



April 10, 2017

California Air Resources Board
1001 I St.
Sacramento, CA 95814

Re: Volkswagen's California ZEV Investment Plan: Cycle 1

The California Electric Transportation Coalition (CalETC) appreciates the opportunity to comment on Volkswagen's (VW's) ZEV Investment Plan: Cycle 1, for the first 30-month investment period.

CalETC is a non-profit association promoting economic growth, clean air, fuel diversity and energy independence, and combating climate change through the use of electric transportation. CalETC is committed to the successful introduction and large-scale deployment of all forms of electric transportation including plug-in electric vehicles (PEVs) of all weight classes, transit buses, port electrification, off-road electric vehicles and equipment, and rail. Our board of directors includes: Los Angeles Department of Water and Power, Pacific Gas and Electric, Sacramento Municipal Utility District, San Diego Gas and Electric, Southern California Edison, and the Southern California Public Power Authority. Our membership also includes major automakers, manufacturers of zero-emission trucks and buses, and other industry leaders supporting transportation electrification.

Although California is leading the nation in PEV adoption, our state still has a long way to go to reach the goals in the Governor's Executive Order B-16-2012: 1.5 million zero-emission vehicles (ZEVs) on California roads by 2025 and zero-emission vehicle infrastructure able to support 1 million vehicles by 2020. In addition, the state must implement SB 1275 (De León) [Chapter 530, Statutes of 2014] and SB 1204 (Lara) [Chapter 524, Statutes of 2014], which set targets for the deployment of 1 million zero- and near-zero-emission vehicles by 2023, access to these vehicles by disadvantaged and low- and moderate-income communities, and deployment of zero- and near-zero-emission medium- and heavy-duty vehicle technologies. Additional access to PEV charging is essential to the state's ZEV adoption goals.

CalETC supports the proposal outlined in VW's ZEV Investment Plan: Cycle 1. VW proposes to install charging infrastructure, engage in ZEV public education and access initiatives, and invest in a Green City to showcase the benefits of ZEVs and promote increased ZEV usage.

Adequate PEV-charging infrastructure is essential to reach the state's clean-vehicle goals. CalETC found that California faces an infrastructure-funding gap of at least \$1.5 billion, if the state is to reach an adequate level of PEV charging by 2020, to accommodate high-public access.¹ VW's proposed investment in charging infrastructure, of \$120 million, is a step in the right direction to make California's gap in charging infrastructure smaller. However, because there is such a large need for charging infrastructure,

¹ See attached CalETC PEV-Charging Infrastructure Opportunity Fact Sheet.

VW's investment leaves room for significantly more private- and public-sector investment in charging infrastructure. In addition, VW's approach is attractive from the point of view of PEV drivers because of the open access to charging infrastructure for all, without an RFID card, membership and/or other limitations on accessibility.

We are pleased to see that VW's infrastructure investment will benefit disadvantaged communities. VW notes that about 25% of the proposed highway-network charging 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. We look forward to VW's forthcoming gap analysis and corresponding investment proposal, relating to the infrastructure needs in disadvantaged communities.

Targeted and brand-neutral public education and access initiatives will help raise consumer awareness and understanding of ZEVs. Currently, consumers have a limited understanding of PEV technologies and available PEV options. In a report released by the National Renewable Energy Laboratory, researchers found that over half of survey participants, of a 1,015-household sample, were unable to name a specific PEV make and model.² We are pleased to see that VW is proposing experiential learning activities, like ride-and-drives, in addition to an education campaign. Experiential learning activities allow consumers to discover that ZEVs are fun to drive, will fit into their lifestyle, and have other benefits relative to traditional internal combustion engine vehicles. CalETC is looking forward to seeing the launch of VW's education and access initiatives.

Relative to the Green City component of VW's proposal, CalETC supports the focus on ZEV car-sharing, ZEV delivery fleets, and ZEV taxi fleets. In addition to reducing emissions, car-sharing and taxi fleets will help raise consumer awareness of ZEVs as riders will experience the technology firsthand. ZEV delivery vehicles are currently available and replacing fossil-fueled delivery vehicles with ZEVs will reduce localized air-quality impacts, in addition to providing climate-change benefits.

In relation to all of these components of the proposal, CalETC supports necessary safeguards to ensure that Appendix C investments facilitate widespread electrification across automakers. First, it will be important to ensure that VW vehicles aren't inadvertently favored in infrastructure access through preferential pricing or other means. Additionally, there should be a firewall in place between VW and Electrify America to address data-privacy and competitiveness issues. For example, VW should not have the ability to access consumer data from non-VW vehicles and subsequently use that data to market VW vehicle to those drivers.

