



DATE: April 10, 2017

TO: Mr. Mark Williams, Mailstop 3E
California Air Resources Board (CARB)
P.O. Box 2815
Sacramento, CA 95812
[Submitted Electronically](#)

FROM: Center for Sustainable Energy®

RE: Response to Volkswagen's (VW's) first 30-month ZEV Investment Plan

Dear Mr. Williams:

The Center for Sustainable Energy® (CSE) is pleased to provide these comments in response to Volkswagen's (VW's) *First 30-Month ZEV Investment Plan, Cycle 1* (VW's Cycle 1 Plan), submitted to CARB on March 8, 2017, in response to CARB's *Guidance to Volkswagen Informing Their First 30-Month Zero-Emission Vehicle (ZEV) Investment Plan*.¹

CSE administers the statewide Clean Vehicle Rebate Project (CVRP) for CARB. In addition, CSE has received California Energy Commission funding for a variety of alternative fuel vehicle (AFV) projects including ZEV readiness projects in the San Diego and San Joaquin Valley regions, and for research on driving the integration of plug-in electric vehicles (PEVs) to maximize grid benefits. Recently, the California Energy Commission selected CSE as the administrator of the Electric Vehicle Charger Incentive Project.² CSE provides these comments based on its diverse experiences in support of the deployment of California's ZEVs and ZEV infrastructure as well as its in-depth knowledge of the AFV landscape.

CSE continues to applaud CARB's leadership on VW settlement matters, as well as CARB's broader goals of reducing greenhouse gas (GHG) emissions and improving air quality. CARB's *Guidance to VW Informing Their First 30-Month ZEV Investment Plan* is a testament to that leadership. CARB's guidance provides concise, yet flexible, direction to inform VW's Cycle 1 Plan. Given the need to rapidly scale and accelerate California's ZEV adoption, and to meet CARB's direction to make 'early and visible progress',³ the VW Cycle 1 Plan represents a sincere effort to facilitate an effective plan consistent with Appendix C of the 2.0-Liter Partial Consent Decree. Nonetheless, VW's Cycle 1 Plan (including its policy framework) will benefit from expansion, clarification, increased transparency, and strengthened alignment with California's

¹ CARB's *Guidance to Volkswagen Informing Their First 30-Month ZEV Investment Plan, Dated February 10, 2017*

² GFO-16-603 - Block Grant for Electric Vehicle Charger Incentive Projects

<http://www.energy.ca.gov/contracts/GFO-16-603/>

³ 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; February 2017; Page 10.*

ZEV attainment goals. While CSE appreciates VW's initial proposal, CSE's comments focus on refining the Cycle 1 Plan to ensure better alignment with California's mature and robust ZEV policy ecosystem.⁴

CSE provides the following comments:

1) Education and Outreach (E&O) programs should be coordinated with existing activities and be linguistically and culturally appropriate

CSE appreciates that VW's Cycle 1 Plan presents brand-neutral public education activities.⁵ CARB should direct coordination between specific existing E&O programs to minimize duplicative efforts, encourage resource sharing, promote economies of scale, and ensure message uniformity and alignment with statewide transportation policy objectives. Specifically, CSE highly recommends that any ride-and-drive activities undertaken in VW's Cycle 1 Plan be coordinated with existing efforts. Existing E&O efforts that deploy test drive events include CVRP E&O, Charge Ahead Campaign and the emergent E&O activities under the Veloz 'Best.Drive.Ever' campaign.⁶

Additionally, CSE strongly supports CARB's initial guidance to VW to create a campaign that is multi-lingual and culturally sensitive.⁷ VW's Cycle 1 Plan does not reflect CARB's guidance. Recognizing California's diverse population, it is crucial that VW's Cycle 1 Plan facilitate a consumer awareness campaign that helps overcome language and cultural barriers. In addition to the importance of creating a campaign that accessible to all Californians, a multi-lingual, culturally appropriate campaign would directly support the State's existing policy framework which prioritizes targeting ZEV deployment in DAC areas, and for DAC residents.

Lastly, CSE attests that VW's efforts should augment CA's E&O efforts by finding new and innovative ways to increase awareness and knowledge. By investing in new and innovative E&O approaches, this funding can help elevate EV recognition and adoption, especially in DAC and low-income communities.

