



April 10, 2017

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Air Resources Board
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We thank you for the opportunity to comment on the Public Version of Volkswagen's California ZEV Investment Plan: Cycle 1 prepared by Volkswagen (VW) pursuant to Appendix C of the Consent Decree and released to the public on March 14, 2017. While we are excited to see that there will be more investments made in zero emissions transportation through the Appendix C funds, we have deep concerns about the very limited process that has informed the development of this draft of the investment plan which we feel also reflects upon its content. We offer the following observations in the hope that if they cannot be addressed during the balance of the process for the Cycle 1 Investment Plan, they can be thoroughly addressed in subsequent Cycles of the process.

As was related during oral comments at the March 24th Board Hearing in Riverside, unlike the thorough manner in which CARB normally engages, this process has been heavily driven from the Top Down and remains mostly opaque to the public and stakeholder community. There have been only two real opportunities for the stakeholder community to engage in any kind of public discourse about the Investment Plan and the process that should go into its development.

(NB: While there was a March 21st Senate Oversight hearing jointly hosted by the Senate Committees on Housing and Transportation, and Environmental Quality that provided limited opportunity for stakeholder engagement, this was neither well publicized nor well attended. It was indeed extremely difficult for the public and stakeholders to even locate where they could watch the live video stream in order to watch the Oversight Hearing in real-time.)

The first opportunity was at the December 2nd workshop run by CARB staff to provide the public and stakeholders¹ with an overview of Appendix C of the settlement and to review and discuss the guiding principles that VW should use in making its ZEV investments, namely that VW should be guided by:²

- Governor's ZEV Action Plan
- SB 350 Clean Energy and Pollution Reduction Act of 2015
- SB 1275 Charge Ahead California Initiative (2014)
- SB 535 California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund (2012)³

with the goals that VW's investments:⁴

- Support transportation electrification⁵
- Support the next generation of zero-emission vehicles
- Grow the State's burgeoning ZEV market
- Support access to ZEVs, including for low- and moderate income consumers in disadvantaged communities

"Stakeholders" could supplement the issues discussed during the December 2nd workshop by submitting written comments by December 16th on the Guidance that CARB should provide to VW on developing its Investment Plan. CARB staff subsequently released their Guidance to VW on February 10th without the "stakeholder" community being afforded the usual opportunity to comment on the Guidance as if it were an initial public draft.

The second opportunity for "stakeholders" to make any kind of oral comment was during the informational item 17-3-9: Public Meeting to Hear an Update on the First Draft Volkswagen Zero Emission Vehicles Investment Plan during the Board Hearing on March 24th. The

¹ The public and stakeholders will hereinafter be referred to as "stakeholders"

² p4., ARB Staff Presentation for December 2, 2016 Public Workshop to Provide Suggestions for Volkswagen's California ZEV Investment Commitment. https://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/meetings/120216_present.pdf

³ Further enhanced by the requirements of SB 1550 (Gomez 2016). See: Greenhouse Gas-Reduction Investments to Benefit Disadvantaged Communities <http://www.calepa.ca.gov/envjustice/ghginvest/>

⁴ p5., ARB Staff Presentation for December 2, 2016 Public Workshop to Provide Suggestions for Volkswagen's California ZEV Investment Commitment

⁵ Which should include not only electric cars and buses powered from batteries but also the many electric vehicles that are coming to market that are powered by fuel cells: See the reports on light, medium and heavy-duty vehicles and buses available at the California Fuel Cell Partnership <http://cafcp.org/downloads>, NREL Hydrogen Fuel Cell Bus Evaluations http://www.nrel.gov/hydrogen/proj_fc_bus_eval.html, Fuel Cells and Hydrogen Joint Undertaking, Strategies for joint procurement of fuel cell buses. July 2016. Available at: <http://www.fch.europa.eu/>, Fuel Cell Electric Buses (Europe) <http://www.fuelcellbuses.eu/>, CHIC (Clean Hydrogen in European Cities), November 30, 2016. Fuel Cell Electric Buses: a proven zero emission solution. Key facts, results, recommendations. http://chic-project.eu/wp-content/uploads/2016/11/CHIC_publication_final.pdf. CHIC is a six year flagship zero emission bus-project that deployed a fleet of fuel cell electric buses and hydrogen refueling stations in cities across Europe and at one site in Canada. The project ended in December 2016.

