



# 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

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# 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/sb350te>**

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







# Appendix



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



# 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						
PG&E	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	Total PG&E Budget: \$266 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
<b>Bear Valley</b> (\$746,500)		EV TOU Pilot Rate (\$139,000)			
			Destination Make-Ready Rebate (\$607,500)		
<b>Liberty Utilities</b> (\$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)
<b>PacifiCorp</b> (\$440,000)			Demonstration & Development Grant Program (\$270,000)		Outreach & Education Program (\$170,000)

Priority Review
Standard Review