



January 23, 2017

Electrify America, LLC
Volkswagen Group of America, Inc.
Attn: ZEV Investment Commitment Planning & Operations
2200 Ferdinand Porsche Dr.
Herndon, VA 20171

RE: Pennsylvania's ZEV Investment Cycle I Project Endorsements

Dear Electrify America Planning Staff:

The Commonwealth of Pennsylvania appreciates the opportunity to submit its Zero Emission Vehicle (ZEV) infrastructure project recommendations to Electrify America, LLC, for the first ZEV Investment Commitment funding cycle pursuant to the schedule as set forth in Appendix C of the Partial Consent Decree in the lawsuit entitled, *In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation*, Case No: MDL No. 2672 CRB (JSC). The Commonwealth believes that it is uniquely positioned as a state to take advantage of the opportunities under this funding cycle and looks forward to working with Electrify America, LLC and stakeholders.

INTRODUCTION

Pennsylvania is a prime candidate for ZEV Infrastructure project funding because it is a centrally located transportation nexus for the Northeast, Midwest and the Southern portions of the United States. Pennsylvania contains some of the longest stretches of heavily traveled interstate arteries in the United States, including I-76, I-80, I-95 and I-81. Three of these interstate highways were recently designated as FAST Act Corridors, which establishes and funds new programs to support critical transportation projects to ease congestion and facilitate the movement of freight on the Interstate System and other major roads.

The Pennsylvania Department of Environmental Protection (DEP) coordinates and collaborates with stakeholders on Electric Vehicle (EV) Infrastructure expansion in Pennsylvania and possesses extensive experience working with local governments and businesses throughout the Commonwealth. DEP operates the Office of Pollution Prevention and Energy Assistance which serves as the State Energy Office. This office administers the U.S. Department of Energy's State Energy Program funds for Pennsylvania. In the past, DEP's State Energy Office, together with the Bureau of Air Quality and other in-state partners, has successfully managed more than \$100 million of American Recovery and Reinvestment Act of 2009 dollars dedicated to clean and alternative energy projects. Additionally, DEP's State Energy Office has administered grant incentive funds under the Alternative Fuels Incentive Grant Program (AFIG) for alternative fuels transportation projects providing over \$100 million in grants and rebates, for nearly 25 years.

Secretary

Rachel Carson State Office Building | P.O. Box 2063 | Harrisburg, PA 17105-2063 | 717.787.2815 | www.dep.pa.gov

BACKGROUND

DEP Alternative Fuel Grant and Rebate Programs

Since 1992, DEP has offered Pennsylvania businesses, municipalities, and school districts opportunities to receive grants under AFIG, a program created by the Alternative Fuels Incentive Act. The grants are available for all alternative fuel transportation projects such as, electric, natural gas, propane, biofuels, and hydrogen. Through AFIG, Pennsylvania has positioned itself to be an innovative leader by funding a network of Level II and Level III DC Fast Charging (DCFC) stations across the Commonwealth. Over the last five years, DEP has invested millions of dollars into EV charging station infrastructure. Approximately 300 EV stations with over 500 charging outlets exist in Pennsylvania, including Level II and Level III DCFC stations available for public use. Of this network, AFIG has funded approximately 142 Level II and 15 Level III stations. Funding for 50 Level II and 32 Level III additional stations is currently planned and/or pending through AFIG. DEP will continue to work closely with Pittsburgh Region Clean Cities and the Greater Philadelphia Clean Cities coalitions to help deploy EVs and EV infrastructure throughout the state. For more information on this initiative, visit:

<http://www.dep.pa.gov/Citizens/GrantsLoansRebates/Alternative-Fuels-Incentive-Grant/Pages/default.aspx>

Since 2004, DEP has also made available a rebate program for Pennsylvania residents for new alternative fuel vehicles purchased at dealerships. From September 1, 2011 to present, approximately 4,000 rebates, totaling over \$6.3 million dollars, have been given to Pennsylvania residents for the purchase of EV and Plug-in hybrid electric vehicles. For more information on this program, visit:

<http://www.dep.pa.gov/Citizens/GrantsLoansRebates/Alternative-Fuels-Incentive-Grant/Pages/Alternative-Fuel-Vehicles.aspx>

Pennsylvania's EV Coalition

In 2016, DEP's State Energy Office began a planning process to leverage stakeholder partnerships to facilitate an EV deployment plan for Pennsylvania. On September 22, 2016, DEP and our Philadelphia and Pittsburgh Clean Cities partners held a meeting with various Pennsylvania state agencies, (the Pennsylvania Governor's Office, Department of Transportation, Department of General Services, Department of Conservation and Natural Resources, and the Pennsylvania Turnpike Commission) to discuss opportunities to support and promote greater adoption of EVs and EV infrastructure for the benefit of the Commonwealth's government, citizens, and businesses. The outcome of that meeting was the formation of the Pennsylvania EV (PA EV) Coalition, and the development of state and business focus committees on three topics: EV Education and Outreach, EV Procurement, and EV Charging Infrastructure.

