



SOUTHERN CALIFORNIA
EDISON[®]

Energy for What's Ahead[®]

Southern California Edison Charge Ready Transport

Infrastructure for Electric Transit Fleets

ARB Innovative Clean Transit Workshop



More Than a Century of Service. Focused on The Future.

Transition to a Clean Energy Future

46% 

OF THE ELECTRICITY THAT SCE DELIVERED TO CUSTOMERS CAME FROM CARBON-FREE RESOURCES.
No coal in owned generation or contracts for specified resources.

WE ARE STILL IN 

Edison International joined other U.S. businesses, universities, and state and local leaders in signing an open letter to the international community demonstrating support for the 2015 Paris Climate Agreement.

Operations

50,000 
SQUARE MILES

of SCE service area across coastal, central, and southern California

118,000 

MILES OF DISTRIBUTION & TRANSMISSION LINES

Customers, Communities & Employees

5M+ 

CUSTOMER ACCOUNTS
covering SCE's service area, which has 15 million residents

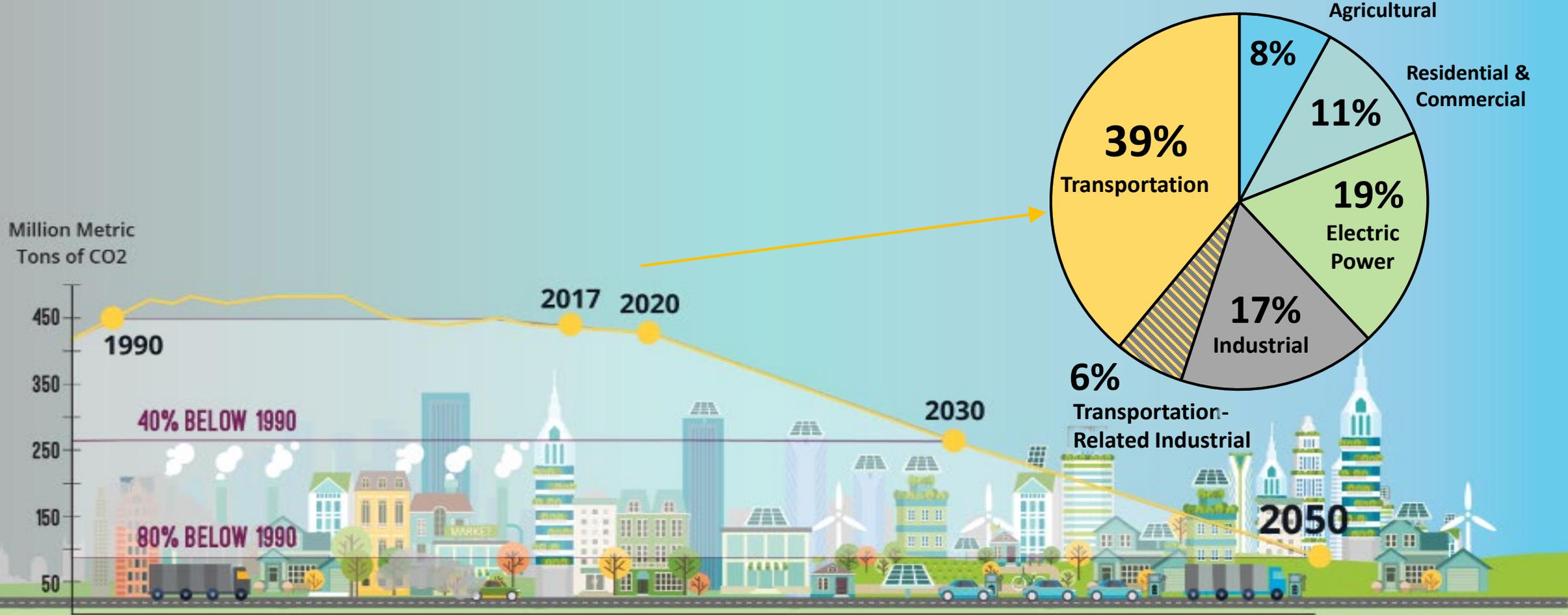
3,574 

SOLAR INSTALLATIONS
connected on average per month

Source: SCE 2017 Sustainability Report

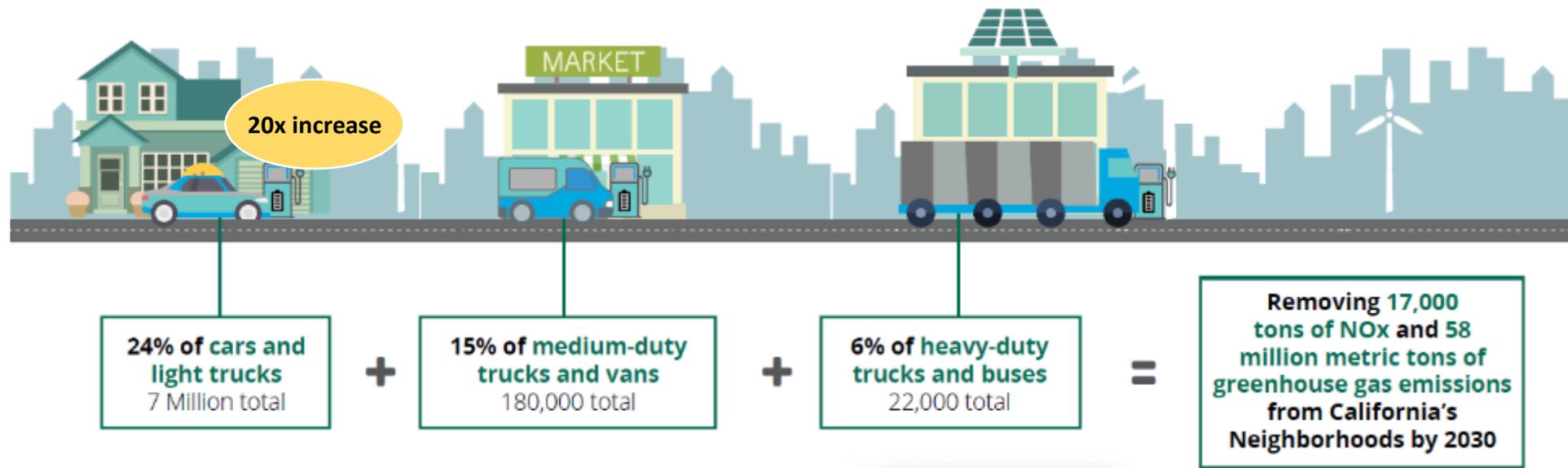


California's GHG Emissions Reductions Goals



If we want to get to **zero emissions**, eventually we have to **replace** many of the things we rely on today that require combustion.

Transportation Electrification Pathway to 2030



*Clean Power and Electrification Pathway
white paper available at:
sce.com/pathwayto2030*



Progress made electrifying transportation

Passenger Vehicles



588,918 EVs registered in CA, 47% of US total.*

Up to \$1,000 rebate per vehicle, including leased & used EVs.

