vehicle type and class, net (usable) and gross battery size (kilowatt-hours [kWh]), fuel economy (kW-hours per 100 miles or miles per gallon gasoline equivalent [mpgge]), projected all electric range, on-board charger size (kW), presence of Direct Current Fast Charge (DCFC) port, and the maximum allowable DCFC power (kW). For projected numbers, please provide a single best estimate, not a range.

A list of vehicle classes is contained in Attachment 3. A sample format for the information requested is enclosed as Attachment 4 and Attachment 5. Please do not aggregate production numbers from previous years.

### **Fuel Cell Electric Vehicles and Fuel Cell Plug-in Electric Vehicles**

We are also requesting that automobile manufacturers provide projected California sales and lease figures of FCEVs and FC-PEVs for the 2019, 2020, and 2021 model years. In addition, for manufacturers who currently produce FCEVs, we request an update on the number of model year 2018 FCEVs sold, leased, or expected to be sold or leased in calendar year 2018. Please provide a single best estimate, not a range of vehicles. Also, note that staff is requesting projections based on model year alone; staff will independently estimate calendar year placement, as in previous years' analyses.

A sample format for the information requested is enclosed as Attachment 6. Please do not aggregate production numbers from previous years.

In this year's survey, CARB is only requesting statewide fuel cell deployment projections. CARB had previously requested county-level projections to inform location-based fueling activity and capacity analyses. For this year's survey, CARB is instead requesting that respondents complete Attachment 7: Desired Future Station Location Worksheet. Completion of this worksheet will provide valuable industry insight to CARB in its efforts to make recommendations for areas of future station deployment. CARB strongly encourages respondents to provide their input through Attachment 7. For any respondents that do not provide this additional information, CARB will rely on the CHIT tool to make estimates of vehicle and fueling locations in the future. Attachment 6: FCEV and FC-PEV Projections provides the default estimate provided by CHIT, which CARB will rely on in the absence of information provided via Attachment 7.

Attachment 7 asks respondents to develop a desired scenario and sequence of hydrogen fueling station deployment in the state. Given the recent Executive Order B-48-18 and the release of the ARFVTP Investment Plan, CARB asks all respondents to assume that 40+ stations will be funded through a solicitation process likely to commence in summer 2018 (per the 2017 Joint Agency Staff Report on AB 8). Members of the California Fuel Cell Partnership have previously provided their aggregate view of desired station deployment for roughly the same number of stations through the Priority Station Location Letter dated August 2, 2017; a slightly altered version with CARB annotations is reproduced here as Attachment 8. In the first response block of Attachment 7, CARB asks all respondents to provide any alterations they believe necessary to the previously released list; if no alterations are indicated, CARB will assume the desired station funding for 2018/2019 will be as indicated in Attachment 8. For the remainder of Attachment 7, CARB asks respondents to assume that 20 additional stations will be funded each year for the next 5 years. For each of these years, CARB is requesting that respondents indicate the cities

where they believe new hydrogen fueling station(s) will be necessary and to indicate the number of stations desired in each city.

### **Voluntary Data Request**

As mentioned, ARB will use the regulatory required production data for infrastructure and incentive planning. In order to facilitate longer term planning efforts we are requesting BEV, PHEV, FCEV and FC-PEV production data for model years 2022, 2023, and 2024. For this voluntary exercise, we are requesting vehicle numbers and as much additional information that can be confidentially disclosed. The voluntary survey data can be entered on the same data sheets as the mandatory survey. We recognize that long-term production data may be somewhat speculative, but please keep in mind that there are no penalties for failing to meet these long-term projections.

In addition, ARB would like to engage in dialog with interested automakers regarding the planning, development, and funding of the next generation of plug-in electric vehicle (PEV) infrastructure. Contact information for individuals in your organization who can speak to your interest in PEV infrastructure development would be appreciated. Please provide this information in Attachment 9.

Additionally, ARB is asking for information about FCEV deployment plans in the Section 177 States. Participation in the Section 177 State data collection effort is voluntary. Further information is provided in Attachment 10.

The requested information for FCEVs, BEVs, and PHEVs should be submitted by May 3, 2018 via email to [Gerhard.Achtelik@arb.ca.gov](mailto:Gerhard.Achtelik@arb.ca.gov) and a hard copy mailed to the following address:

Mr. Gerhard Achtelik, Manager  
Emissions Compliance, Automotive Regulations and Science (ECARS) Division  
California Air Resources Board  
Post Office Box 2815, MS 3E  
Sacramento, CA 95812-2815

The information provided in response to this request will be kept confidential, pursuant to Title 17, California Code of Regulations, Section 91011, to ensure that the competitive position of each manufacturer is not compromised. Automobile manufacturers will be surveyed annually to update their previous projections and add additional model year projections.

If you have any questions, please contact Marissa Williams, Air Pollution Specialist, at (916) 322-5848, or by email at [marissa.williams@arb.ca.gov](mailto:marissa.williams@arb.ca.gov).

Attachments (10)

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