John J. Viera
Global Director
Sustainability & Vehicle Environmental Matters

World Headquarters
One American Road
Dearborn, MI 48126-2701 USA

April 10, 2017

California Air Resources Board
P.O. Box 2815
Sacramento, California 95812

Attention: Mr. Mark Williams

Subject: Ford Comments on Volkswagen First 30-month ZEV Investment Plan

Ford Motor Company appreciates the opportunity to provide comments on Volkswagen's (VW) first 30-month zero emission vehicle (ZEV) investment plan. As a manufacturer and marketer of advanced technology vehicles including full hybrid electric vehicles, plug-in hybrid electric vehicles and battery electric vehicles (BEVs), Ford Motor Company is a vehicle electrification supporter and stakeholder. Ford is investing $4.5 billion in electrified vehicles by 2020, with plans to introduce 13 new global electrified vehicles in the next five years. As part of this investment, Ford recently announced an all-new fully electric small SUV, coming by 2020, engineered to deliver an estimated range of at least 300 miles.

Fast charging has emerged as a key sales enabler for BEVs. Long-range capability with limited charge time will support market adoption and increase BEV utility. We believe that long range BEVs coupled with strategically placed high-powered infrastructure will be key to increasing BEV adoption. Ultra-fast charging that enables inter-city travel is therefore a key strategic interest to encourage BEV sales and a positive customer experience with ZEV technology.

Ford is supportive of the Air Resources Board's (ARB) goals to promote ZEV investments that support increased adoption and utilization of ZEV technology in California and would like to provide comments on the "high-speed highway network" portion of the VW ZEV Investment Plan. Our comments provide a framework to augment the overall infrastructure investment equation in CA and associated efficacy of increasing support for ZEV adoption in the state. Our comments are focused on the section of the plan that includes installation of fifty high-speed highway corridor stations. Given the importance of this portion of the infrastructure to BEV adoption, Ford has reservations about having a key electrification driver dependent on and ultimately controlled by one automotive competitor. Ford believes that private investment in the CA ultra-fast highway corridor charging market would be dampened by settlement-based funding if settlement investments are targeted toward high-traffic corridors in areas with significant BEV sales and projected high volume traffic – these are the locations most likely to attract market-based ZEV infrastructure investment.

Ford believes there is a better, more efficient framework for ultra-fast corridor charging which incorporates a framework of multiple automotive original equipment manufacturers (OEMs) with active participation in the planning, deployment, operation and funding of the network. A multi-OEM framework is progressing in Europe that accomplishes the objective of deploying infrastructure for long-range BEVs with a market-based investment. Support from multiple automakers ensures that charging infrastructure will meet the needs of a range of BEV designs, including various charging port locations, and customer profiles. The framework could focus an industry lens on the network design and planning and could be applied in North America, with open ability for interested OEMs to fund and deploy an integrated ultrafast charging network in California and elsewhere in the US. The framework would also ensure that one OEM does not have opportunity for competitive advantage in this strategic area of interest, while providing flexibility for multiple forms of automaker and EV charging network participation such as equity investments and subscription agreements.

Although the settlement provides some protections for competitive advantage, including brand neutral advertising, there are underlying fundamental concerns with having customers' experience, support and data in the hands of a competitor. There is concern that critical components of the inter-city travel network design will be in the hands of a single automaker (e.g., configuration of charge point, network capacity, locations, etc.) A multi-OEM framework would also eliminate the ability of a single OEM to control these areas of network design and deployment and customer experience, providing an implicit advantage. Even if multiple OEM input is received and open industry standards are incorporated into settlement controlled planning, there are no assurances possible under the governing consent decree that could guarantee that input on network planning (capacity, queuing, station locations and configuration, etc.), technology considerations (IT, data handling methods, network systems integration into Ford mobility platforms, etc.) and customer needs will be incorporated or accommodated.

As noted above, there is a multi-OEM framework progressing in Europe to develop ultra-fast charging corridors, where market forces are not impacted by the settlement. This demonstrates private investment interest in this particular sector of EV infrastructure. Without competition from the settlement ZEV Investment Plan resources being allocated to ultra-fast charging corridors, there would be increased interest from the private sector investment. Given the strong market interest in inter-city corridor ultra-fast charging, we encourage ARB to consider recommending allocation of this portion of the funding to other areas that perhaps do not have as much market interest. This type of complementary approach could provide an expanded infrastructure investment pool for California, including associated jobs and diversification of infrastructure deployment.

There is market interest in ultra-fast charging investment by automakers and charging networks, including consideration by Ford in participating in a multi-OEM environment. The ZEV Investment Plan proposes to allocate its largest sector of investment to locate ultrafast highway charging stations "in the areas with the highest anticipated ZEV demand"[1]. To complement market-based investment interest for ultra-fast highway charging networks, the ZEV Investment Plan should target locations, and categories of ZEV infrastructure, where

[1] "California ZEV Investment Plan: Cycle 1 (Public version)", March 8, 2017, p. 5.

demonstrated market interest does not already exist, or is not as strongly demonstrated. This ensures that the ZEV Investment Plan does not discourage market-based investment in ZEV infrastructure in this sector of infrastructure.

Complementary ZEV infrastructure could be deployed under the settlement plan to increase its overall impact on increased adoption and utilization of ZEV technology in California. This would augment the overall ZEV infrastructure equation in California. Ford welcomes opportunity for further discussion with ARB on our thoughts and considerations. Thank you again for the opportunity to provide comments on the first 30-month ZEV Infrastructure Plan and considering the input of affected stakeholders.

Sincerely,