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Ms. Mary Nichols
Chair, California Air Resources Board
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Response - White Paper: Summary of Staff's Preliminary Assessment of the Need for Revisions to the Zero Emission Vehicle Regulation

Dear Ms. Nichols,

Plug In America has reviewed the "White Paper: Summary of Staff's Preliminary Assessment of the Need for Revisions to the Zero Emission Vehicle Regulation" and while it contains some improvements to the ZEV Regulation, the assessment is fundamentally flawed in both its scope and determinations based on a number of incorrect assumptions about plug-in vehicles.

We do agree with the staff that the scope should shift to focusing on GHG emissions reductions. The ZEV regulation has been extremely successful in reducing criteria pollution over the last two decades and we applaud ARB's efforts. ARB was also successful in getting the first round of true ZEV vehicles on the road.

The most straightforward way reduce GHG emissions is to accelerate the market deployment of BEVs and PHEVs. As the ARB Board has indicated many times in the past, early interventions will have the largest benefit and we should prioritize the opportunity presented by the imminent PHEV and BEV commercialization. This represents a GHG savings that cannot be recaptured while waiting for at least five years for the initial pre-commercial deployments of FCEV vehicles.

We agree at a core level with the staff assertion: "Historically, the argument has been FCVs versus BEVs. This argument is irrelevant if an 80% GHG emission reduction by 2050 is the goal. In order to limit the risk in meeting California's long term goal, staff believes all ZEV technologies will be needed in order to achieve the necessary reductions for the passenger vehicle subsector." This matches both the position of Plug In America and ARB on technology neutrality with market forces driving the 2020 and 2050 mix of ZEV vehicles.

Therefore, we must urge ARB to reallocate its staffing and program budgets to reflect this scenario. We estimate that currently the Mobile Sources Division within ARB spends at least 75% of its ZEV budget (staff and programs) on FCEV focused activities and less than 25% on funding for BEV and PHEV initiatives.

The most obvious conclusion from this white paper is that the ARB spending priorities for the ZEV Regulation are seriously unbalanced and must be realigned. Taking into account the benefits of early intervention and the market forces which are delivering BEVs and PHEVs to consumers beginning in the next twelve months, we propose that the budget should be immediately reallocated so that 75% of the funding supports the BEV and PHEV technologies and charging infrastructure which will put more vehicles on the road quickly and will accelerate consumer acceptance.

We also must disagree with the staff assertion: "Some manufacturers believe BEVs will be able to fulfill 20-30% of the future fleet. Limited by vehicle range, weight, and cost, BEVs will more than likely be used in compact vehicle platforms for urban use where smaller batteries can be used. However, of the three vehicle technologies, all manufacturers agree that BEVs will play a key role in the 2050 fleet." This assumption fails to take into account changes in consumer preferences, fast charging infrastructure, or ongoing technology innovation including any technology breakthroughs in battery costs (already estimated to be less than $500/kWh based on volume production similar to the 2009 US DOE FCEV analysis). These could easily allow for longer range scenarios at a fraction of the infrastructure costs for FCEVs, as well as both size and weight reductions of the battery technology. Changes in consumer preferences influenced by public policy could have an even larger impact for market acceptance.

Meanwhile, ARB continues to use assumptions for FCEV technology that have proven over time to be overly optimistic. For example, using U.S. DOE estimates for the 2009 cost of a fuel cell system at $61/kW (if produced in high volumes), assumes high volumes that will not exist for at least 5 years in the best-case scenarios. If the same logic was applied to batteries for both BEV and PHEV, the 2015 pricing estimates for batteries would be at least 50% lower cost or $250/kWh. In fact, Japan's Nikkei News just reported last week that Nissan will have a battery with double the capacity at the same cost for their 2015 vehicles. On a recent Plug In Detroit panel, Tony Posawatz of General Motors stated that the second-generation battery for the Chevy Volt will cost them as little as $185/kWh. Clearly market forces will drive down technology costs and create new options and scenarios.

We urge the ARB to redouble its own efforts to get the facts straight about the technology curves for all of the proposed technologies: FCEV, PHEV, and BEV. Please make a rational decision to invest in all of the technologies, but in proportion to their market availability so we can reach our GHG reduction goals in time.

Thank you for your time,

Jay Friedland
Legislative Director, Plug In America