Investment plan was produced based on submissions to a new website VW had launched (ElectrifyAmerica.com) on December 9th, 2016 where project proponents could submit “proposals” for ZEV projects and Green City funding to VW/EA by the deadline of January 16, 2017. However, there were no clear criteria set out for what project proponents should have included in their proposals, nor were any evaluation criteria spelled out by VW/EA for how proposals would be screened. At the same time the public currently has no idea how many proposals VW/EA received, who may have submitted proposals, nor what areas these proposals were seeking to address. The public also has no idea which projects (whether they are ultimately deemed worthy, or not) may have been rejected by VW/EA. It would contribute greatly to the transparency of the process if VW/EA would provide a public listing of all the proposals it has received along with a brief abstract providing a description for each of the projects and which projects have been accepted or rejected for funding.

Outside of December 2nd, 2016 and March 24th, 2017 there has been no real opportunity to openly and publicly discuss the Investment Plan. We submit that this is not the most productive or healthy way of conducting a process for developing the Investment Plan(s), and, as we suggested during the Board Hearing, the process should have allowed for an opportunity for the Public Draft of the Investment Plan to be discussed in one or more public workshops. We interpret the extensive discussion and concerns shared by many of the Board members about the Investment Plan as confirmation for the need to have a more extensive public dialogue before proceeding with the Plan.⁶ Public workshops would offer VW/EA an opportunity to more thoroughly explain to CARB and “stakeholders” how it plans to proceed with the Cycle 1 and subsequent Cycles of the Investment Plan process. It would also provide VW/EA with the opportunity to receive largely constructive input from the “stakeholder” community which should help VW/EA to make more effective investments in developing California’s ZEV market.

As was also related during the March 24th Board Hearing, unfortunately, this draft of the Public Investment Plan appears to treat disadvantaged communities in the state’s rural regions, especially the Central Valley, as drive-through or drive-by country.⁷ For VW/EA’s investments to truly count they must “directly benefit” the residents of disadvantaged communities, not just be coincidentally placed adjacent to those communities while having the primary purpose of benefiting individuals who need to either charge or fuel their zero emission vehicles when transiting through those communities on their way to the state’s major metropolitan centers. Indeed, making direct investments that **prioritize** these rural communities would allow these communities to more readily **transform** themselves in a manner that would be maximally **complimentary and additional** to the small but growing investments that have already been and will be made these communities.⁸ What could be even more **transformational** – than

⁶ Indeed one Board Member was so concerned that they issued a blog on the subject: Dean Florez, VW’s Plan Drives Past Disadvantaged Communities, at <https://medium.com/@deanflorez/vws-plan-drives-past-disadvantaged-communities-d77cf0f3f138>

⁷ Also see Dean Florez’s Blog: VW’s Plan Drives Past Disadvantaged Communities.

⁸ CARB’s guidance to VW/EA in developing the Investment Plan recommends to VW/EA that the investments be: 1. Complimentary and Additional to other ZEV investments; 2. Transformational; and 3. Prioritize Disadvantaged,

allowing just California's major cities to compete for funding – would be to allow collaborating groups of small rural cities to join together in order to compete for the Green City funds.

Furthermore, with the communities in California's interior regions projected to be the fastest growing in the state in the coming decades,⁹ ZEV and Green City Investments in these communities could allow them to start growing on the cleanest and most efficient path from the near outset; and to develop a sustainable smart-growth mindset that would be consistent with the state's air quality and climate goals; and help them to grow as healthy cities that avoid the problematic legacy issues that are found in California's largest cities.

As the market for ZEVs grows there will be a growing demand for skilled employees who can install ZEV charging and fueling equipment and who can also service the zero emissions vehicles and infrastructure. Developing and maintaining a pool of highly skilled and trained labor will be critical to supporting the ZEV market. The ZEV Investment Plan process should consider how it can work together with programs such as those run by the California Energy Commission's Alternative and Renewable Fuel and Vehicle Technology Program through the Employment Training Panel to further fund workforce training for the ZEV market especially targeted at the residents of disadvantaged communities. Such investments could also be *transformational* in these communities.