⁴ This 'ZEV policy ecosystem' includes the 2013, 2015, and 2016 ZEV Action Plans; SB 350 Transportation Electrification Policy; California Sustainability Freight Action Plan; CARB's Advanced Clean Transit Rulemaking; and other key transportation policy frameworks which provide policy tools to accelerating ZEV adoption and transportation electrification across California.

⁵ VW's Cycle 1 Plan; Page 7.

⁶ PEV Collaborative, Annual 2016 Report; Website Access: http://www.pevcollaborative.org/sites/all/themes/pev/files/2016_AR_web.pdf

⁷Id; Page 15 States: "some marketing materials and products should be produced that are multi-lingual and culturally sensitive"

2) VW's Cycle 1 Plan should reflect clearer coordination with CARB's sister agencies that are also responsible for transportation electrification

CSE appreciates that VW's Cycle 1 Plan commits to alignment with CARB's Investment Plan Guidance.⁸ VW's Cycle 1 Plan presents considerable effort to align with Appendix C of the Partial Consent Decree and the four priority investment areas identified there. While VW's Cycle 1 Plan does accomplish this, it does not create the necessary synergy between California's robust ZEV initiatives underway across multiple state agencies. CSE attests that strengthening coordination with key agencies will reduce duplicative processes, and promote resource and knowledge sharing which increases likelihood of program success. Areas necessary for expanded public agency coordination and engagement include, but are not limited to:

- **California Energy Commission (Energy Commission).** CARB instructs VW that investments should be 'complementary and additional to investments already being made by government and the private sector',⁹ and specifically highlights the Energy Commission's infrastructure grants.¹⁰ VW's Cycle 1 Plan does not reflect strong synergy with the Energy Commission's infrastructure grants, and CSE recommends that CARB mandate further coordination. This coordination is even more important as the Energy Commission begins its Electric Vehicle Charger Incentive Project,¹¹ which will deploy \$200 million in infrastructure grant funds through various incentive projects across California during the next five years. The Energy Commission's program investments will undoubtedly provide opportunities for resource sharing and coordination.
- **California Public Utilities Commission (CPUC).** CARB expects VW to coordinate investment with the CPUC's programs authorizing utility investment in ZEV infrastructure that serves low income and DACs.¹² VW's Cycle 1 Plan does not reflect this requested coordination between VW, CPUC, and the investor-owned utilities (IOUs), which will install the infrastructure to support up to 12,500 charging stations with total budgets up to \$197 million.¹³ To minimize duplicative efforts, CSE recommends that CARB direct VW to clarify these coordination activities. CARB should also direct VW to strengthen program alignment with the CPUC's current SB 350 Transportation Electrification Rulemaking, where the IOUs have presented over \$1 billion in potential

⁸ VW's Cycle 1 Plan; Page 4.

⁹ 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; February 2017; Page 9.

¹⁰ Id; Page 9.

¹¹ Energy Commission; Block Grant for Electric Vehicle Charger Incentive Projects; Website Access: <http://www.energy.ca.gov/contracts/GFO-16-603/>

¹² 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; February 2017; Page 10.

¹³ CPUC Website, Zero-Emission Vehicles, Infrastructure Programs; Website Access:

http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Infrastructure/RDD_and_Emerging_Programs/Alternative_Fuel_Vehicles/IOUInfrastructurePrograms.pdf

program activities across the three IOU territories.¹⁴ If these applications are approved, there will be a need to align efforts across these programs.

