



Overview of CPUC Transportation Electrification Activities and Opportunities for Fleet Participation

August 30, 2018





Several CPUC TE Programs Support Charging for Light-Duty Vehicles Which Could Include Fleets

- **Utility Programs - [\\$197 million](#)**
 - 12,500 primarily Level 2 charge ports at workplaces, multi-unit dwellings, and long dwell-time destination centers
- **NRG Settlement - [\\$102.5 million](#)**
 - Over 200 DCFC stations
 - 6,000-10,000 make-ready stubs at workplaces, multi-unit dwellings, and destination centers
 - Car sharing and Technology R&D (V2G, high-power, storage)
- **SB 350 Pilot Programs - [\\$8 million](#)**
 - SCE residential make-ready installation pilot - \$4 million
 - SCE DCFC program pilot - \$4 million
- **SB 350 IOU Infrastructure Programs - [\\$158 million](#)**
 - PG&E DCFC program - \$22 million
 - SDG&E residential program- \$136 million





Fleet Opportunities are Available in IOU SB 350 MD/HD TE Programs

- **SB 350 Medium/Heavy-Duty Infrastructure Programs - \$578 million**
 - SCE - \$342 million
 - PG&E - \$236 million
- **SB 350 Pilot MD/HD Programs - \$27.9 million**
 - Delivery fleets (e.g. UPS, FedEx, etc.)
 - Shuttle buses
 - Port equipment electrification (e.g. yard tractors)
 - Airport ground support equipment
 - School bus electrification and renewable integration
 - Idle reduction technology
 - Transit bus electrification





Utility LCFS Programs Offer Rebates to Customers that Drive EVs

- **CPUC oversees utility participation in the California Low-Carbon Fuel Standard program**
 - California has a statewide cap on the carbon intensity of fuels sold in the state
 - Fuel distributors and providers can earn credits for fuels that have low carbon intensity (CI)
- **Existing IOU LCFS rebate programs**
 - SCE: \$450 rebate (3 diff owners of vehicle)
 - PG&E: \$500 rebate (one time)
 - SDG&E: \$200 annual bill credit





Electric Rates are Critical for Ensuring EVs are Economic to Fuel

- Each of the IOUs currently offer a residential, time-variant EV rate that offers customers the option of charging at very low-cost prices during off-peak hours
- SCE's recently adopted commercial EV time-of-use rates provide a window for fleets to adapt and develop low-cost charging plans





D.18-01-024 Provides Guidance on IOU TNC Proposals

- [Decision 18-01-024](#) rejected 2 IOU proposals to use ratepayer funding to encourage TNC drivers to go electric
 - SCE's driver incentive proposal to provide cash payments for maximizing electric vehicle miles traveled
 - SDG&E's taxi/rideshare proposal to install, own, and operate charging stations in TNC drivers' home garages
- Neither proposal included any financial commitments from TNC companies
- Neither proposal ensured data could be collected from TNC companies
- Neither IOU provided evidence the proposals could be scaled if successful





Additional \$1B Investment Has Been Proposed

- **A.18-01-012**: SDG&E Medium/Heavy Duty Charging Infrastructure Program and Vehicle-to-Grid Electric School Bus Pilot (\$150.6 million as proposed)
- **D.16-01-023**: SCE requesting authorization to spend up to \$22 million more on Phase I of Charge Ready LD infrastructure Program; SCE also directed to file a Phase 2 application for Charge Ready, if warranted from Phase 1 results
- **A.18-06-015**: SCE requesting \$760 million to install up to 48,000 ports at workplaces, destination centers, multi-unit dwellings, and government facilities
- **AB 1082/1083**: 2017 legislation encourages IOUs to propose pilot programs for ZEV infrastructure at schools, state parks, and state beaches
- **A.18-07-021**: Low/Moderate-income EVSE rebate program (~\$4mn)





CPUC Aligns with Other State Agencies for ZEV Action Plan / E.O. B-48-18

- **Counting Stations Effort**
 - Using data collection templates to contribute to list of existing charging stations
- **VGI Roadmap Update**
 - CEC leading update of 2014 VGI Roadmap
 - Working with Gridworks to continue work from 2017 VGI Communication Protocol Working Group
- **Affordability and Rates**
 - Follow-up from ZEV Rates Forum June 7-8
- **Governor's Climate Summit September 12-14**





Overview of CPUC-Regulated Transportation Providers

August 30, 2018





Passenger Stage Corporations (PSCs)

- Fixed route, scheduled service (scheduled bus operators), **or**
- On-call, door-to-door "share-the-ride" service (airport shuttles)
- Provides transportation service to the general public on an **individual fare** basis.