On December 7, 2016, the PA EV Coalition met to discuss statewide education and outreach for EVs. The coalition recommended the development of a statewide and brand-neutral website that could serve as a platform for this newly formed group. The PA EV Coalition also discussed breaking education and outreach into smaller working groups that might address items such as web development, marketing and strategic partners, EV policy recommendations, and additional EV research and planning.

On December 14, 2016, the PA EV Coalition met to discuss procurement. Vehicle manufacturers outlined the types of electric vehicles that will be available in 2017, and ways they can help overcome barriers to adoption. Agencies and utilities discussed various procurement efforts taking place and outlined current barriers to implementation. There were discussions regarding national and regional procurement options available, and developing state commitments/goals to purchase electric vehicles. The committee recommended that more should be done to assist fleet managers by providing opportunities to talk with early adopters, creating case studies, developing performance indicators and fleet evaluation tools. There were also discussions about offering better incentives, providing marketing and outreach, and enhancing connections with local dealerships.

On December 21, 2016, the PA EV Coalition met to discuss charging infrastructure. Charging infrastructure companies outlined the types (Level 1, 2, and 3 charging) and ideal locations (home, workplace, and destination) for siting charging stations. There were discussions about the need to support all of these charging situations, as they are all important to driving mass EV adoption. The coalition recommended that electric utilities and transportation planning organizations be involved in the planning and siting of the EV charging infrastructure. Some stakeholders had particular interest in chargers that provide electricity from a solar canopy and a battery bank, instead of relying solely on grid-tied installations. Others suggested that building codes should be adjusted to make new construction and major renovation building projects EV ready.

All of these stakeholder meetings were well attended. Participants included state executive agencies, electric utilities, the Public Utility Commission, planning commissions, charging infrastructure companies, major auto makers, consultants, academia, clean cities coalitions, transit authorities, and Pennsylvania local governments.

DEP plans to continue statewide stakeholder engagement by diversifying and expanding partnerships, beginning comprehensive planning, and developing common goals, themes, and activities the PA EV Coalition can work towards for the expedited adoption of EVs in Pennsylvania. We invite Volkswagen and representatives from Electrify America to be a part of the Coalition and to collaborate on project ideas and ways to further the mission and future of EV projects in Pennsylvania.

PENNSYLVANIA ZEV PROJECT RECOMMENDATIONS

Through PA EV Coalition activities and operation of the AFIG programs, DEP is aware of and able to provide assistance to different entities in their various EV charging project plans. DEP recommends support for several noteworthy project initiatives throughout Pennsylvania. The more publicized and commonly known projects for which Electrify America, LLC may receive project proposals from Pennsylvania include:

- *The Pennsylvania Turnpike.* The Pennsylvania Turnpike is one of the most traveled interstate highways in the Commonwealth, hosting approximately 550,000 vehicles per day. The Pennsylvania Turnpike Commission is actively installing EV chargers

along I-76, which connects Philadelphia and Pittsburgh. They are also working to install chargers along the Northeast Extension of the Pennsylvania Turnpike.

- *The City of Pittsburgh.* The City of Pittsburgh's recent Smart City proposal includes various elements for a transportation electrification program, including an Electric Avenue in downtown on 2nd Street. Potential projects also include vehicle-to-grid applications and the expansion of electric transit systems in the city. DEP's AFIG program has been a key part of the electrification of the City of Pittsburgh by providing funding to help deploy nearly 100 plugs at points in and around the city. It should be noted that the City of Pittsburgh was a finalist in this highly sought after grant program, provided through the United States Department of Transportation.
- *The Pennsylvania Department of Conservation and Natural Resources (DCNR).* DCNR desires to provide electric charging locations throughout the state park system. Every Pennsylvanian lives within a 30 minute drive to a Pennsylvania State Park. Pennsylvania state parks have 40 million visitors annually, 23% from out of state. The parks are also viewed as important destination charging locations to connect Pennsylvania residents to their public parks and favorite recreational areas.
- *The Philadelphia Parking Authority (PPA).* PPA is seeking to install EV infrastructure at city parking garages and at the Philadelphia International Airport for a total of 24,000 total parking spaces. All PPA parking facilities are open to the public 24 hours a day, and are located within one half mile of the federal interstate highway system (I-95 and I-676). Last year, the PPA installed 14 EV charging spaces at the airport, which show a high level of utilization. The PPA received an AFIG grant from DEP to help fund this initiative.

DEP believes there are many other potential projects in Pennsylvania that could be developed within the next two years that would bring greater awareness and connectivity to the state and expand the use and purchase of EVs. For instance, DEP could work with local electric distribution utilities to bring EV infrastructure to small and medium-sized cities throughout Pennsylvania. Expanding the ZEV Infrastructure to these areas would create new markets for EV ownership.