Charging Stations



Installing 1,301 ports at 81 sites through Charge Ready Pilot

Bridge funding – 1,173 ports at 57 sites currently committed

14 DC fast chargers in urban areas

Transit Vehicles



Installing charge ports at three transit agency sites

Port Transportation



Electrifying nine rubber tire gantry cranes

Installing 20 charging stations for yard haulers

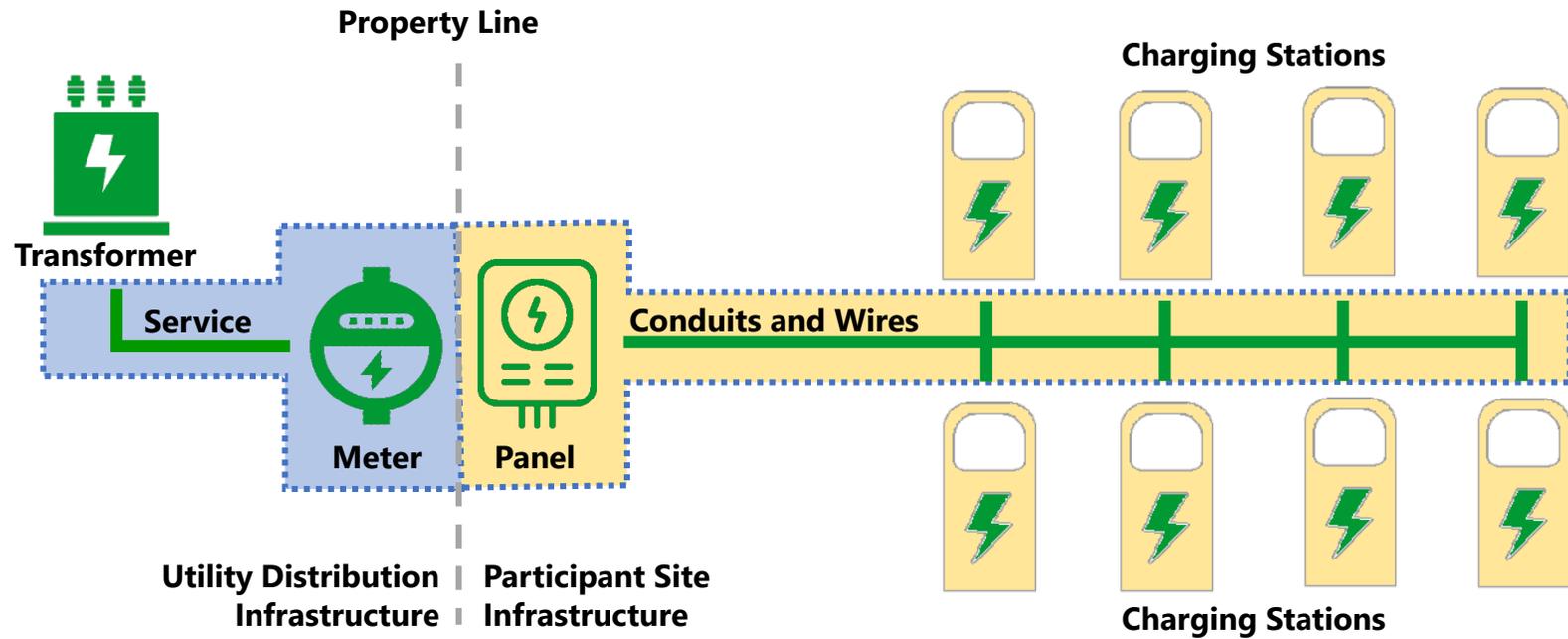
*As of June 2019

SCE CPUC Filing A 17.01.21

Medium to Heavy Duty Plan had Two Paths

- SB 350 provided CPUC direction to instruct investor owned electric utilities to enable wide spread TE deployment.
- The CPUC instructed the utilities to develop Demonstration “Priority Review” projects and a Long Term Medium to Heavy Duty TE program
- Four Priority Review Projects received approval January 2018
- One of the approved Priority Review projects was for the installation of infrastructure to support Transit Agencies electrification effort for their fleets
- Standard Review Charge Ready Transport program approved in late 2018 and launched in May 2019

Typical Electrical Infrastructure Project



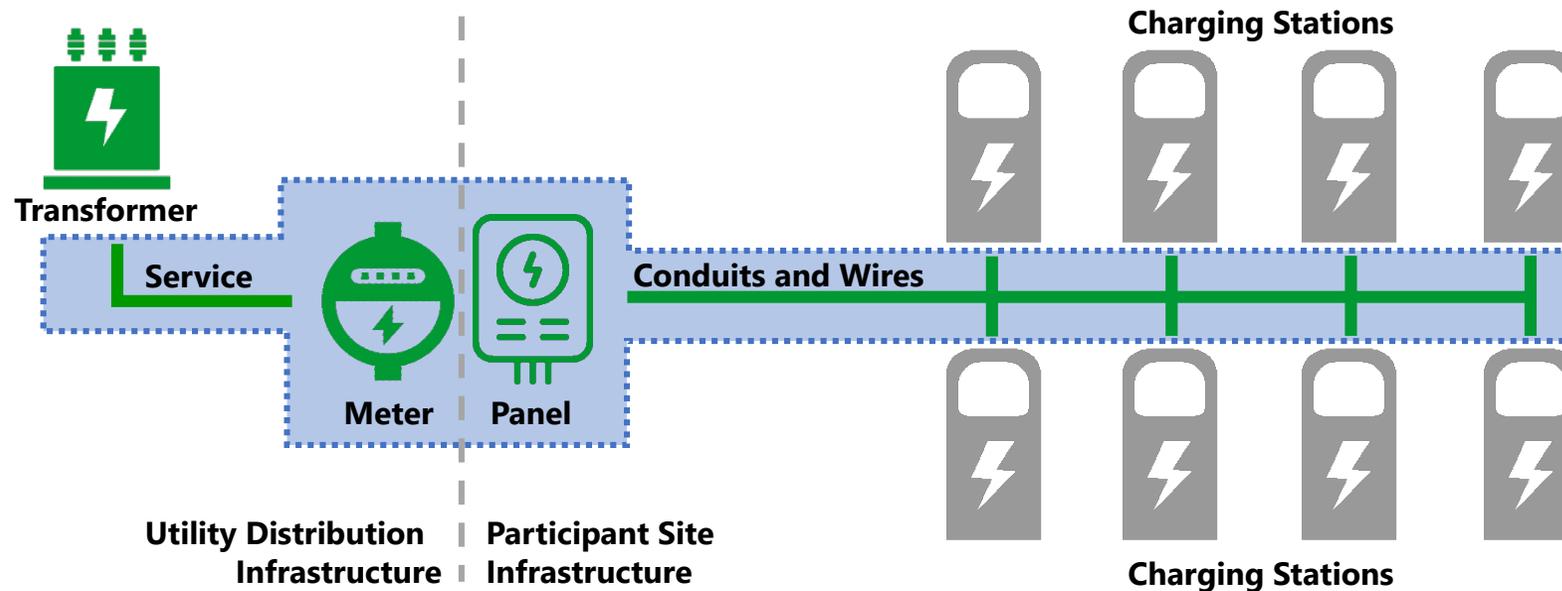
Utility builds off-site transformer & service drop to the meter



