Multi-State ZEV Task Force Recommendations for Electrify America's Cycle 3 Investments

July 2020

On behalf of the multi-state Zero Emission Vehicle (ZEV) Task Force, NESCAUM[1] is pleased to submit these recommendations for Electrify America's Cycle 3 National ZEV Investment Plan.

Background

Recognizing that coordinated state policies and programs will help to accelerate consumer adoption of light-duty electric vehicles (EVs) and help to make state ZEV programs more successful, the governors of ten ZEV states signed a multi-state ZEV memorandum of understanding (MOU). The MOU directed the formation of the ZEV Task Force and the development of a Multi-State ZEV Action Plan. Facilitated by NESCAUM, the ZEV Task Force is comprised of representatives from the ZEV MOU states, including California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, and Vermont. The ZEV Task Force serves as a unique forum for galvanizing state leadership on transportation electrification through research and analysis, information sharing, collective strategizing, and coordinated regional action on shared priorities. As described in more detail below, the ZEV MOU states are not relying on the ZEV mandate alone to advance transportation electrification. The MOU states have pursued a wide range of market-enabling initiatives to accelerate EV adoption, such as establishment of vehicle purchase incentives and charging infrastructure grants, implementation of utility transportation electrification programs, adoption of state fleet ZEV purchase goals, and public policy recommendations to foster the development of interoperable, consumer friendly and reliable charging networks. The ZEV Task Force has a strong interest in ensuring that Electrify America's investments under the National ZEV Investment Plan complement other public and private investments and drive long-term ZEV adoption.

Recommendations

1. Electrify America Should Prioritize Cycle 3 Investments in the ZEV States.

Electrify America should prioritize its Cycle 3 investments in the ZEV states, where EV sales momentum is strongest due to state adoption of ZEV sales requirements, significant

[1] The Northeast States for Coordinated Air Use Management (NESCAUM) is the nonprofit association of state air quality agencies in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

infrastructure investment, and implementation of a wide range of complementary market-enabling policies. Cycle 3 investments made in the ZEV states will build on these existing state efforts, which are described in more detail below, and satisfy Electrify America's obligation under Appendix C of the 2.0-Liter Partial Consent Decree to make investments that will have "a high likelihood of utilization."[2]

The ZEV regulation, which requires automakers to sell increasing numbers of EVs in the ZEV states over time, is a key driver of market transformation. Adopting the ZEV mandate sends a long-term signal to the market about the strength of the states' commitment to consumer ZEV adoption. In addition, states with the ZEV mandate will continue to be the primary EV sales market for automakers as the ZEV credit requirements increase each year under the ZEV regulation.

To prime the market and ensure widespread consumer ZEV adoption, the ZEV states have made, and are continuing to make, substantial investments in public charging infrastructure using state and utility funds, and allocations made available under Appendix D of the Partial Consent Decree. The ZEV states have also implemented a range of complementary policies and programs designed to accelerate ZEV adoption, including purchase incentives for ZEVs and charging stations, high occupancy vehicle lane access, utility time of use rates, public sector fleet electrification goals, ride-and-drive programs, dealership training, and corporate leadership recognition programs. Further, with NESCAUM's support, the ZEV Task Force has developed model state EV charging grant and procurement contract provisions to foster consumer friendly and reliable public charging networks,[3] recommendations for interoperability,[4] finalized recommendations and educational materials to streamline permitting of DC fast charging stations,[5] and launched a regional ZEV consumer awareness campaign with automakers.[6]

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[2] Appendix C of the 2.0-Liter Partial Consent Decree entered by the U.S. District Court for the Northern District of California on October 25, 2016, requires Electrify America to explain, as applicable, how each national ZEV investment: "increases the use of ZEVs in the United States; addresses a clearly existing need or supports a reasonably anticipated need; has a high likelihood of utilization and provides accessibility/availability where most needed and most likely to be regularly used; supports and/or advances the market penetration of ZEVs in the United States;" etc.

[3] NESCAUM, *Building Reliable EV Charging Networks: Model State Grant and Procurement Contract Provisions for Public EV Charging*, May 2019, available at: https://www.nescaum.org/documents/model-contract-provisions-for-public-evse-5-24-19.pdf/.

