Fuel Cell Electric Bus Commercialization Consortium (FCEBCC) Project

In order to realize near- and long-term commercialization goals and to establish fuel cell electric buses as an industry standard, the unit cost of the buses will have to decrease significantly and more transit agencies will have to deploy these vehicles in revenue service. The FCEBCC is addressing these challenges by building 20 fuel cell electric buses through an industry collaboration between New Flyer and Ballard Power Systems for deployment at AC Transit and OCTA. Messer, LLC, Trillium and Air Products are providing the reliable hydrogen fuel supply and fueling technology capable of meeting the demands of the transit industry.

cte
25th Anniversary
1993-2018

CTE is relying on its experience with research, development, demonstration, and deployment projects that has helped bridge the gap to commercialization for zero-emission buses, to lead the team which also includes Transworld Associates and Fiedler Group. Bay Area Air Quality Management District and South Coast AQMD are providing match share funding for the buses.

Dates: 02/01/2017 – Summer 2020
Grantee: Center for Transportation and the Environment
Partners: AC Transit, OCTA, New Flyer, Ballard Power Systems, Messer, Trillium, Air Products, TWA, Fiedler Group, BAAQMD, and SCAQMD

Grant Amount:

CARB Contribution:	$22,347,502
Matching Funds:	$23,152,357
Project Total:	$45,499,859

Vehicles/Equipment Funded

Funding from CARB, BAAQMD, SCAQMD, AC Transit, and OCTA supports the build and deployment of both buses, fueling infrastructure, facility upgrades at OCTA to safely work on hydrogen-fueled buses, and Project Management.

- 10 New Flyer fuel cell electric buses for AC Transit.
- 10 New Flyer fuel cell electric buses for OCTA.

Infrastructure to support the project includes installation of a new station and upgrades to an existing station.

- Messer, LLC is upgrading AC Transit's Emeryville and Oakland hydrogen fueling stations to serve 30 buses or more per day.
- Trillium and Air Products have designed and installed a new hydrogen station at OCTA's Santa Ana base to fuel as many as 50 buses per day.
- Fiedler Group is leading efforts to upgrade OCTA's Santa Ana base to support service and maintenance of fuel cell buses and hydrogen fueling.

Lessons Learned

- Schedule sufficient time to work through vehicle specifications and execute procurement contracts
- Acceptance testing by transit agencies for a new technology bus takes months, not weeks
- Closely coordinate the design, specifications, and timing of vehicles, fueling stations, and facility upgrades for gas detection and ventilation systems. All three project components need to be operational in order to deploy buses in passenger service

Status Updates

- OCTA Station operational and filling buses as of January 2020.
- AC Transit Station operational and filling buses as of January 2020.
- All 20 buses accepted and deployed in service February 2020

AC Transit · New Flyer · Trillium · Messer · Bay Area Air Quality Management District · OCTA · Ballard · Air Products · Transworld Associates LLC · fiedlergroup Design & Engineering · South Coast AQMD

March 2020