Customer installs on-site electrical panel, conduit, and charging stations

Defining Make-Ready Infrastructure

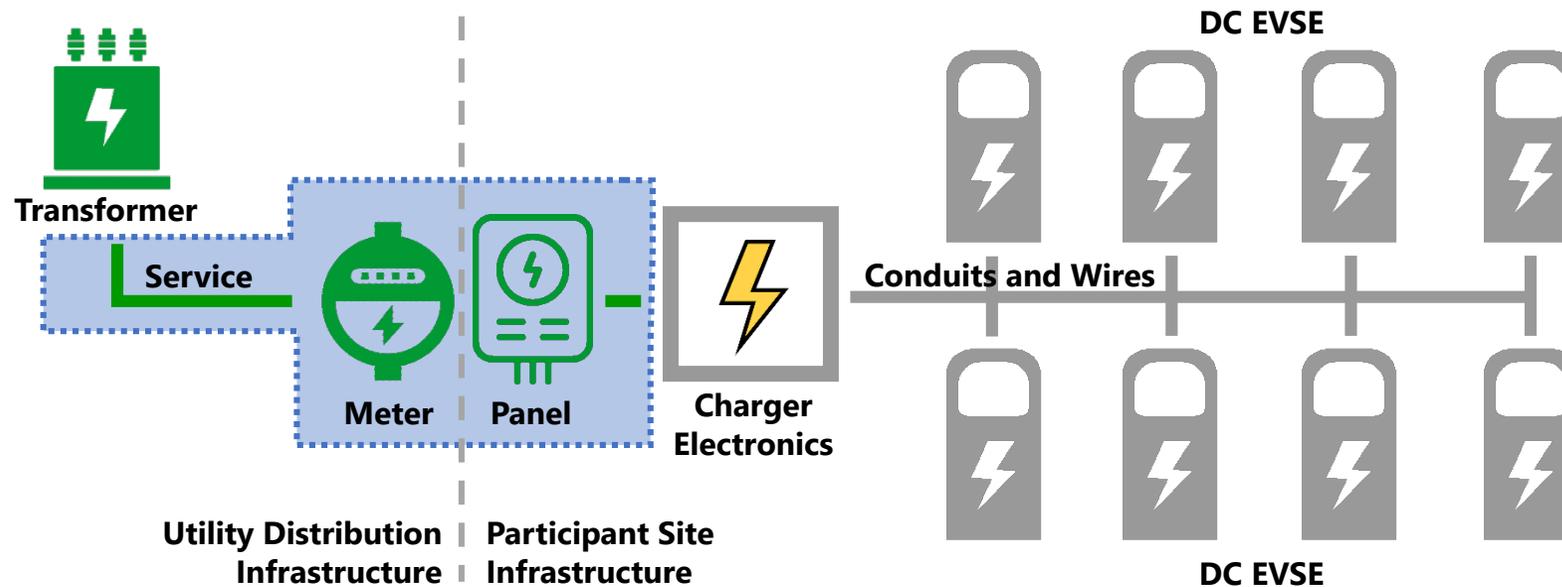
- Standalone charging station model



Program covers costs associated with service drop, meter, panel, and circuit dedicated to EV charging. Make-ready ends at interconnection point with customer charging equipment providing AC service.

