# **Fuel Cell Electric Vehicles**

Adding a fuel cell electric vehicle (FCEV) to your fleet is a great way to reduce your emissions and help advance this technology in the North Coast and Upstate region.

Light-duty vehicles are the most readily available commercial FCEVs, but there are also fuel cell buses and forklifts currently on the market. Medium and heavy-duty vehicles such as semi-trucks, pick-up trucks, and delivery and transit vans are already being road-tested and should become commercially available in the near future.

### Light duty vehicles Honda Clarity

3 year lease includes \$15,000 worth of fuel



#### **Hyundai Nexo**

The next-generation FCEV, replacing the Hyundai Tucson, set for release in 2019.



### **Toyota Mirai**

3 year lease includes \$15,000 worth of fuel



# Transit Buses New Flyer of America

Xcelsior Hydrogen Fuel Cell





#### Forklifts

### Plug Power, Inc.

GenDrive fuel cell power integrates with existing electric forklifts

### **Nuvera Fuel Cells**

Nuvera fuel cells power Hyster-Yale forklifts.



#### **Raymond Corporation**

Applies fuel cells to battery-powered lift trucks.

# **Fuel Cell Electric Vehicle Incentives**

While there are considerable costs and logistical factors to consider, there are also a number of rebates and incentives to reduce the up-front costs of vehicles and fueling station infrastructure.

### Clean Vehicle Rebate Project

Rebates of **\$5,000** - **\$7,000** available to California residents and public fleets that buy or lease a new FCEV. Public fleets located in disadvantaged community census tracts where residents are most impacted by air pollution are eligible for the highest rebate amount. Learn more and check your eligibility <a href="here">here</a>.

### Low and No Emission Bus Grant

The Federal Transit Administration provides competitive funding for the purchase or lease of fuel cell electric vehicles that use advanced technologies for transit revenue operations, including related equipment or facilities. Projects may include costs incidental to the acquisition of buses or to the construction of facilities, such as the costs of related workforce development and training activities, and project administration expenses. Learn more <a href="here">here</a>.

## Hybrid and Zero-Emission Voucher Incentive Project (HVIP)

Point-of-sale discounts for truck and bus purchases, funded by the California Air Resources Board. Nearly **\$120 million** are available in vouchers for zero-emission medium and heavy duty vehicles, as well as Low NOx Engine Incentives. More information can be found <a href="here">here</a>.

# California Energy Commission ARFVTP

The California Energy Commission's Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) invests approximately **\$100 million per year** for projects that help achieve the State's climate policy goals, including hydrogen fueling infrastructure and advanced fleet technologies. Current grant opportunities can be found here.

## AFV and Fueling Infrastructure Grants

The Motor Vehicle Registration Fee Program, administered by the California Air Resources Board, provides funding for Alternative Fuel Vehicle (AFV) and Fueling Infrastructure Grants. These grants help reduce vehicle-related air pollution and are available through local air quality management districts, so contact your air quality management district to learn how to apply for the Carl Moyer Program, TIMBER Grant, VIP Grant, and more.

#### **Insurance Discount**

Farmers Insurance provides a discount on vehicle insurance for Alternative Fuel Vehicles. Find the details here.

### Federal Business Energy Investment Tax Credit

This is a **30% federal tax credit** on renewable energy technology including fuel cells. The maximum rebate for fuel cells is \$1,500 per 0.5 kW. Check with a tax official to verify whether fuel cell vehicles would qualify for this rebate. Details <a href="here">here</a>.

After adding up all the credits, rebates, discounts and financing options, FCEVs become an increasingly pragmatic choice. New incentives pop up all the time, so keep an eye out for the latest deals and give RCEA a call to find out more.

# **FCEV Training Resources**

Below are some resources to help train your staff about how to safely and efficiently use fuel cell electric vehicles. These include resources for a general audience, as well as more technical details for fleet staff who help service and maintain the vehicles.

# California Employment Training Panel (EPT)

Provides funding to employers for employee training that leads to long-term, well paid jobs. Employers determine their own training needs and how it will be provided, then EPT assists with acquiring funding. Programs include Alternative and Renewable Fuel Technology training. Find out more <a href="here">here</a>.

# U.S. Department of Energy Resources

The Department of Energy offers a variety of resources about FCEV technology. The Federal Energy Management Program periodically offers training specific to fleet management. You can register for future courses and check-out past offerings <a href="here">here</a>.

# College Automotive Programs

Local colleges and universities often have technical training and certification courses focused on advanced fuels and vehicle technology. John Frala is the head of the <u>Alternative Fuels Technology program at Rio Hondo College</u> in southern California, and he conducts in-person training around the state. He can be contacted at Office: (562) 908-3433; Direct line: (562) 463-7473; email: jfrala@riohondo.edu

# Training from vehicle manufacturers

Many manufacturers of alternative fuel vehicles offer training for buyers, including technical resources for vehicle maintenance and servicing. Check with local dealers or manufacturers for details.

#### **DISCLAIMER**

RCEA does not recommend any one fuel cell electric vehicle; rather our goal is to see zero emissions vehicle adoption increase in our region. The availability of the above incentives are subject to change, along with the value of each incentive. We suggest checking with each organization to confirm their incentive applies to you and the vehicle you are considering.

Fleet managers will have to engage directly with vehicle manufactures to purchase light duty vehicles listed on this sheet. Manufacturers may be unwilling to sell 1-2 vehicles to a small fleet due to the current lack of hydrogen fueling infrastructure in the California Upstate region. All fleets that want to purchase FCEVs, regardless of size and number of vehicles ordered, will also have to invest in their own fueling infrastructure and consider infrastructure redundancy. For assistance with this process, please contact RCEA.

Funded by the California Energy Commission's Alternative and Renewable Fuels and Vehicle Technology Program, the North Coast and Upstate Fuel Cell Vehicle Readiness Project is being led by the Redwood Coast Energy Authority in partnership with the Shasta Regional Transportation Agency, Mendocino Council of Governments, North Coast Unified Air Quality Management District, Glenn County Air Pollution Control District, Tehama County Air Pollution Control District, Siskiyou Economic Development Council, Local Government Commission, and Schatz Energy Research Center