CalETC supports expeditious approval of VW's ZEV Investment Plan to ensure that these actions are undertaken swiftly, and that the benefits begin to be realized before VW's second investment-plan proposal. We would like to avoid the delays that occurred under the NRG Settlement; timely action is essential to PEV-market acceleration in line with the state's goals.

² Singer, Mark. National Renewable Energy Laboratory. 2016. Consumer Views on Plug-In Electric Vehicles – National Benchmark Report http://www.afdc.energy.gov/uploads/publication/consumer_views_pev_benchmark.pdf.

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Thank you for your consideration. Please do not hesitate to contact us should you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "EWTutt", is centered on the page. The signature is fluid and cursive.

Eileen Wenger Tutt, Executive Director
California Electric Transportation Coalition

Attachment: CalETC PEV Charging Infrastructure Opportunity Fact Sheet

CALIFORNIA'S ELECTRIC VEHICLE INFRASTRUCTURE PRESENTS A MARKET OPPORTUNITY

By 2020, California needs the infrastructure in place to charge at least 1 million EVs in public or at workplaces.¹ This presents a vast opportunity for private investment to help drive the EV market.

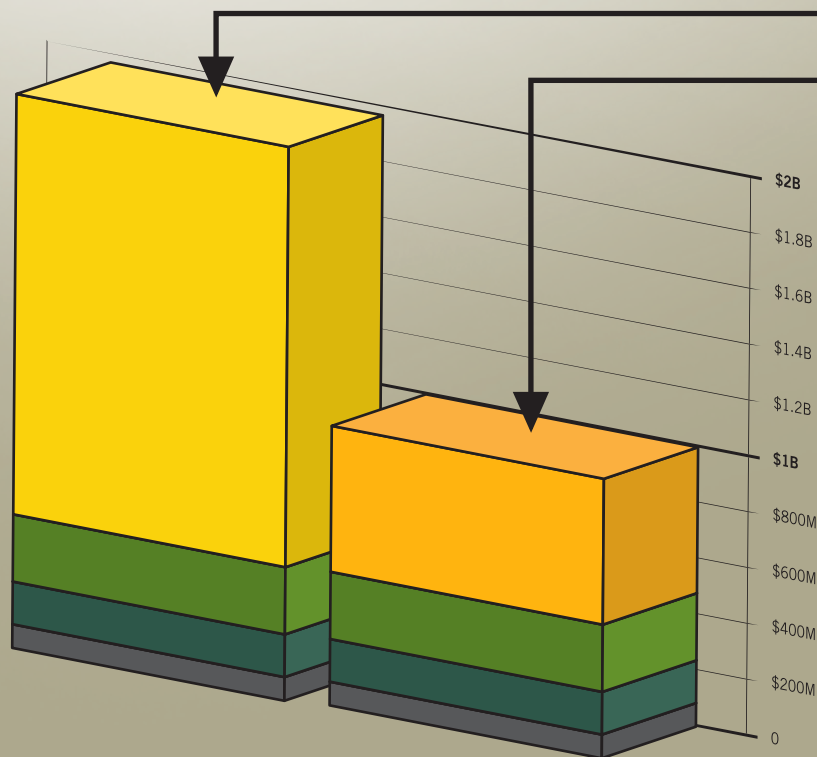
The state needs up to \$2B by 2020 to ensure adequate public EV charging.²

Funds are promised from:

- The State of California: \$85M³
- California utilities: \$153M⁴
- The NRG and VW Settlements: \$241M⁵



After committed funds, California must realize an additional \$523M – \$1.5B to achieve needed light-duty EV infrastructure in the next three years



TOTAL PROJECTED NEED⁶

- \$2 BILLION (HIGH PUBLIC ACCESS)
- \$1 BILLION (LOW PUBLIC ACCESS)*

*Home-dominant charging scenario

EXPECTED FUNDING

- VW/NRG SETTLEMENTS: \$241M⁷
- CA UTILITY FUNDING: \$153M⁸
- CA FUNDING: \$85M⁹

TOTAL FUNDING OPPORTUNITY

- \$1.5B (HIGH)
- \$523M (LOW)