Defining Make-Ready Infrastructure

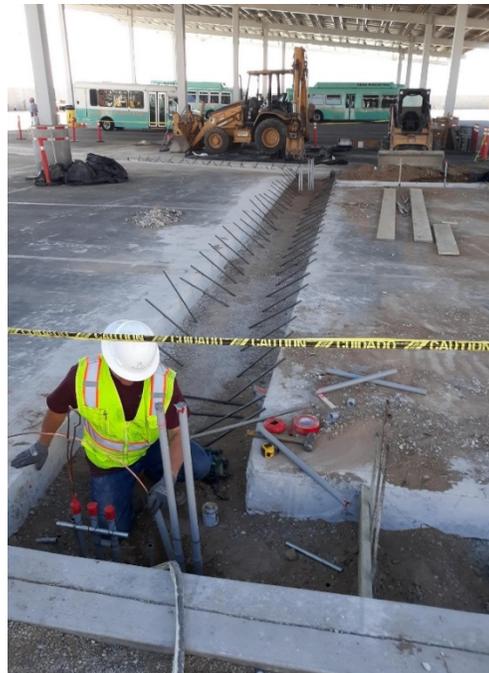
- Centralized charger electronics with modular DC power distribution



Program covers costs associated with service drop, meter, panel, and circuit dedicated to EV charging. Make-ready ends at interconnection point with customer charging equipment providing AC service.

Priority Review Project Victor Valley Transit

- SCE installed New Primary Service dedicated to Zero Emission Bus charging
- Installed new meter panel to serve charging equipment
- Brought power to service disconnects for the charging units



Foothill Transit Project

- Twelve 60kw DC chargers, one 125kw DC charger.
- Extended a dedicated 12kV primary feed approx 500 feet
- Clustered transformer, switchgear and chargers to minimize footprint



Charge Ready Transport provides infrastructure for fleet electrification



- Approved total program budget of **\$356.4M**
- Achieve minimum **870 sites** with **8,490 electric vehicles** procured or converted
- **Covers cost of all infrastructure** needed up to charging station
- **Charging station rebates** available for **transit/school buses** and **sites in disadvantaged communities**