California's zero emissions vehicle strategy includes a future for fuel-cell electric vehicles (FCEVs).¹⁰ However, there is no mention in the March 14th draft of the Investment Plan of FCEVs or of hydrogen fueling infrastructure for any size-class of fuel cell vehicle. Over the years California has made major efforts leading to major investments in the future of FCEVs and hydrogen fueling infrastructure. While there were some growing pains with FCEVs in past decades vehicle manufacturers will soon be bringing FCEVs to market in commercial numbers.¹¹ However, while there is funding in place to support the installation of up to 100 hydrogen fueling stations the danger is that there will not be enough fueling stations to keep up with demand based on sales projections for the cars. Indeed CARB staff have noted as part of their annual evaluation of the market that:

“The hydrogen fuel demand of the projected FCEVs is expected to also exceed the fueling capacity of the network under business-as-usual growth. ARB recommends that methods to maximize the capacity leveraged by Alternative and Renewable Fueled

Low-income, and Disproportionately Impacted Communities. See pp9-10 in: “California Air Resources Board's Guidance to Volkswagen on First 30 Month Electric Vehicle Infrastructure Investment Plan of the 2.0 Liter Diesel Engine Partial Consent Decree Settlement”, Feb. 2017, https://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/documents/carb_guidance_021017.pdf

⁹ Public Policy Institute of California, January 2017. California's Future: Population. http://www.ppic.org/content/pubs/report/R_117HJ2R.pdf

¹⁰ 2016 ZEV Action Plan from the State of California. https://www.gov.ca.gov/docs/2016_ZEV_Action_Plan.pdf

¹¹ California Fuel Cell Partnership, July 2014. A California Road Map. The Commercialization of Hydrogen Fuel Cell Vehicles. 2014 Update: Hydrogen Progress, Priorities and Opportunities (HyPPO) Report. <http://cafcp.org/sites/default/files/Roadmap-Progress-Report2014-FINAL.pdf>

Vehicle and Technology Program (ARFVTP) funds be identified and implemented. Furthermore, new funding sources, whether private or public, need to be identified and directed to the challenge of growing the hydrogen fueling network in 2020 and beyond at a pace commensurate with the expected FCEV fueling demand.”¹²

We recommend that VW/EA meet with the Governor’s Deputy Director of ZEV Infrastructure, staff of the California Fuel Cell Partnership, and staff at the California Energy Commission and California Air Resources Board who work on the state’s FCEV and fueling infrastructure deployment strategy in order to discuss how VW/EA’s investment strategy can also work to provide important support to the growth of the FCEV market. There are potential opportunities for the production of inexpensive hydrogen due to the abundance of excess generation of renewables – especially during certain times of year¹³ – and there is work under way to see how California’s zero emissions transportation system could take advantage of this for fueling (whether as renewable electricity or renewable hydrogen) while at the same time providing beneficial load and other services to the grid.

We thank CARB for the opportunity to provide written comments on the March 14th Public Version of Volkswagen’s California ZEV Investment Plan: Cycle 1. We reiterate that we offer the observations contained within these written comments with the hope that if they cannot be addressed during the balance of the process for the Cycle 1 Investment Plan, they can be thoroughly addressed in subsequent Cycles of the process. We look forward to the opportunity to continue working with CARB staff and the staff at VW/EA in order to ensure the ZEV Investment Plan process provides maximum benefits to the public; remedies the harm caused by VW; and ***Prioritizes Transformational investments in Disadvantaged, Low-income, and Disproportionately Impacted Communities.***

Sincerely,



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¹² p66. CARB, 2016. 2016 Annual Evaluation of Hydrogen Fuel Cell Electric Vehicle Deployment and Hydrogen Fuel Station Network Development. https://www.arb.ca.gov/msprog/zevprog/ab8/ab8_report_2016.pdf

¹³ California's Grid Geeks: Flattening the 'duck curve', January 25, 2017. <https://www.greenbiz.com/article/californias-grid-geeks-flattening-duck-curve>

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