



Electrify California

John Kato

Deputy Director

Fuels and Transportation Division

California Energy Commission

August 16, 2017

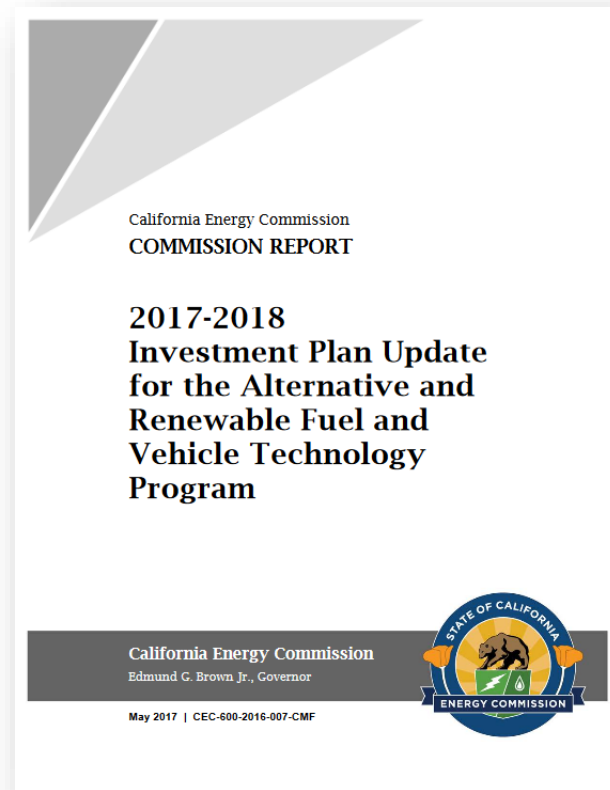
The Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)



Basis for solicitations, agreements,
and other funding opportunities

\$100 million funding allocation for
a portfolio of fuels, technologies,
and supporting elements

Funding allocations for categories
(not individual projects)