Customer Eligibility and Obligation

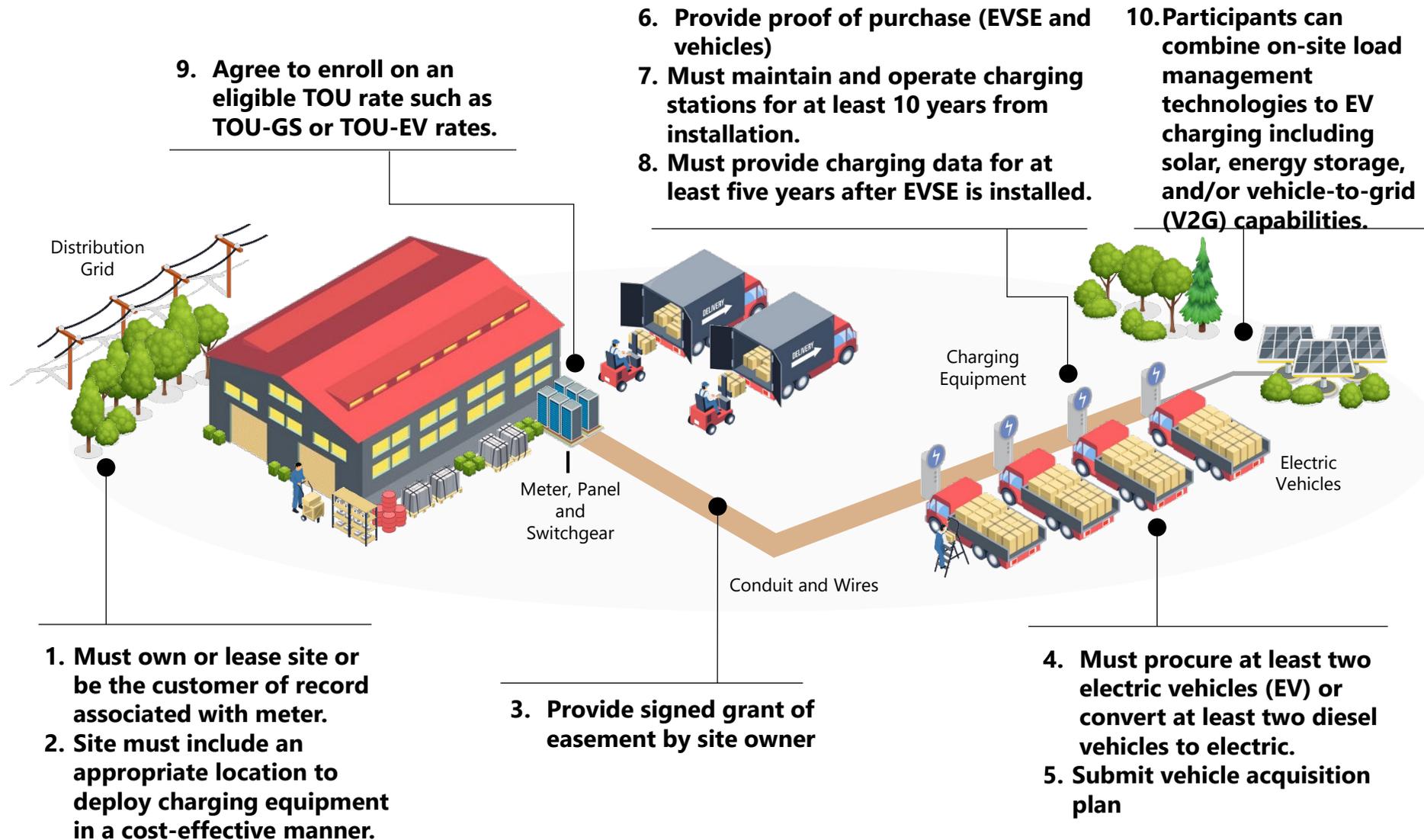
