

SUSTAINABLE LAST-MILE DELIVERY IN DENSE METROS

Summary

Sustainable Last-Mile Delivery in Dense Metros will deploy and demonstrate sustainable methods of last-mile delivery using electric heavy-duty, automotive grade cargo bikes, paired with maritime middle-mile transportation, to create a model that can be scaled throughout New York City and replicated in other large cities to reduce traffic emissions and congestion caused by dramatic increases in last-mile delivery and e-commerce.

Project Goals

Develop Sustainable Delivery Model: The project will deploy new electric cargo bike technology in New York City to demonstrate how leading last-mile delivery companies can adopt this mode of transport to develop a safe, reliable, cost effective, and sustainable delivery model for beverages, produce, and other types of heavy cargo in highly congested urban areas.

Reduce Truck Trips and Vehicle Miles Traveled: Replacing trucks with electric cargo bikes on delivery routes will directly offset truck miles traveled and achieve last-mile decarbonization. The project seeks to mature the operations and business model to demonstrate that electric cargo bikes paired with middle-mile maritime solutions can replace existing truck trips to South Street Seaport and Governors Island and deliver similar results for other leading last-mile delivery companies operating in Lower Manhattan and throughout New York City.

Create Jobs in Environmental Justice Communities: The project seeks to demonstrate that electric cargo bikes can create a new category of delivery and logistics jobs. Jobs will be created for delivery drivers and maintenance technicians, with a focus on providing pathways to skilled employment opportunities for residents of waterfront Environmental Justice communities. Additionally, the project will develop a comprehensive curriculum to train individuals in the use and maintenance of electric cargo bikes.

Reduce Environmental Impact: The project will mitigate carbon impacts per delivery unit, reduce vehicular traffic, and minimize local congestion and emissions in a commercially viable manner. The pilot will catalyze a modal shift away from trucks to waterborne freight paired with electric cargo bikes, reducing truck congestion impacts and curbing particulate matter (PM 2.5), nitrogen oxides (NOx), sulfur oxide (SOx), and ground-level ozone levels in Environmental Justice communities.



Timeline

Launched in July 2024, the project is structured in three scalable phases to facilitate project adjustments and foster collaboration with partners, ensuring successful implementation. Over the course of three years, the project will continue to expand the pilot, engage additional public and private stakeholders, and develop best practices for the industry.

Phase 1

Pilot Runs

Pilot runs of the delivery operations servicing Governors Island customers. Governors Island is a former Coast Guard base reimagined as a National Monument and public park. The island's over 150 acres are open to the public and are home to multiple food and beverage operations, all of which receive deliveries via truck ferry dispatched from the Battery Maritime Building in Lower Manhattan.

Phase 2

Expansion

Expand the cargo bike service area to include the South Street Seaport district and adjacent neighborhoods in Lower Manhattan. This area is a designated historic district and home to numerous bars and restaurants. The project team will make any necessary adjustments from Phase 1 based on lessons learned and partner feedback.

Phase 3

Scaling Up

Scaling the project will involve planning and targeted outreach to expand partnerships, funding, and delivery routes throughout New York City. During this phase, the project team will also develop best practices and share lessons learned with other cities across the country.

Project Team



Partners

Manhattan Beer Distributors, The Trust for Governors Island, Greater Hunts Point Economic Development Corporation, Trucking Association of New York, and more!

This material is based upon work supported by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under the Vehicle Technologies Office (VTO) Award Number DE-EE0011134.