



October 8, 2018

Steve Hagel  
Deputy Director, Office of Air  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087

RE: Draft Beneficiary Mitigation Plan for Texas

Dear Steve,

Greenlots appreciates the opportunity to provide the Texas Council of Environmental Quality (TCEQ) with comments on the Draft Beneficiary Mitigation Plan for Texas and recommendations for funds disbursement.

Greenlots is a leading provider of electric vehicle (EV) charging software and services, and our smart charging solutions help site hosts and utilities manage dynamic EV charging loads. We leverage numerous partnerships to achieve successful charging solutions, including supporting a significant percentage of the DC fast charging infrastructure in North America and an increasing percentage of the Level 2 infrastructure. Our network supports Electrify America's growing nationwide fast charging network, which will provide EV drivers with fast charging options throughout Texas. We are ready to collaborate with Texas-based partners to create EV charging solutions.

**1 - Greenlots supports TCEQ's allocation of the full 15% toward light-duty EV charging.** The utilization of the maximum amount of funds toward public EV charging infrastructure can help give drivers the confidence they need to travel throughout the state and region. Public investments, such as through the Trust or utility-funded programs, are the primary means to create non-proprietary charging systems that can serve vehicles of all makes and models, and accommodate all Texas EV drivers. To create an ideal consumer experience, a network of stations should be responsive, accessible, and connected on an open charging platform.

1A – Focus on open standards to build out EV charging networks. An open standards-based charging software (such as Open Charge Point Protocol v1.6)<sup>1</sup>, which is the foundation for Electrify America's fast charging network and those of many utilities, is vital to minimize the likelihood of stranded assets. Open standards future-proofs both software-hardware communications and infrastructure interoperability. This approach is also critical to help protect ratepayers from poor investments.

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<sup>1</sup> Greenlots. 2018. Open Standards Based Networks White Paper. [https://greenlots.com/wp-content/uploads/2018/08/open-standards\\_white-paper\\_05.pdf](https://greenlots.com/wp-content/uploads/2018/08/open-standards_white-paper_05.pdf)

1B – Build out a streamlined EV driving experience along corridors using an infrastructure needs assessment. TCEQ should develop a statewide infrastructure needs assessment, and prioritize locations for infrastructure deployment. This approach can help ensure more adequate statewide coverage of charging infrastructure, and that appropriate site hosts are vetted and considered. The assessment can evaluate the efficacy of existing charging infrastructure to meet driver needs, and potentially replace infrastructure that has fallen into disrepair. An assessment can enable TCEQ to proactively lead this infrastructure effort, rather than just waiting to see what types of site hosts apply. Starting with a vision for a strategic network can help best meet the state’s objectives for EV adoption and create a positive EV driver experience.

Trust funds should be used to build a robust network of DC fast chargers, which provide drivers with a quick charge and should be focused on most traveled routes, facilitating travel and providing foundation for accessing EV charging where residential charging is lacking or not feasible. This can help create a backbone for EV charging, which can be augmented in the future as adoption scales. Cities like San Antonio, Dallas, Houston, Austin, and Waco could serve as hubs, prioritized for near-term Trust investments. Utilities would also be less sensitive to the financial pressures associated with owning and operating EV infrastructure, and better prepared for long-term stewardship of the sites and equipment. Fast chargers can supplement Level 2 charging at workplaces and multi-unit dwellings, or other locations suitable for long dwell times.

1C – Ensure all aspects of EV charging costs are covered to the maximum allowable. Acceptable costs should *at a minimum* include the following: site identification, hardware and software, installation, equipment warranty, and operations and maintenance. It is important that costs are covered to the maximum extent allowable – not the 50% currently proposed – to ensure that the equipment is serviced and operational for the lifetime of the infrastructure. For an EV driver or those considering an EV purchase or lease, it is important to have confidence in the reliability of public charging infrastructure; Trust funds can be used to help reassure EV drivers.

**2 – For the remaining funds, Greenlots supports increased electrification of Texas’s heavy-duty sector.** We strongly encourage Texas to take a step forward and develop a 21<sup>st</sup> Century mobility system. The Trust represents an unparalleled opportunity to transform the way goods and people move through the state, and particularly to address NAAQS compliance. TCEQ should consider funding electrification of transit buses, school buses, freight trucks, and other vehicles, including port cargo equipment. Electrifying Texas’s heavy-duty sector will not only provide cleaner air for residents and visitors alike, but locally produced electricity will support more jobs that can be sustained well into the future, and keep hard-earned dollars in the state.<sup>2</sup>

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<sup>2</sup> NRDC. 2017. America’s Clean Energy Frontier. <https://www.nrdc.org/sites/default/files/americas-clean-energy-frontier-report.pdf>

2A – Evaluate proposals for the heavy-duty sector based on total cost of ownership. The remainder of Trust funds should be allocated based on the vehicle’s total cost of ownership, rather than just upfront costs. This adequately incorporates not just changes in available technology, but also long-term pollution and fuel costs associated with operations and maintenance of equipment – and the prolonged NOx emissions exposures that the Trust program is designed to mitigate. Research from McKinsey shows that while electric transit, shuttle, and school buses have higher up-front costs, they have reduced fuel and maintenance costs, a longer vehicle lifespan, greater potential to reduce criteria air pollutants and greenhouse gases, and provide health benefits for port workers, schoolchildren, and community members.<sup>3</sup>

2B – Build a clean energy economy for all Texans. The economic savings through electrification of the heavy-duty sector can reverberate throughout the local economy, including health care savings, local job creation, and investment in locally sourced electricity. By investing in technologies that will provide for Texas’s future growth, TCEQ can further advance priorities for environmental justice and disadvantaged communities. Furthermore, electrification of transport can help enable NAAQS compliance – paving the way for greater economic opportunities in Texas.

Thank you for your consideration. Greenlots will be available as a resource to TCEQ through the finalization and implementation of the Plan. Please do not hesitate to contact us should you have any questions.

Sincerely,



Thomas Ashley  
Vice President, Policy



Ashley Horvat  
Vice President, Public & Private Partnerships

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<sup>3</sup> McKinsey. 2017. What’s sparking electric-vehicle adoption in the truck industry?  
<https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/whats-sparking-electric-vehicle-adoption-in-the-truck-industry>