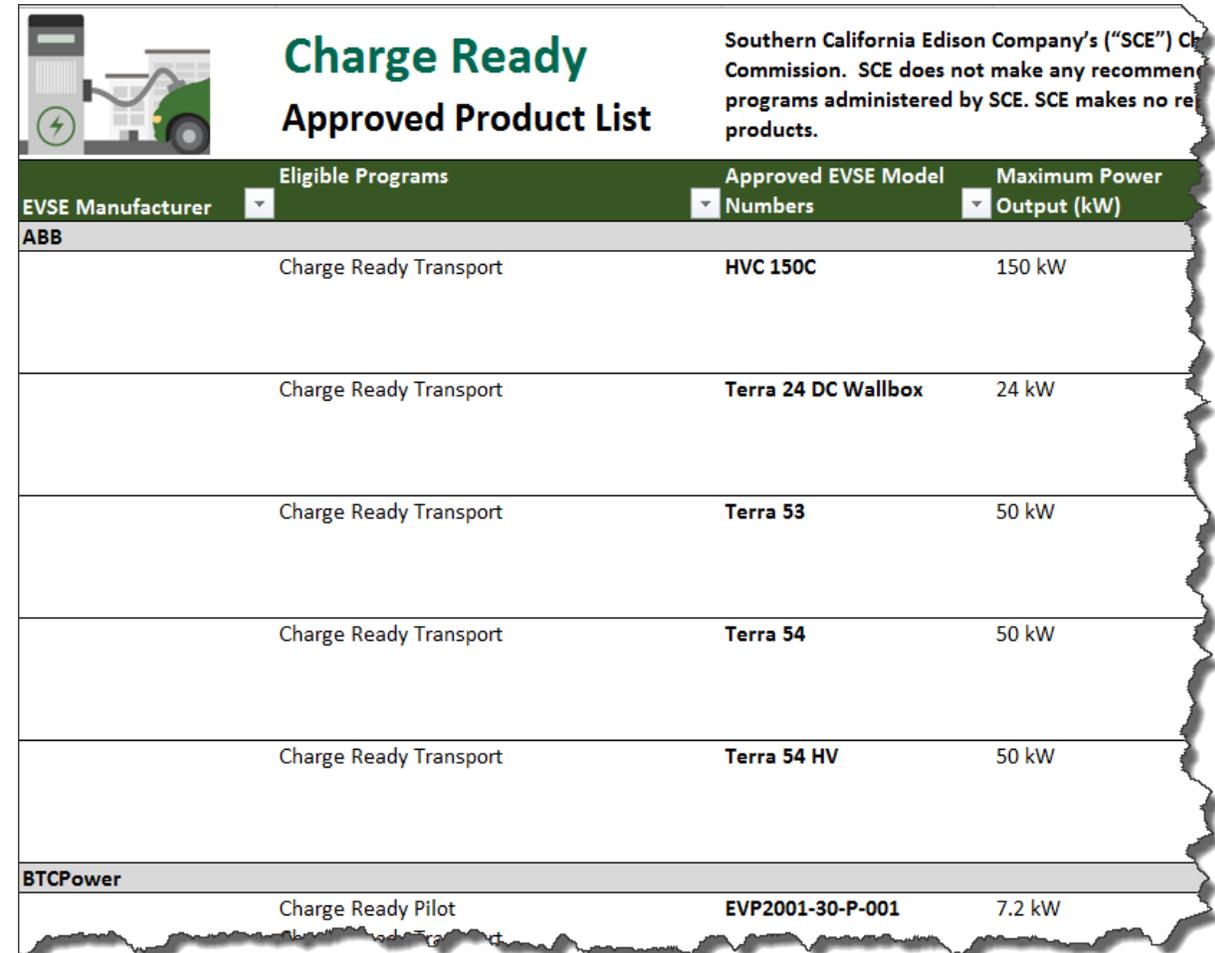