- **Regional PEV readiness planning.** CARB highlights CSE's recommendation that VW should use existing readiness plans as infrastructure in "planned" areas.¹⁵ VW's Cycle 1 Plan does not reflect alignment with PEV readiness plans. These plans have also spawned complementary activities, specifically regional PEV readiness committees, which should be leveraged to inform and enhance VW's Cycle 1 Plan activities. From CSE's perspective, these plans can and should be leveraged by VW to demonstrate expeditious collaborative efforts, as well as 'early and visible' progress towards infrastructure deployment consistent with CARB's guidance.¹⁶
- **(Emergent) Caltrans EV Infrastructure Investments.** If authorized with the Fiscal Year 2017/18 State budget, Caltrans will provide funding for up to \$20 million (with a \$20 million federal fund match) to install 30 new EV charging stations at public locations (such as rest areas and roadside stops) by December 2018.¹⁷ Notably, Caltrans investments potentially would overlap with VW's proposed investment strategy to deploy charging 'along high-traffic corridors between metropolitan areas.'¹⁸ To avoid duplicative investments and avoid stranding assets, CSE encourages CARB to direct VW to coordinate with Caltrans, should this funding be authorized.
- **(Emergent) Transformative Climate Communities (TCC) Program,¹⁹ non-funded projects.** CSE attests that the emergent TCC Program initiatives present model grounds for VW's investments. It is highly likely that this high-profile, \$140 million program will be oversubscribed. This oversubscription will yield a diverse array of 'shovel ready' community-level projects, many of which will likely have clean technology touchpoints related to green infrastructure, ZEV transportation, smart grid technologies, and energy storage.²⁰ Hence, the ZEV infrastructure portions of these unfunded projects should be considered for investment by VW. The TCC program also targets air pollution and GHG emissions reductions directly in DACs, and presents the opportunity to showcase targeted programs in support of DACs. As such, CSE recommends that CARB direct VW

¹⁴ CPUC; *Transportation Electrification Activities Pursuant to Senate Bill 350; Projects Table: Website Access:* http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Infrastructure/RDD_and_Emerging_Programs/Alternative_Fuel_Vehicles/SB350Applications.pdf

¹⁵ *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; February 2017; Page 9.*

¹⁶*Id*; Page 11

¹⁷ *Assembly Budget Committee no. 3 Resources and Transportation, Wednesday, April 5, 2017 Agenda; Website Access:* <http://abgt.assembly.ca.gov/sites/abgt.assembly.ca.gov/files/April%205%20-%20Transportation%20and%20Energy%20Commission.pdf>

¹⁸ *VW's Cycle 1 Plan; Page 5*

¹⁹ *Strategic Growth Council; Transformative Climate Communities Program; Website Access:* <http://sgc.ca.gov/Grant-Programs/Transformative-Climate-Communities-Program.html>

²⁰ *Transformative Climate Communities Draft Scoping Guidelines, page 6. Website Access:* <http://sgc.ca.gov/resource%20files/20161123-TCCDraftScopingGuidelines.pdf>

to collaborate with the Strategic Growth Council (implementer of the TCC Program) and direct VW to do a thorough review of the TCC Program's non-funded programs as a potential area of VW's investment (after the TCC Program's three target cities have been selected).

3) The use of a third-party, brand-neutral, technology-agnostic ombudsman is warranted

CSE recommends that CARB evaluate the use of a single third-party ombudsman to coordinate and facilitate the activities above (in Section 2), to serve as an independent aggregator of program data, information, and lessons learned for VW's investments and to monitor VW's progress against the plan generally. The ombudsman would also be able to bridge resources and agencies by providing brand-neutral, unbiased support in areas such as stakeholder coordination activities, data and information aggregation for research purposes, and by acting as a research and information sharing channel. This ombudsman will be especially important in providing informational resources that guide and organize ZEV infrastructure investments from a diverse array of public and private stakeholders. They would benefit from a single, common informational channel, especially as the State rapidly increases its ZEV infrastructure access.

4) Clarify and prioritize disadvantaged community (DAC) policies

CARB's guidance indicates that at least 35% of funds should be invested in DACs.²¹ VW's Cycle 1 Plan proposes a 25% DAC investment strategy,²² which does not align with CARB's instruction. CSE recommends that CARB direct VW to clarify its 35% investment consistent with CARB's instruction. CSE would also recommend that CARB clarify for VW that this 35% is a minimum investment. From CSE's perspective, every investment made should have a focus on DAC and low-income communities since DACs are highly impacted by air pollution, and have been burdened the most from VW's infraction.

5) Prioritize the release of anonymous and aggregated data for independent stakeholder analysis

CARB informs VW that 'data collection and reporting is very important to California to help understand effectiveness of programs', and will be 'critical for providing transparency and accountability for the program'.²³ Moreover, CARB's guidance indicates that data should be provided 'through a public website for members of the public'.²⁴ CSE strongly supports this

²¹ *Id.*; Page 10.

²² VW's Cycle 1 Plan states: 'In an analysis of the proposed highway network, roughly 25% of stations will fall in areas which score in the bottom quartile on the CalEnviroScreen, and over 50% of stations will fall in areas that scored in the bottom half on the CalEnviroScreen index. This will help provide state-of-the-art infrastructure to disadvantaged communities near major highways, and especially those communities that have significant air pollution issues as a result of being located near a highway;' Page 6.

