



Zero- and Near Zero-Emission Freight Facilities Project: Next Generation Fuel Cell Delivery Van Deployment

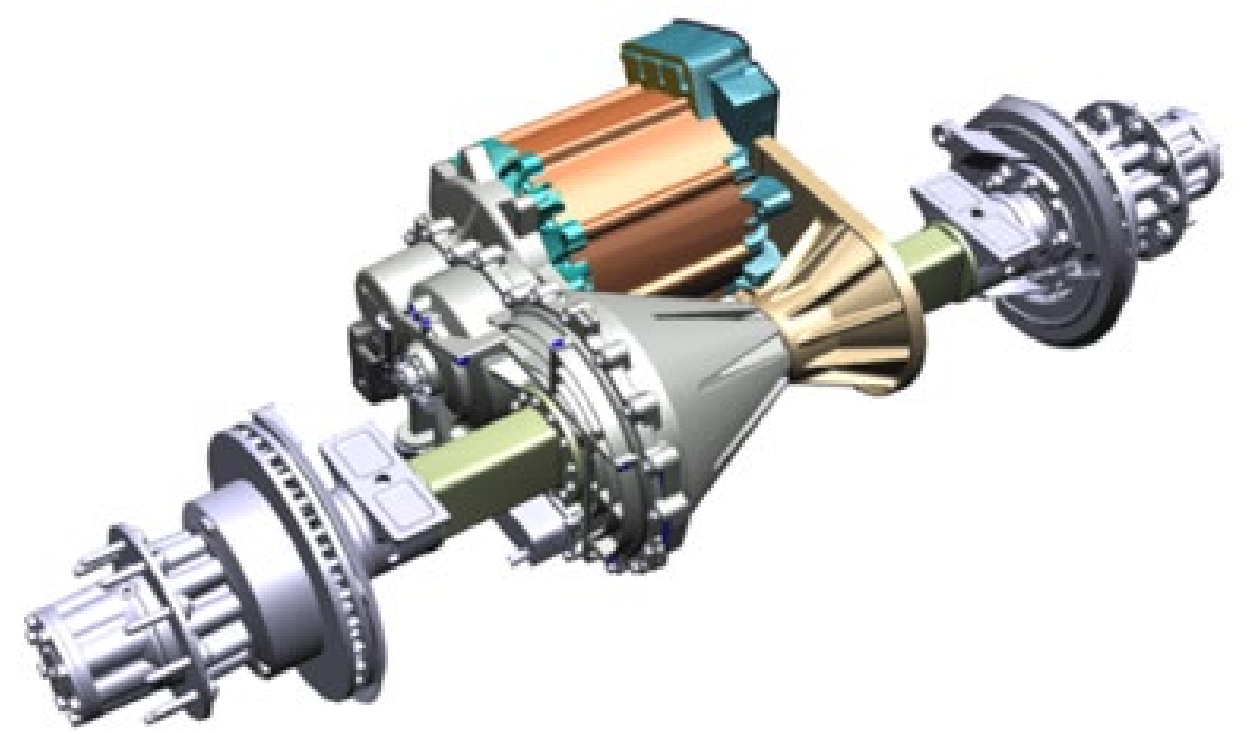
The project team, led by Center for Transportation and the Environment (CTE), will build and demonstrate four fuel cell hybrid-electric walk-in delivery vans featuring Linamar's new Gen 2.0 eAxle design. The objective of this project is to promote future commercialization of fuel cell vehicles that will significantly transform the parcel delivery market while achieving greenhouse gas, criteria pollutant, and toxic emission reduction. The demonstration will generate performance data that will be analyzed to determine the project's effectiveness in meeting its objectives.



The fuel cell hybrid electric propulsion system will be integrated into new Ford F-59 chassis by Linamar Corporation; Ballard Power Systems will supply each of the HD85 (85-kW) fuel cell engines; and hydrogen fuel will be provided at a fueling station local to UPS's customer center in Ontario, CA, where the each vehicle will be demonstrated in regular UPS delivery service for one year.

Dates: 02/07/2019– Spring 2021
Grantee: CTE
Partners: Linamar Corporation,
Ballard Power Systems,
United Parcel Service (UPS)

Grant Amount:
CARB Contribution: \$5,831,866
Matching Funds: \$5,838,236
Project Total: \$11,670,102



Vehicles/Equipment Funded

Under the Zero- and Near Zero-Emission Freight Facilities Project grant, CARB will be funding the following equipment:

- Four (4) fuel cell hybrid electric delivery vans integrated by Linamar Corporation.
- Four (4) "HD30" 30-kW fuel cell engines developed and built by Ballard Power Systems.

This equipment will be delivered to and operated at the UPS Customer Service facility in Ontario, CA, where they will be demonstrated for one year in regular parcel delivery service.

Lessons Learned

- The project team is excited to assess the commercial viability of these technologies and share lessons learned with CARB over the course of the program.

Status Updates

- This project was kicked off on March 15th, 2019 at CARB in Sacramento, CA.
- The project team is beginning their design reviews and manufacturing plan development.
- The four delivery van chassis are on order and expected to arrive in 3Q2019.



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