[4] NESCAUM, *Electric Vehicle Charging Interoperability Recommendations for State Policy Makers*, May 2020, available at: https://www.nescaum.org/documents/ev-charging-interoperability-reccomendations_5-1-20.pdf/ .

[5] NESCAUM, *Preparing Our Communities for Electric Vehicles, Facilitating Deployment of DC Fast Chargers*, May 2019, available at: https://www.nescaum.org/documents/dcfc-permit-streamlining-whitepaper-final-5-14-19.pdf/.

As a result of these combined efforts, the ZEV states have created policy environments that promote ZEV adoption and encourage infrastructure investment. Thus, strategic investment in the ZEV states by Electrify America during Cycle 3 will accelerate transportation electrification in a manner that is consistent with Appendix C of the Partial Consent Decree.

2. Infrastructure Investments.

As described in more detail below, Electrify America's Cycle 3 infrastructure investments should focus on: (1) DC fast charging along travel corridors; (2) community charging hubs serving EV drivers without home charging; and (3) community charging hubs to support electrification of transportation network companies (TNCs) and taxi fleets.

- **Electrify America should continue to invest in DC fast charging along travel corridors in the ZEV states.**

  A robust and reliable fast charging network is particularly important to accelerating ZEV market penetration. Despite significant infrastructure investments by ZEV states, utilities, and station developers, there is not yet sufficient infrastructure to support reliable and convenient interstate and intrastate travel within and between the ZEV states. Deploying DC fast charging stations along primary and secondary travel corridors in the ZEV states will enable long distance driving for current and future EV drivers.

  Numerous studies indicate that lack of charging infrastructure continues to be a major barrier to EV adoption. A recent nationwide survey of prospective car buyers found that the top two perceived drawbacks of electric car ownership are the time it takes to charge an electric car and the availability of charging stations.[7] Another survey found that 83 percent of Northeast drivers believe there are not enough charging stations.[8] Further, analyses have identified a significant gap between existing DC fast charging stations and projected needs for light-duty ZEVs.[9]

  In addition, there is an emerging need to deploy charging infrastructure for zero emission medium- and heavy-duty vehicles along travel corridors. On July 14, 2020, 15 states, including all of the ZEV states, and the District of Columbia announced a new multi-state

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[6] See *Drive Change. Drive Electric.*, and its signature program Destination Electric, which partners with local businesses to spotlight a growing network of charging stations in communities across the Northeast.

[7] Edelman Intelligence, *Electric Vehicle Audience and Tracking Survey – Wave III*, December 2019.

[8] Edelman Intelligence, *ZEV Mediagenic Survey*, March 2019.

[9] NREL, *National Plug-In Electric Vehicle Infrastructure Analysis*, September 2017.

governors Medium- and Heavy-Duty ZEV MOU by which the signatory jurisdictions committed to work collaboratively through the existing ZEV Task Force to accelerate electrification of trucks and buses. The MOU calls for 30 percent of new truck and bus sales to be zero-emission by 2030 and 100 percent by 2050. To achieve these goals, significant investments in public DC fast charging on travel corridors will be needed to complement on-site depot charging for many regional and long-haul commercial applications.

For these reasons, the ZEV Task Force recommends that Electrify America:

- Make substantial investments in DC fast charging stations along travel corridors in the ZEV states, including heavily traveled interstate and state highway corridors, federally designated National Alternative Fuel Corridors, and destination corridors;
- Focus on filling gaps along travel corridors in the ZEV states and decreasing the distance between existing charging stations to not more than 50 miles;
- Prioritize travel corridors, in consultation with individual ZEV states, taking advantage of available tools, research and plans that will help to inform Electrify America's investment decisions;
- Consider a site design that includes battery storage, especially in locations that may not have electrical capacity or may face high demand charges, and powering stations with renewable energy where it is cost effective; and
- Look for opportunities to provide charging for zero emission medium- and heavy-duty vehicles along travel corridors.

❖ **Electrify America should invest in community charging hubs serving EV drivers without home charging.**

While most charging occurs at home because it provides unparalleled convenience, EV drivers without the option to charge at home must rely on workplace charging and public charging options. Providing convenient access to charging options for people who are not able to charge at home is an important step toward increasing access to ZEVs beyond early adopters who primarily live in single-family homes with off-street parking.

