

Freight & Goods Delivery Electrification Pilot Program

Growing Interest in Electrifying Freight

Following our deep and ongoing engagement with stakeholders throughout the EV supply chain, [Securing America's Future Energy](#) (SAFE) and the [Electrification Coalition](#) (EC) believe there is near-term interest from commercial vehicle operators, such as delivery and logistics companies, in medium- and heavy-duty EVs (MHDEVs). As the proliferation of e-commerce continues to increase the demand for their services, these companies are beginning to seriously evaluate the potential for integrating MHDEVs into their fleets.

Despite great interest from industry to conduct advanced-stage pilots or expand deployment, these vehicles are not yet being produced (especially in the United States) at the scale or pace necessary—and with the quality and reliability—to meet companies' needs. The 2020s will be a crucial decade for EV technology maturation, but adoption patterns will largely determine how quickly the nation can reduce its oil dependence and associated emissions. Any strategy to achieve our goal of reduced oil dependence should include, and perhaps focus on, the movement of goods from freight vehicles to last-mile delivery.

Two-Year Pilot Program

SAFE and the EC are launching a two-year initiative to develop a commercial freight and delivery goods pilot program that helps companies overcome real-world challenges. The first year will focus on developing a thorough understanding of the challenges to adoption, as well as selecting corporate partner(s) and other stakeholders to create a public program launch in year two.

Another option would be to partner with companies that have already made commitments and are willing to broaden the program and publicly share lessons learned. After the program is publicly launched in year two, we will work closely with the corporate partner(s) and other stakeholders to evaluate and document what it would take to scale the program and integrate additional EVs.

Year One - Program Development

SAFE will deploy the EC to utilize our network to define the best partners and location to launch a pilot program. This will include conducting a "Freight and Goods Delivery EV Listening Tour" within the first three months of the pilot. Following the EV Listening Tour, we hope to have a narrowly defined target list and an understanding of the timelines companies may have for existing or new freight electrification projects and key policy opportunities. Through this process, we will also look to join existing efforts while prioritizing fleets with the largest number of vehicles.

Within the first six months, we expect to host a roundtable event with top industry participants to broaden our learning and to define the opportunities and challenges for a pilot. We also plan to publish learnings from the roundtable in issue briefs that can be shared with stakeholders across the country.

In Year One, we will research existing electrification finance and leasing options that can reduce the upfront cost of purchasing vehicles. Presenting financing and leasing options will help reduce some of the perceived financial risks associated with vehicle electrification, and may encourage logistics companies and smaller fleets to

consider participating in the pilot program. It will be important to identify an initial location that has favorable purchasing incentives, appropriate routes, or other market factors that can reduce the barriers and risks. We will identify a program coordinator with significant fleet electrification experience for this effort.

Within the first six months of the pilot program, we plan to thoroughly assess the top options for pilot locations. The degree of involvement from local and state government, air quality agencies, utility companies, and industry leaders will influence pilot locations. After the initial location is selected, we will begin to convene local pilot partners and stakeholders to create a memorandum of understanding (MOU) and start the process to develop a shared implementation plan and goals. After the implementation plan has been finalized, we will begin an operational analysis to update new operating costs for the fleet partner(s) and confirm the best routes to define the most appropriate vehicles for the pilot. It is important to ensure that an order for vehicles is placed soon after the six-month mark to allow time for vehicle delivery.

The EC will coordinate an infrastructure deployment plan and conduct a risk analysis on the costs and impacts of installing the necessary charging infrastructure. Within the first 12 months, and after resolving any outstanding issues, we will then proceed with the initial infrastructure installation.

Project work teams for infrastructure development, vehicle procurement, stakeholder coordination, communications, and policy support will be created. They will be led by SAFE/EC staff and include the local stakeholders, so that there is shared ownership over the pilot.

Year Two - Fleet Deployment and Documentation

Vehicle procurement can take approximately nine to twelve months, which translates in vehicle delivery toward the beginning of year two. If possible, vehicle procurement should start in year one to avoid any delays. Upon vehicle delivery, training for all deployment partners and the respective staff members will occur. The EC will define the metrics and data sources that should be collected once the pilot begins.

SAFE, with EC support, will begin exploring opportunities to expand the pilot program by securing additional funding support. We have already identified several local, state, and federal grants that we expect to apply for, including the EPA's Targeted Airshed Grant Program, which has been used in the past to support freight electrification.

Following delivery of the vehicles, we expect to host a public launch event for the pilot program. This event will be a critical component of our strategy to educate the public, policymakers, and future corporate partner targets on the importance of freight electrification. After the vehicles are placed into service, we will address any programmatic challenges, collect data from the initial pilot, generate content for continued media coverage, and lead the overall pilot coordination. We will also engage the fleet owner and corporate partners to discuss the possibility of expanding the pilot program to include additional electrification options.

As we reach the end of the grant period, we may document the experience and create case studies to be shared with other advocates, state and regional policymakers, including the PUCs, and industry including other commercial fleets, vehicle lease companies, utilities etc.

Expected Barriers

Our initial discussions on freight electrification with leading OEMs and logistics companies have already enabled us to expect several barriers to widespread adoption, briefly described below. We believe it will be beneficial to industry to author and produce a series of short papers or articles that explain the challenges we experience

throughout our pilot program. These will provide an opportunity to report on our progress, and define the obstacles and solutions to these challenges. Expected challenges include:

1. Vehicle Availability
2. Initial Purchase Price
3. Infrastructure Development
4. Tariff Structures
5. Power Outages
6. Electrifying the Last Mile

Beyond the first two years, we envision that freight will be an integral part of our electrification efforts, and this initiative will ultimately guide our vision for an electrified freight ecosystem, inclusive of everything from long-haul trucks to urban delivery vehicles to last-mile bots.

SAFE and the EC believe that the electrification of freight and goods delivery will play an integral role in reducing the economic and national security dangers posed by oil dependence, but widespread adoption will take decades to achieve unless supportive policies are implemented and lessons learned from early deployment projects can be widely shared. We have an extensive track record of effective on-the-ground deployment initiatives and in producing insightful policy reports with well-thought out policy recommendations. This experience makes our organizations well positioned to lead a two-year initiative that will broaden the scope of an electrified transportation system, inclusive of freight and goods delivery vehicles.