Appendix C2

State of California
Air Resources Board

Summary and Response to Department of Finance Comments on the Standardized Regulatory Impact Assessment

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California Air Resources Board
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Sacramento, California 95814

The California Air Resources Board (CARB) responds as follows to the comments of the Department of Finance (DOF) on the Standardized Regulatory Impacts Analysis (SRIA) prepared for the proposed regulations, as required by Government Code section 11346.5, subdivision (a)(10).

DOF Comment:

The SRIA assumes that charging infrastructure will accelerate as the private sector continues its rollout of zero-emission vehicles. However, slower adoption of charging infrastructure may hinder consumers' willingness to purchase zero emission vehicles (ZEVs) and faster adoption may accelerate the rate at which benefits are realized. The SRIA should include a sensitivity analysis to show how impacts may vary under different infrastructure adoption scenarios or justify the current adoption rate assumptions.

Staff Response:

Because zero emission motorcycles (ZEMs) have smaller batteries and different rider demands than other ZEVs, the charging needs are different than they are for ZEVs. Staff has characterized riders into two different cohorts based upon usage: recreational and nonrecreational riders. For nonrecreational riders who are commuting short distances back and forth to work and running errands within the city, battery sizes are more than adequate to cover the riding in a typical day, with ranges easily exceeding 100 miles. Many of these ZEMs can easily access existing level 1 level 2 charging. In fact, the small size of ZEMs and their batteries makes them more amenable to parking inside a home or garage to access ubiquitous level 1 charging. Further, in many cases these batteries are small enough to remove from the ZEM. We are seeing some manufacturers specifically design around this for the purpose of charging the battery off of the vehicle, making these much more amenable to overnight charging for people who otherwise might have a hard time charging a vehicle, such as apartment residents. Therefore, for this type of rider, staff anticipates very little impact from limited availability of public charging stations.

However, for recreational riders, access to public chargers in remote areas capable of fast charging is critically important for public adoption of ZEM technology. Recreational riders represent a very large portion of the on-road motorcycle (ONMC) market as shown in a 2011 survey by the Institute for Social Research at California State University Sacramento (CSUS) in which they found that 56 percent of riders characterized their riding as recreational only and an additional 34 percent characterized their riding as both recreational and commuting.[1] Recreational riders include riders who do their riding as touring over long distances in remote areas, riders who prefer the aesthetics of classic

[1] Institute for Social Research at California State University, Sacramento, Analysis of the 2011 California Survey of On-Highway Motorcycles (web link: *https://www.arb.ca.gov/msprog/offroad/orrec/onmc_survey_2011.pdf?_ga=2.152029625.184814853.1655755023-477306975.1604914731*).

ONMC designs with pronounced exhaust features, and riders who prefer the performance characteristics of ICE ONMCs. Often recreational riding is done at freeway speeds which coincides with the most restricted range of ZEMs, currently less than 100 miles. This limited freeway speed range is most constraining when riding in remote areas with limited ability for ZEM riders to recharge their vehicles as charge times may take as much as two hours under level 2 charging conditions. Level 3 charging capability might address some of this need, but currently level 3 charging is not offered on most ZEMs and level 3 charging stations are much less common than level 1 and 2 charging stations. Although there are many ZEM offerings available that can satisfy many rider's needs for city riding and commuting, ultimately it is a challenge for ZEM manufacturers to meet the wide range of recreational rider's needs and desires. If many riders are left with no new ONMC purchase options in California to satisfy their needs, they may ultimately be pushed to buy higher emitting used ONMCs from out of state, with the net effect of bringing more emissions into California while at the same time hurting the California economy by driving sales to other states. The Proposal ultimately tries to address this problem by allowing for a sales mix of ZEMs and state-of-the-art low emitting ICE ONMCs that can satisfy all riders needs and desires.

In either case of recreational and nonrecreational riders, it is unlikely that simply increasing the number of charging stations will have much impact on ZEM ridership.

DOF Comment:

The regulation is implementing a voluntary tradeable ZEM credit program to incentivize manufacturers to begin early compliance with the target ZEM sales. The SRIA must disclose any administrative costs that may be incurred from tracking the generation or trading of ZEM credits or clarify why there is no expected change in administrative costs to implement and track the program.

Staff Response:

It is assumed that Staff will shift responsibilities coinciding with shifting the statewide ONMC fleet away from ICE and towards electric. Therefore, it is not likely that additional staff will be needed for this Proposal. Further, because the number of participants holding ZEM credits is limited to a small number of manufacturers, likely less than 20 when considering both ICE and ZEM manufacturers, staff does not anticipate tracking ZEM credits will be very burdensome.

DOF Comment:

The SRIA must include comprehensive estimates of disparate impacts. Finance acknowledges the SRIA broadly discusses state and local government programs that will be impacted by the reduction in tax revenue. However, the SRIA currently reports statewide costs for state and local government but does not include estimates for any government program(s) that are expected to be disproportionately impacted. Similarly, some state and/or local agencies such as police motorcycle fleets, as mentioned in the SRIA, own a

larger share of the government fleet, and are expected to bear a disproportionate share of the government ownership costs.

Staff Response:

There is not sufficient data to disaggregate effect on local government. The only State-owned fleet which Staff obtained information on was the California Highway Patrol (CHP), which staff was informed from CHP fleet management was just over 400 ONMCs. It is very unlikely that this fleet would be able to be replaced by ZEMs due to range limitations of less than 100 miles at freeway speeds. As a rough approximation, the average estimated cost increase per ICE ONMC from 2028 to 2045 is approximately $285 per ONMC. Including sales tax, this is $310 per ONMC. Because CHP currently prefers ICE ONMCs for range and performance issues, there would be no change in fueling and maintenance cost from their current fleet from current ICE ONMCs. If we assume that only 10 percent of the fleet is replaced every year (40 ONMC), the annualized cost would be approximately $12,404 to the CHP.

DOF Comment:

The SRIA does not discuss the potential disparate impacts of mandating incrementally higher-priced vehicles and the consequent need for electrical charging on lower income individuals or the potential for higher used motorcycle prices as the more expensive cleaner motorcycles cycle into the used motorcycle market and as the stock of cheaper conventional motorcycles is being gradually depleted.

Staff Response:

In the early years of the Proposal, ICE ONMCs would likely have modest price increases of several hundred dollars due to improved emissions control technology and ZEMs are expected to cost more than comparable ICE ONMCs. However, in the long run it is anticipated that consumers will experience a net savings due to falling battery prices along with fuel and maintenance savings.

Nonrecreational ZEM users, whose primary purpose is commuting and errands, will not likely be impacted by the number of available charging stations due to the ability of ubiquitous level 1 charging to satisfy most charging needs of these ZEM owners. Due to the small size of the ZEMs and their batteries they are more amenable to parking inside a home or garage to access level 1 charging. Further, in many cases these batteries are small enough to remove from the ZEM for charging the battery off of the vehicle, making these much more amenable to overnight charging for people who otherwise might have a hard time charging a vehicle, such as apartment residents.

For purchasers of used vehicles, the pool of used conventional ONMCs in California will not become completely depleted as this regulation only requires a maximum of 50 percent ZEM sales by 2035. The price of California used ICE ONMCs is expected to be checked by the availability of used ICE ONMCs sold in other nearby states, as no regulatory changes are

expected in the near term for any of the other 49 states. Nothing prevents a California rider from purchasing and registering a used ONMC that continues to be sold in other states so long as they have at least 7,500 miles on them at the time of registration.