According to the U.S. Census Bureau, 28 percent of the total housing units in the U.S. are in multi-unit dwellings (MUDs) with two or more units. The percentage is even greater in densely populated urban areas. While providing charging options to MUD residents is extremely important to expanding consumer EV adoption, installation of charging stations at existing MUDs presents many challenges. High up-front retrofit costs for upgrades to electrical infrastructure, wiring, and trenching present a substantial barrier. Also, some MUDs and single-family homes do not have off-street parking options, making home charging impossible.

For these reasons, the ZEV Task Force recommends that Electrify America:

- Invest heavily in community charging hubs to support EV drivers living in MUDs and in single-family homes without off-street parking or home charging; and
- Conveniently locate charging hubs that offer both DC fast charging and Level 2 charging to provide EV drivers with a variety of overnight and daytime charging options.

❖ Electrify America should invest in community charging hubs to support electrification of TNC and taxi fleets.

The use of ride-hailing services offered by TNCs, such as Uber and Lyft, has grown dramatically in the last five years, and steep growth is projected to continue. A key concern with ride-hailing is that it generates more pollution than the trips it displaces due largely to the miles that ride-hailing vehicles travel without passengers between hired rides. Electrifying ride-haling services will enable reductions in transportation-sector greenhouse gas emissions, while also increasing utilization of infrastructure investments and building consumer demand by greatly increasing exposure to ZEVs.

Electric taxis and TNCs offering ridesharing and ride-hailing services present an excellent opportunity to introduce consumers to driving electric. Equally important is the opportunity to broaden access to the benefits of electrification among TNC drivers and residents from diverse urban communities. In order to realize these benefits, however, efforts to electrify TNC vehicles and taxi fleets must be closely coordinated with plans to deploy DC fast chargers to serve TNC and taxi drivers, especially at airports and train stations and at strategically located charging hubs in and around metropolitan areas.

Therefore, during Cycle 3, the ZEV Task Force recommends that Electrify America:

- Invest in community charging hubs that serve electric taxi fleets and TNC drivers using EVs;
- Offer DC fast charging and Level 2 charging, as appropriate, at charging hubs to provide electric taxi and TNC drivers with a variety of overnight and daytime charging options; and
- Strategically place community charging hubs along travel corridors, at airports and train stations, and other places that will help to accelerate electrification of TNCs and taxi fleets.

3. *Electrify America should invest in brand-neutral education and projects to increase access to ZEVs.*

Consumer awareness remains a key barrier to the expansion of the EV market. Numerous studies and surveys indicate that many consumers are still not familiar enough with EVs to consider one for their next car. Electrify America's Cycle 3 investments provide an important opportunity to push the market forward in a meaningful way. Given the significant effort put forth in the ZEV states to advance the market for ZEVs, investments to increase consumer awareness in the ZEV states are likely to have greater and more immediate impact on market growth than in other parts of the country. Moreover, by leveraging existing consumer outreach investments in the ZEV states, Electrify America can stretch its dollars further and achieve concrete and measurable results.

Therefore, during Cycle 3, the ZEV Task Force urges Electrify America to:

- Support and expand the reach of existing outreach and education efforts by investing Cycle 3 funds in the brand-neutral *Drive Change. Drive Electric.* campaign, which advances consumer awareness, understanding, and acceptance of electric cars in the Northeast, and the campaign's new program, *Destination Electric*, which partners with EV-friendly businesses to bring attention to the growing number of charging stations in the region;
- Support innovative state, local, and grassroots efforts to increase consumer experience with EVs, such as ride-and-drives in different settings (e.g., downtowns, large workplaces, MUDs, etc.), electric car sharing and rental programs, and pop-up or permanent EV showrooms;
- Explore how TNC drivers could serve as EV ambassadors and develop supporting materials;
- Invest in projects to expand access to ZEVs in low- and moderate-income communities, such as electric car-sharing programs, MUD charging, subsidized electric TNC rides, targeted education and outreach, and workforce training programs related to installing and maintaining charging infrastructure; and
- Review its Green Cities investments for examples of successful projects in California that could be replicated in other ZEV states.

The multi-state ZEV Task Force appreciates the opportunity to provide input on Electrify America's Cycle 3 planning efforts through these recommendations. Please feel free to contact NESCAUM with any questions or requests for additional information.