Diagram is for illustrative purposes only

Approved Product List (APL) is online

- APL lists approved hardware and vendors
- Approved:
 - AC Level 2 19.2kw, J1772 connector
 - DC 50kw+, CCS1 connector
 - Clipper creek with gateway
- Not approved:
 - 3-phase AC, 33kw
 - Meltric connector
 - Non-networked chargers (clipper creek without gateway)
- EVSE vendors can submit applications to be added to APL
- <http://on.sce.com/crapl>



Charge Ready Approved Product List

Southern California Edison Company's ("SCE") Charge Ready Program is a pilot program. SCE does not make any recommendations regarding the use of products in this program. SCE makes no representation or warranty regarding the products listed in this program.

EVSE Manufacturer	Eligible Programs	Approved EVSE Model Numbers	Maximum Power Output (kW)
ABB			
	Charge Ready Transport	HVC 150C	150 kW
	Charge Ready Transport	Terra 24 DC Wallbox	24 kW
	Charge Ready Transport	Terra 53	50 kW
	Charge Ready Transport	Terra 54	50 kW
	Charge Ready Transport	Terra 54 HV	50 kW
BTCPower			
	Charge Ready Pilot	EVP2001-30-P-001	7.2 kW



Additional Programs and Services



Transportation Electrification Advisory Services

- Perform rate analyses to find optimum rate tier
- Perform fleet assessment service to calculate GHG reductions and potential LCFS credits
- Support customer-led projects outside of programs

Self Generation Services

- Review plans for solar and battery storage projects
- Conduct analysis of feasibility and customer savings
- Provide a third-party check on vendor claims

Online Energy Management Tool

- Displays usage data day-behind
- Online graphs and data summaries provide high-level insights
- Detailed data available for download and offline analysis

Charge Ready Transport Website

- www.sce.com/crt
 - Program information
 - Application requirements
 - Program handbook, fact sheet and FAQ
 - Apply Now button to submit application online

Charge Ready Transport

Home > Your Business > Electric Vehicles for Business > **Charge Ready Transport**



Charge Ready Transport Program

Get the infrastructure you need to support charging stations for a fleet of **medium- and heavy-duty electric vehicles (EVs)** at no cost to you with the Charge Ready Transport Program.

[Stay Informed >](#)

Upcoming Events:

CalACT Conference, October 29-November 1

Navigating the Zero Emission Bus Pathway Part I - Planning

October 30, 12:30pm

What You'll Learn:

- The planning required for implementing Zero Emission Buses.
- Addressing cost related concerns with electricity and upgrades
- Potential funding support available from utility partners.

Transit Case Studies in building EV Infrastructure

October 31, 9:45am

What You'll Learn:

- Lessons learned by transit agencies from their infrastructure projects
- Timelines for constructing electric infrastructures
- How proper planning can simplify and streamline infrastructure installations

Expo Hall: Learn more and sign up for Charge Ready Transport

Charge Ready Transport More Information:

Contact your Account Manager or chargereadytransport@sce.com



Energy for What's AheadSM