²³ 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; February 2017; Page 11

²⁴ *Id.*; Page 4.

guidance. To inform and develop a competitive marketplace, and to maximize learning from these activities, anonymous and aggregated data from VW's Cycle 1 Plan should be made public and widely available while ensuring confidentiality and privacy where needed. The data gathered under VW's Cycle 1 Plan would be beneficial to regulators, academics, a diverse array of ZEV stakeholders. It has been CSE's experience that public-facing data has value in – among other things – providing key feedback on program success, informing policy decision-making processes, and providing ancillary data for evaluation and research purposes. As administrator of the CARB's CVRP, CSE has worked closely with CARB and other stakeholders to provide data to the public in both comprehensive and easily accessible formats, while maximizing the amount of data made available to the public and ensuring confidentiality and privacy protections. CSE encourages CARB to direct VW to publicly release:

- uniform data
- data with a defined purpose
- streamlined data reporting
- deeply granular data
- geographical data
- categorical data
- easily disseminated data.

6) Direct VW to produce quarterly data reports for stakeholders

CARB has expressed its desire for VW to routinely share data, and some CARB board members have expressed concerns about year-long 'data blackouts' and its impact on transparency and accountability.²⁵ The VW's Cycle 1 Plan has suggested to 'meet bi-annually', and 'submit an annual report detailing its progress in implementing the California ZEV Investment Plan'. CSE attests that an annual timeline seems incongruent with CARB's transparency goals and guidance, since annual reporting intervals do not encourage prompt stakeholder review and independent evaluation practices that will rapidly inform decision-making processes. From CSE's perspective, it will be important to quickly learn from program activities while soliciting effective feedback from CARB and stakeholders. To do this, quarterly reporting is warranted, which will support proper feedback processes while encouraging interactive and iterative program review.

7) Support for third party auditing

CARB provides guidance that 'a third-party auditor will review expenditures and determine if they are creditable investments on an annual basis.'²⁶ CSE agrees with CARB in the need for this role which ensures effective Evaluation, Measurement and Verification (EM&V). Safeguarding proper EM&V will strengthen the likelihood of VW's Cycle 1 Plan success. VW's Cycle 1 Plan does not yet fully explain the use and role of this type of third-party auditor. As such, CSE recommends that CARB request clarification related to this auditing.

²⁵*Id.*; Page 3.

²⁶ VW's Cycle 1 Plan; Page 6.

8) Prioritize hydrogen investments in the short term

CARB 'strongly encourages VW to include hydrogen investment, if not now in a subsequent 30-month investment plan'.²⁷ VW's Cycle 1 Plan does not contain hydrogen investments, and does not discuss hydrogen as a potential future investment. CSE supports CARB's technology-agnostic guidance. Hydrogen investments are consistent with guidance under the ZEV Action Plan. In addition, hydrogen vehicle technologies can act as a controllable grid asset, and are a highly promising future electric technology. CSE believes renewably-sourced hydrogen does have an application within the larger ZEV ecosystem, and is ideal for a grid-operation scenario with high penetrations of renewables. Moreover, as grid penetration of renewables increase, the large-scale production of hydrogen via electrolysis may become an important outlet during times of excess generation. As such, CSE supports CARB's request for investments in hydrogen infrastructure in the short term, and recommends that CARB instruct VW to state its intention to incorporate hydrogen in future plans to accommodate this instruction.

Conclusion

CSE appreciates the opportunity to provide these comments in response to VW's Cycle 1 Plan. While the VW's Cycle 1 Plan presents a solid initial framework broadly consistent with Appendix C of the 2.0-Liter Partial Consent Decree, and is beginning to harmonize per CARB's instructions, there are several critical areas where the VW Cycle 1 Plan does not reflect CARB's guidance. Given this, CSE recommends CARB request modifications and clarifications to VW's Cycle 1 Plan as stated above.

Please continue to consider CSE a resource on these and other matters, please feel free to contact Paul D. Hernandez, CSE's Transportation Electrification Policy Manager to clarify these comments or with any questions you may have.

Respectfully Submitted,



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²⁷ 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; February 2017; Page 11.