The SunLine Fuel Cell Buses & Hydrogen Onsite Regeneration Fueling Station Pilot Commercial Deployment Project will deploy five new 40-foot fuel cell electric transit buses (FCEBs) in daily service on two regular service routes in the Coachella Valley. The project also includes upgrading SunLine’s existing hydrogen refueling station with a new electrolyzer hydrogen production plant, supporting compression and storage equipment, and two 350-bar fueling dispensers. The station will have a total fueling capacity of 900 kg/day. Data will be collected and analyzed for both the station and buses for the period of operation.

SunLine is a leader in zero-emission bus technology, and shares knowledge with other transit agencies through the West Coast Center of Excellence in Zero Emission Technology. The five New Flyer XHE40 Xcelsior® FCEBs will expand SunLine’s fleet of zero emission buses to a total of fifteen FCEBs plus four BEBs.

**Dates:** 02/09/2017 – Spring 2020  
**Grantee:** SunLine Transit Agency  
**Partners:** New Flyer Industries  
Nel Hydrogen Inc.  
Zen Clean Energy Solutions

**Grant Amount:**  
CARB Contribution: $12,586,791  
Matching Funds: $5,214,619  
Project Total: $17,801,410

**Vehicles/Equipment Funded**  
New Flyer Xcelsior® XHE40 Buses  
- Hydrogen-powered 40’ fuel cell electric buses.  
- Powered by Ballard FCveloCity-HD 85 kilowatt modules.  
- Based on standard Xcelsior® CHARGE electric propulsion system.

Nel Hydrogen Production and Fueling Station  
- 900 kg/day capacity.  
- M400 series modular PEM electrolyzer.  
- H2station® modules deliver 350 bar hydrogen.  
- Supplied as complete turnkey solution.

**Lessons Learned**  
- Site civil design and construction costs much higher than budgeted.  
- Utility upgrade costs – new power line to site – costly and time intensive.  
- Bus technology mature, leveraging reliability improvements from previous generations.

**Status Updates**  
- Major fueling station equipment modules complete by November 2018.  
- All five buses delivered to SunLine by January 2019.  
- Site construction started March 2019.