ARFVTP Funding As of March 2017



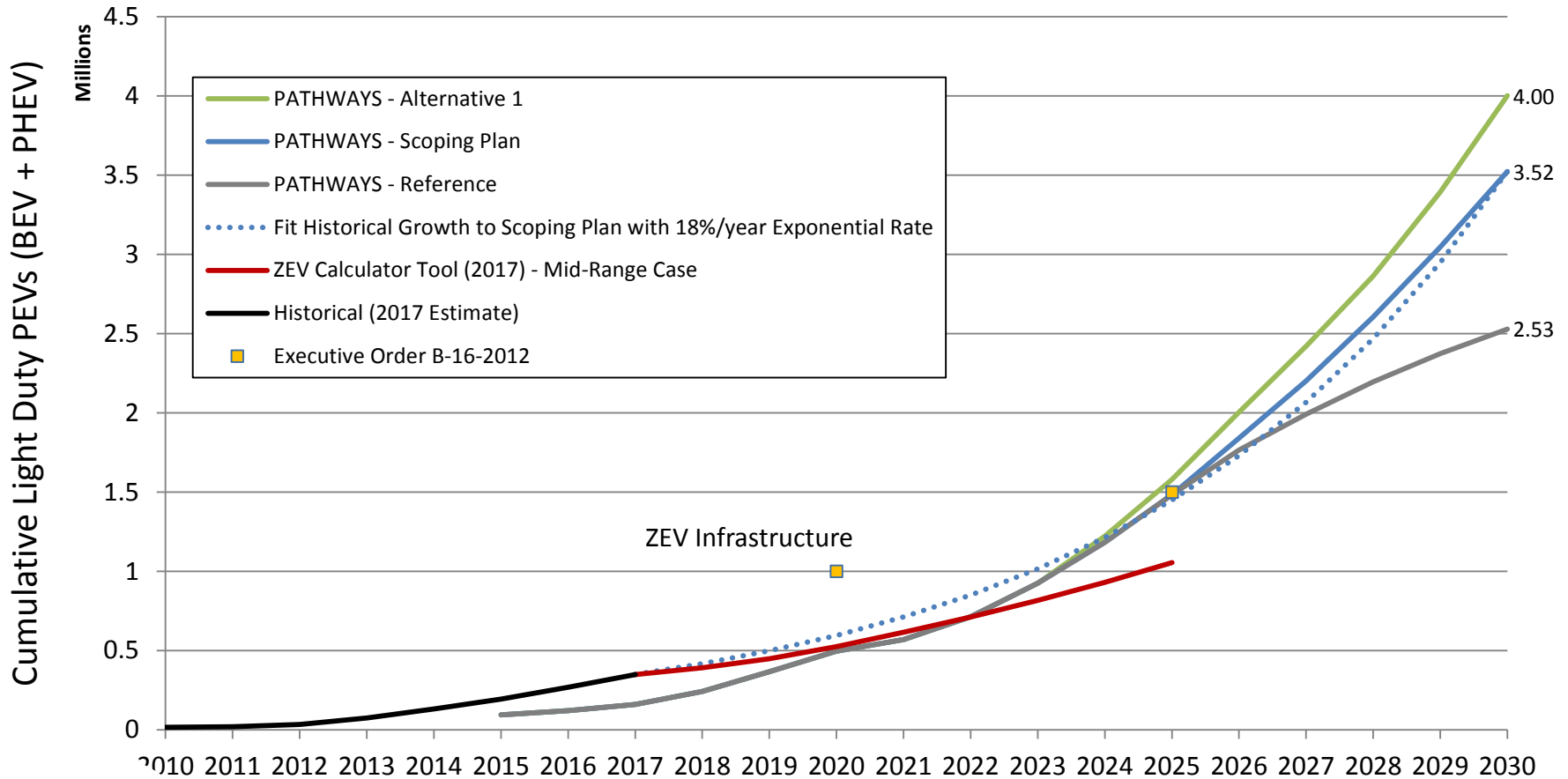
Category	Funded Activity	Cumulative Awards to Date (in millions)*	# of Projects or Units
Alternative Fuel Production	Biomethane Production	\$59.5	20 Projects
	Gasoline Substitutes Production	\$32.4	14 Projects
	Diesel Substitutes Production	\$75.1	25 Projects
Alternative Fuel Infrastructure	Electric Vehicle Charging Infrastructure**	\$80.1	7,796 Charging Stations
	Hydrogen Refueling Infrastructure	\$128.2	64 Fueling Stations
	E85 Fueling Infrastructure	\$13.7	158 Fueling Stations
	Upstream Biodiesel Infrastructure	\$4.0	4 Infrastructure Sites
	Natural Gas Fueling Infrastructure	\$21.9	64 Fueling Stations
Alternative Fuel and Advanced Technology Vehicles	Natural Gas Vehicle Deployment***	\$65.8	3,148 Vehicles
	Propane Vehicle Deployment	\$6.0	514 Trucks
	Light-Duty Electric Vehicle Deployment	\$25.1	10,700 Cars
	Medium- and Heavy-Duty Electric Vehicle Deployment	\$4.0	150 Trucks
	Medium- and Heavy-Duty Vehicle Technology Demonstration and Scale-Up	\$129.4	49 Demonstrations
Related Needs and Opportunities	Manufacturing	\$46.5	21 Manufacturing Projects
	Emerging Opportunities	†	†
	Workforce Training and Development	\$30.7	96 Recipients
	Fuel Standards and Equipment Certification	\$3.9	1 Project
	Sustainability Studies	\$2.1	2 Projects
	Regional Alternative Fuel Readiness and Planning	\$9.0	40 Regional Plans
	Centers for Alternative Fuels	\$5.8	5 Centers
	Technical Assistance and Program Evaluation	\$5.5	n/a
Total		\$748.7	

Source: California Energy Commission. Sum of cumulative awards may not equal total because of rounding. *Includes all agreements that have been approved at an Energy Commission business meeting or are expected for business meeting approval following a notice of proposed award. For canceled and completed projects, includes only funding received from ARFVTP, which may be smaller than initial award. **Includes \$15.3 million for an agreement with the Center for Sustainable Energy to provide EV incentives throughout California, which will fund a yet-to-be-determined number of EV chargers. ***Funding includes both completed and pending vehicle incentives, as well as encumbered funds for future incentives. †Previous awards have been reclassified by project type into other rows.