Charter-Party Carriers (TCPs)

- Charters a vehicle, on a prearranged basis, for the exclusive use of an individual or group (limousines, tour buses, etc.)





Transportation Network Companies (TNCs)

Transportation Network Companies (TNCs) provide prearranged transportation services for compensation using an online-enabled application or platform (such as smart phone apps) to connect drivers using their personal vehicles with passengers.





Please Email Us With Any Questions!

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<http://www.cpuc.ca.gov/zev>

<http://www.cpuc.ca.gov/sb350te>

<http://www.cpuc.ca.gov/transportation/>





Appendix



	SDG&E <u>Power Your Drive</u>	SCE <u>Charge Ready</u>	PG&E <u>EV Charge Network</u>
Program Start Date	December 2016 First site operational May 2017	May 27, 2016 First site operational Feb 2017	Expected early 2018
Scope	3,500 charging stations	1,500 charging stations	7,500 charging stations
Budget	\$45M	\$22M	\$130M
Markets	multifamily, workplace	multifamily, workplace, public	multifamily, workplace
Disadvantaged Communities	≥10% charging stations in disadvantaged communities	≥10% charging stations in disadvantaged communities	≥15% charging stations in disadvantaged communities
Charger Ownership	SDG&E	Site host	Site host. PG&E ownership allowed only in multifamily or disadvantaged community up to 35%
Cost to host	Participant Payment	Rebate	Participant Payment or Rebate
Rates	Vehicle-grid integration rate to driver or host	Time-of-use rate to host	Time-of-use rate to driver or host
Regulatory Status	Approved Jan 2016 (CPUC Decision <u>16-01-045</u>)	Approved Jan 2016 (CPUC Decision <u>16-01-023</u>)	Approved Dec 2016 (CPUC Decision <u>16-12-065</u>)

3 Large IOUs Approved SB 350 Projects

	Medium/Heavy Duty Infrastructure	Residential Infrastructure	Offroad Infrastructure	Public DC Fast Charging	Taxi/ Shuttle	Education/ Outreach	
	\$592 Million	\$141 Million	\$13 Million	\$30 Million	\$3.2 Million	\$2.3 Million	
SDG&E	Fleet Delivery Services \$3.7 M	Residential Charging Infrastructure \$137 M	Airport Ground Support Equipment \$2.8 M	Electrify Local Highways \$4 M	Green Shuttle \$3.2 M	Car Dealer Incentives \$1.8 M	Total SDG&E Budget: \$155 M
		Residential Grid Integration Rate	MD/HD and Forklift Port Electrification \$2.4 M				
SCE	Transit Bus Make-Ready & Rebate \$4 M	Residential Make-Ready Rebate \$4 M	Port of Long Beach Gantry Crane \$4 M	Urban DC Fast Charger Clusters \$4 M			Total SCE Budget: \$360 M
	MD/HD Charging Infrastructure \$343 M		Port of Long Beach ITS Terminal Yard Tractor \$0.5 M				
	Commercial EV Rate Design						
	MD/HD Fleet Demonstration \$3.4 M		Idle-Reduction Technology Demonstration \$1.7 M	Fast Charge Infrastructure \$22 M		Home Charger Information \$0.5 M	
	Electric School Bus Renewables Integration \$2.2 M						
	FleetReady Make-Ready Infrastructure \$236 M						

Priority Review
Standard Review
Rate Design Proposals

3 Small IOUs Proposed SB 350 Projects Under CPUC Review

	Public DC Fast Charging	Residential Infrastructure	Commercial Infrastructure	Heavy-Duty Infrastructure	Education & Outreach
	\$4 M	\$1.74 M	\$1.18 M	\$223,000	\$235,000
Bear Valley (\$746,500)		EV TOU Pilot Rate (\$139,000)			
			Destination Make-Ready Rebate (\$607,500)		
Liberty Utilities (\$6.2 M)	DC Fast Charger Project (\$4 million)	Residential Make-Ready Rebate (\$1.6 million)	Small Business Make-Ready Rebate (\$300,000)	EV Bus Infrastructure Program (\$223,000)	Customer Online Resource Project (\$65,000)
PacifiCorp (\$440,000)			Demonstration & Development Grant Program (\$270,000)		Outreach & Education Program (\$170,000)

Priority Review

Standard Review