

# CALIFORNIA ENERGY COMMISSION

# THE ALTERNATIVE AND RENEWABLE FUEL AND VEHICLE TECHNOLOGY PROGRAM

## 2014 INTEGRATED ENERGY POLICY REPORT UPDATE

The California Energy Commission's *2014 Integrated Energy Policy Report Update* focuses on transportation in light of California's energy and climate goals. The following is a summary of information on the Energy Commission's investments to help spur transformation to a clean, low-carbon transportation energy future.

### **The ARFVTP Is Funding the Fuels and Vehicles Necessary for California's Low Carbon and Zero Emission Future**

The Energy Commission is charged with implementing the ARFVTP, which was created to "[d]evelop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies." The program is funded with up to \$100 million annually. The ARFVTP was created in 2007 under Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007), amended by Assembly Bill 109 the following year (Núñez, Chapter 313, Statutes of 2008), and reauthorized in 2013 by Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013) (AB 8). The reauthorization extended program funding from January 1, 2016 to January 1, 2024. This continuity provides market certainty and investment consistency that is needed to advance the market. The Energy Commission has invested in a portfolio of projects that have the potential to be transformative, consistent

with direction in AB 8 to support advancements "without adopting any one preferred fuel or technology."

California's public policy goals can be achieved more rapidly when government capital is introduced and made available to technology development enterprises. This infusion of government capital can accelerate the transition of technologies because government assumes the risk for investments that private capital markets are not ready to assume. Moreover, the timing of government-funded incentives is important. Because of positive feedback effects, the earlier the investments are made, the bigger the net benefits over time.

### ***Programs Like ARFVTP Are Helping Reduce Transportation Energy Use***

California is committed to transforming the transportation sector to meet greenhouse gas reduction, air quality, and energy security goals. Significant changes are needed in the state's portfolio of transportation fuels and vehicles to achieve these goals. Making incentives available for a portfolio of alternative low-carbon fuels and advanced technologies, leveraging state dollars where possible, and bringing key partners to the table, the ARFVTP remains crucial in accelerating the transformation of the state's transportation sector between now and January 2024, and beyond.

### ***Continually Evaluating Technology Trends and Market Needs***

The program remains flexible by working closely with the public and various stakeholders to understand the needs of Californian's technology innovators and consumers. For example, the annual investment plan of up to \$100 million is developed through a series of public meetings, with the input and expert advice of a stakeholder advisory committee representing a diverse range of interests – including environmental organizations, academic institutions, state agencies, fuel and technology organizations, and other nongovernmental organizations. Throughout the process, stakeholders have multiple opportunities to comment at public meetings or in writing.

### ***The Alternative and Renewable Fuel and Vehicle Technology Program Has Achieved Significant Benefits To Date***

As of December 2014, the ARFVTP invested \$532 million for:

- » More than 470 projects across the State of California that are spurring innovation in zero and near-zero emission vehicle technologies and low carbon fuels
- » 9,369 residential, public, workplace, and DC fast charger charge points across the State, helping build the foundation of an EV charging network for California
- » 48 hydrogen fueling stations, making California a global leader in hydrogen fueling networks
- » 2,725 natural gas trucks, 60 natural gas truck fueling stations, and a total of \$157 million in ARFVTP truck sector-related funding through September 2014

- » 44 low carbon biofuels projects that will culminate in 145 million gallons in new annual production capacity, most of which use waste-based feedstocks
- » Total estimated job creation from ARFVTP projects was 6,400 through July 2013.
- » About \$25 million to help provide training for more than 13,600 individuals, 600 businesses, and 14 municipalities to support all aspects of alternative fuel technologies

The National Renewable Energy Lab assessed 290 of the 470 projects and found:

- » Expected annual greenhouse gas reductions between 3.4 million and 5.3 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>eq) by 2025.
- » Expected annual petroleum reductions between 441 million and 693 million gallons of gasoline/diesel by 2025.
- » Expected annual transportation-related small particulate matter (PM<sub>2.5</sub>) reductions between 2 and 5 tons by 2025.

The current ratio of ARFVTP grant amounts to applicant-furnished match is about \$1.6 to every \$1. For \$482.5 million in ARFVTP capital project grants, total match amount is \$762.3 million.

For more information, please see the 2014 Integrated Energy Policy Report Update, available at [www.energy.ca.gov/2014\\_energy policy/](http://www.energy.ca.gov/2014_energy policy/).

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