Installations Must Accelerate to Meet Climate Targets

California Plug-In Electric Vehicle Deployment Scenarios



Evaluating Charging Infrastructure Needs To Support Growing Plug-In EV Population

- Electric Vehicle Infrastructure supply analysis
- Assessing California's travel behavior and demand
- Regional demand for public Level 2 chargers and DC fast chargers.
- EVI-Projections Modeling (“EVI-Pro”)



DC Fast Charging (ARFVTP-Funded)

- 217 sites
- 531 DCFC charging outlets
- 272 Level 2 charging outlets

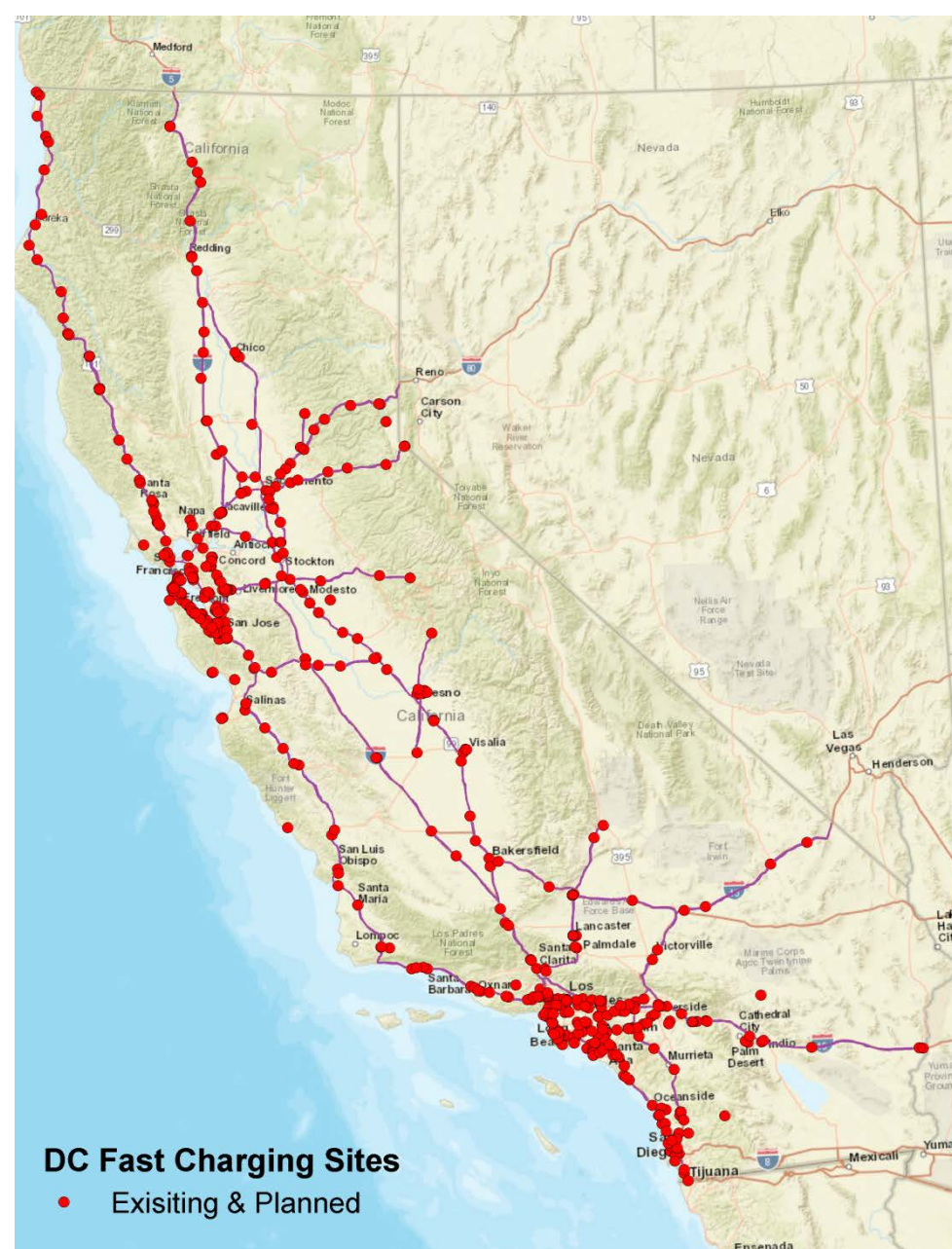
Each site has a minimum of one DCFC connector.