While DEP is not soliciting specific funding at this time from Volkswagen Group (DBA, Electrify America, LLC) for any particular EV charging infrastructure or education programs, DEP requests that the projects mentioned above be given adequate consideration.

RECCOMENDATIONS

DEP would also appreciate the opportunity to coordinate and leverage efforts with Volkswagen on its ZEV investments throughout Pennsylvania over the course of the next 10 years. DEP requests that VW utilize these Pennsylvania resources and opportunities when developing projects in Pennsylvania for the ZEV plan:

- 1) **Coordinate funding plans and opportunities between VW and DEP so that financial resources can be optimized for the greatest benefit to Pennsylvanians.** This could be accomplished by VW Group (DBA, Electrify America LLC) sharing relevant aspects of its business plan with DEP on a year-to-year basis (i.e. projected and actual locations of electric vehicle charging stations), so that the installation of duplicative infrastructure in strategic areas can be avoided. This is particularly important early in the electric vehicle supply equipment (EVSE) development stage so that funding is effectively allocated to benefit more communities in Pennsylvania. DEP is willing to share information on projects that will be funded through the AFIG program and any relevant funding opportunities that may occur using Mitigation Trust fund dollars.
- 2) **Collaborate with DEP on Education & Outreach, fleet procurement, and EVSE development with our diverse group of PA EV Coalition members.** DEP believes that having VW involved will enhance Pennsylvania's statewide collaboration and increase interest among Pennsylvania businesses, municipalities and other stakeholders that will help grow the EV market.
- 3) **Establish an interoperable charging system that is accessible, affordable, and consumer friendly.** By deploying funding in Pennsylvania, VW has an opportunity to establish standards and influence how charging infrastructure is installed, managed, and supported in Pennsylvania relative to the size of the investment planned.
- 4) **Provide opportunities to support or enhance education and consumer marketing in Pennsylvania.** Consumer education is a large barrier to wide adoption of EVs. Many of the same myths surrounding battery range anxiety, vehicle utility, vehicle servicing and repair concerns continue to persist. DEP invites VW to be partner, along with other major vehicle manufactures, in the PA EV Coalition's Education and Outreach Committee to develop tools to more effectively reach Pennsylvania customers.
- 5) **Provide opportunities to tap into disadvantaged communities and provide opportunities for disadvantaged businesses.** DEP's Environmental Justice Program has experience identifying and working with economically and environmentally disadvantaged populations. These populations often live in areas that do not achieve current ambient air quality standards. DEP's goal is to ensure equal opportunities and access for these more vulnerable populations. Pennsylvania has existing programs such as the Small Diverse Business Program for Procurement for all verified Minority-, Woman-, Veteran-, and Disabled Veteran-owned businesses, which can assist in connecting Pennsylvania's businesses and workforce with service-level contracting and sub-contracting opportunities associated with VW ZEV Projects. Deployment of these initiatives and active promotion of service level opportunities available to Pennsylvania's workforce could multiply the success of Electrify America's ZEV Plan.

SUMMARY

Pennsylvania's expertise and history of promoting alternative fuel projects provides an excellent opportunity to both collaborate and leverage VW ZEV opportunities in Pennsylvania. Pennsylvania is the 6th largest populated state, with the 5th largest urban center. The Philadelphia metro area is centrally located between the Northeast Transportation Corridor. In western Pennsylvania, the City of Pittsburgh and its metro area serve as a "Gateway to the Midwest" and provide immediate access to the Ohio River Valley and Great Lakes regions. The York-Harrisburg-Lancaster corridor serves as a centralized transportation connector hub between Pittsburgh and Philadelphia where several major highways such as I-76, I-81 and I-83 connect commercial markets to the east, west, north and south.

The Commonwealth of Pennsylvania, through DEP and other state agencies including Pennsylvania Department of Transportation and the Department of General Services, has already built partnerships that will be able to assist VW in building an Electrify America ZEV plan that leverages immediate support and maximizes efficiency in permitting, local approvals or identifying additional project financing. Pennsylvania may be able to assist Electrify America, LLC by promoting service level opportunities to the State's skilled trade workforce, which is necessary to complete these ZEV Infrastructure projects throughout the Commonwealth.

CONCLUSION

We thank you for your consideration of Pennsylvania's ZEV Investment project ideas and recommendations. Please review our background, experience, partnerships and near term and long term opportunities. Should you have questions or wish to discuss any Pennsylvania opportunities please contact: David Althoff Jr., Program Manager, Office of Pollution Prevention and Energy Assistance, Pennsylvania Department of Environmental Protection at 717-783-8411. We look forward to working with Electrify America, LLC and associated stakeholders.

Respectfully,



Patrick McDonnell
Acting Secretary