

Net-Zero Farming and Freight Facility Demonstration Project

Through this project, five zero emission, all electric battery class 7 trucks with all-electric transport refrigeration units (eTRUs) will be delivered to the main demonstration site, Moonlight Companies in Reedley, California. The eTRUs will operate 100 percent of the time within a Disadvantaged Community based on CalEnviroScreen 3.0. Project Clean Air, Inc., as the lead applicant, has partnered with HummingbirdEV, Moonlight Companies, Volta Air, TechTruth Consulting to create the Net-Zero Farming and Freight Facility Demonstration Project.



**PROJECT
CLEAN
AIR**

The Net-Zero Farming and Freight Facility Demonstration Project has been conceived and developed by all of these partners with a great amount of support from the agriculture industry, public health officials, educators and clean air advocates. The project partners have a great amount of advanced technology experience to oversee and ensure the success of this demonstration. Each of the project partners are taking a leading role in providing replicable clean advanced technology medium- and heavy-duty trucks that can have immediate positive impacts through adoption by agricultural freight movement throughout California's Central Valley.

Dates: March 2019 – Fall 2021
Grantee: Project Clean Air, Inc.
Partners: HummingbirdEV, Moonlight Companies, Volta Air and TechTruth Consulting

Grant Amount:
CARB Contribution: \$3,283,735
Matching Funds: \$3,283,735
Project Total: \$6,567,470



Vehicles/Equipment Funded

The Demonstrated Technologies include the electrification of class 7 trucks and TRUs.

- Five Class 7 single trucks will be designed & developed as full battery electric for Ag Fruit Freight Transport
- Five TRU boxes will be purpose-built as battery electric eTRUs specifically for Fruit Transport between packing and cold storage warehouse facilities.
- Each Class 7 eTruck will receive an eTRU with Solar to serve as a complete zero-emission refrigerated transport unit truck to serve the "First 5 to 15 miles" of agriculture freight movement to market.

The Project Goals Include

- Customize, manufacture, and deploy five all-electric class 7, single vehicle 3-axle, trucks rated to 54,000 GVWR and eTRUs.
- Demonstrate the functionality and GHG Emissions Reductions of the electric fleet, specifically in Disadvantaged Communities
- Create a market for all-electric heavy-duty TRUs in the agriculture and freight industries by improving existing technology.

Status Updates

- Contract kick-off was in May 2019
- Design and Development of Electric Drive System, Engineering of Cab/Chassis, plus zero emission TRUs.
- First cab & chassis completed by Fall 2020
- Field Testing Winter 2021 through Summer 2021



VOLTA AIR

**TECHTRUTH
CONSULTING**

March 2020