1. California Executive Order No. B-16-2012. March 23, 2012. <https://www.gov.ca.gov/news.php?id=17472>
2. Melaina, Marc, Michael Helwig. National Renewable Energy Laboratory. California Statewide Plug-In Electric Vehicle Infrastructure Assessment. California Energy Commission. May 2014. Publication Number: CEC-600-2014-003. (Page 3, Table 1). <http://www.energy.ca.gov/2014publications/CEC-600-2014-003/CEC-600-2014-003.pdf> [provided projections for charging-station need, high and low case]; Public access electric vehicle charging station locations in California listed in the AFDC's Electric Vehicle Charging Station Locator. US Department of Energy, Energy Efficiency and Renewable Energy. September 2016. http://www.afdc.energy.gov/fuels/electricity_locations.html [used for baseline number of charging stations located in California]; California Transportation Electrification Assessment: Phase 1 Final Report. ICF International, Energy+Environmental Economics. September 2014. http://www.caletc.com/wp-content/uploads/2016/08/CalETC_TEA_Phase_1-FINAL_Updated_092014.pdf [used to calculate cost for needed/gap in charging stations, based on 2014 costs].
3. Orenberg, Jacob. 2016-2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program. California Energy Commission, Fuels and Transportation Division. May 2016. Publication Number: CEC-600-2015-014-CMF (Page 53, Table 19). <http://www.energy.ca.gov/2015publications/CEC-600-2015-014/CEC-600-2015-014-CMF.pdf>.
4. Orenberg, Jacob. 2016-2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program. California Energy Commission, Fuels and Transportation Division. May 2016. Publication Number: CEC-600-2015-014-CMF (Page 44, Table 15). <http://www.energy.ca.gov/2015publications/CEC-600-2015-014/CEC-600-2015-014-CMF.pdf>. [Utility planned investments updated to reflect CPUC-approved pilot programs from SCE, SDG&E, and PG&E; as well as known publicly-owned utility investments from SCPPA (including LADWP) and SMUD.]
5. California Air Resources Board, Press Release. Volkswagen to spend over one billion dollars in California to address illegal emissions caused by cheating devices on its 2.0-liter diesel vehicles. June 28, 2016. <https://www.arb.ca.gov/newsrel/newsrelease.php?id=834>; See also, VW Settlement Documents. <https://www.vwcourtsettlement.com/en/>. [For VW settlement funding, estimated an average of \$145.8 million out to 2020 (from the \$200m ZEV Investment to be allocated every 30 months for education, outreach, and infrastructure).] California Public Utilities Commission. CPUC Files Settlement That Will Bring Electric Vehicle Charging Infrastructure to California's Diverse Communities. [For NRG settlement funding, used entire amount allocated to EV charging: \$95.5 million.]
6. Melaina, Marc, Michael Helwig. National Renewable Energy Laboratory. California Statewide Plug-In Electric Vehicle Infrastructure Assessment. California Energy Commission. May 2014. Publication Number: CEC-600-2014-003. (Page 3, Table 1). <http://www.energy.ca.gov/2014publications/CEC-600-2014-003/CEC-600-2014-003.pdf> [provided projections for charging-station need, high and low case]; Public access electric vehicle charging station locations in California listed in the AFDC's Electric Vehicle Charging Station Locator. US Department of Energy, Energy Efficiency and Renewable Energy. September 2016. http://www.afdc.energy.gov/fuels/electricity_locations.html [used for baseline number of charging stations located in California]; California Transportation Electrification Assessment: Phase 1 Final Report. ICF International, Energy+Environmental Economics. September 2014. http://www.caletc.com/wp-content/uploads/2016/08/CalETC_TEA_Phase_1-FINAL_Updated_092014.pdf [used to calculate cost for needed/gap in charging stations, based on 2014 costs].
7. California Air Resources Board, Press Release. Volkswagen to spend over one billion dollars in California to address illegal emissions caused by cheating devices on its 2.0-liter diesel vehicles. June 28, 2016. <https://www.arb.ca.gov/newsrel/newsrelease.php?id=834>. See also, VW Settlement Documents. <https://www.vwcourtsettlement.com/en/>. [For VW settlement funding, estimated an average of \$145.8 million out to 2020 (from the \$200m ZEV Investment to be allocated every 30 months for education, outreach, and infrastructure).] California Public Utilities Commission. CPUC Files Settlement That Will Bring Electric Vehicle Charging Infrastructure to California's Diverse Communities. Page visited January 25, 2017. <http://www.cpuc.ca.gov/General.aspx?id=5936>. [For NRG settlement funding, used entire amount allocated to EV charging: \$95.5 million.]
8. Orenberg, Jacob. 2016-2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program. California Energy Commission, Fuels and Transportation Division. May 2016. Publication Number: CEC-600-2015-014-CMF (Page 44, Table 15). <http://www.energy.ca.gov/2015publications/CEC-600-2015-014/CEC-600-2015-014-CMF.pdf>. [Utility planned investments updated to take into account CPUC-approved pilot programs from SCE, SDG&E, and PG&E; as well as known publicly-owned utility investments from SCPPA (including LADWP) and SMUD.]
9. Orenberg, Jacob. 2016-2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program. California Energy Commission, Fuels and Transportation Division. May 2016. Publication Number: CEC-600-2015-014-CMF (Page 53, Table 19). <http://www.energy.ca.gov/2015publications/CEC-600-2015-014/CEC-600-2015-014-CMF.pdf>.