DC Fast Charging (All)

- 481 sites
- 1,349 DCFC charging outlets
- 568 Level 2 charging outlets

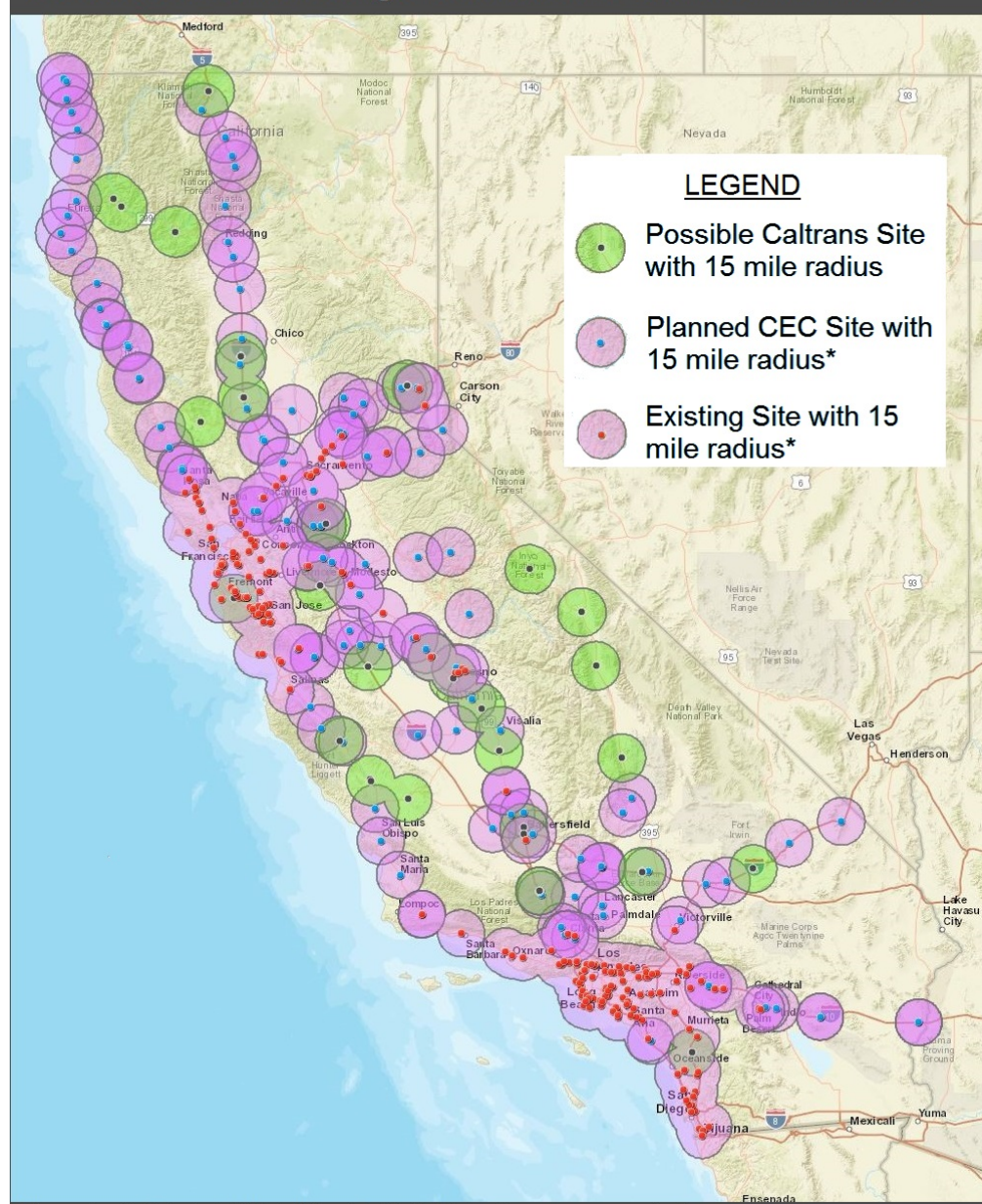
Each site has a minimum of one DCFC connector.



DC Fast Charging with Caltrans Site Overlay

Each DCFC site has a minimum of 1 DC fast charger with 2 charging outlets (CHAdeMO and SAE CCS)

California's DC Fast Charger Network with Possible Caltrans Sites



*These sites include both CHAdeMO and SAE J1772 Combo connector standards.



Roadmapping for 2030 and Beyond

- Deployment Strategic Analysis and Planning
- Streamlined process - Block Grants
- Innovative e-Mobility
 - Holistic approach to electrification based on local needs and changing uses of vehicles.
- Regional Readiness Blueprints
- Collaboration





Thank you

www.energy.ca.gov/transportation/tour/

