

# Tools to Electrify Your City

Funding, Electric Vehicle Charging and Collaboration

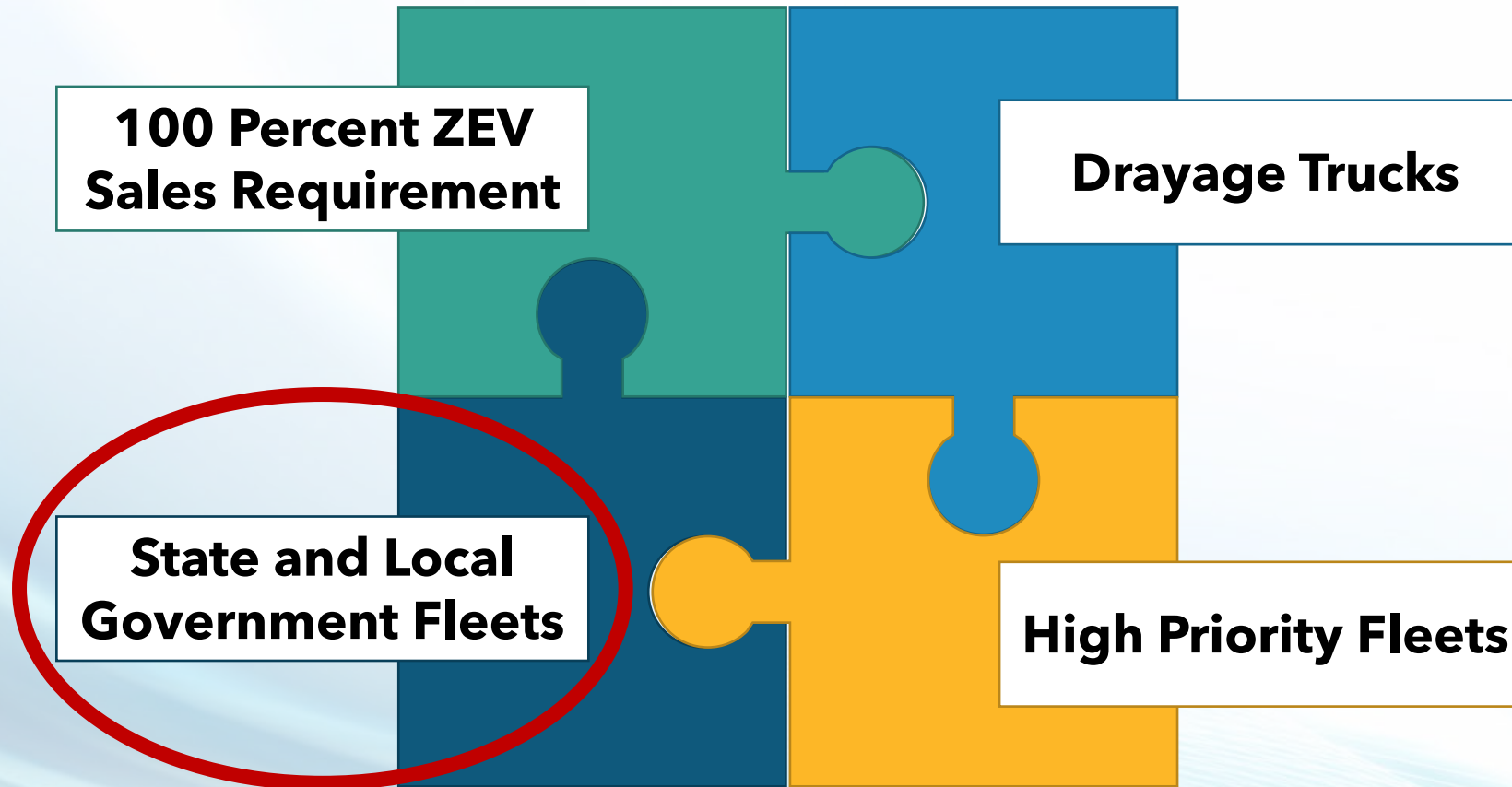


# **Advanced Clean Fleet Regulation— State and Local Government Fleets**

Public Works Officers Institute  
March 14, 2024

**Yachun Chow, Manager, Zero Emission Truck and Bus**

# Regulation Components of Advanced Clean Fleets (ACF)



# State and Local Government Fleet Applicability and Deadlines

- Applies to any state or local government agency in California that owns, leases, or operates one or more vehicles with a gross vehicle weight rating (GVWR) greater than 8,500 lbs.
- Hiring Entities— Any entity that hires and operates or directs the operation of vehicles like a broker or shipper
- Early/excess action credit can be used towards compliance
- Compliance assessed at end of year for all purchases made during calendar year
- Annual reporting deadline is April 1, 2024, even for counties on delayed start



# ZEV Purchase Schedule

2024-2026

January 1, 2027




50 percent of purchases must be ZEV or NZEV

All purchases must be ZEV or NZEV

- Agencies in designated counties or divisions with 10 or fewer trucks are exempt until 2027
- May use certain exemptions and extensions

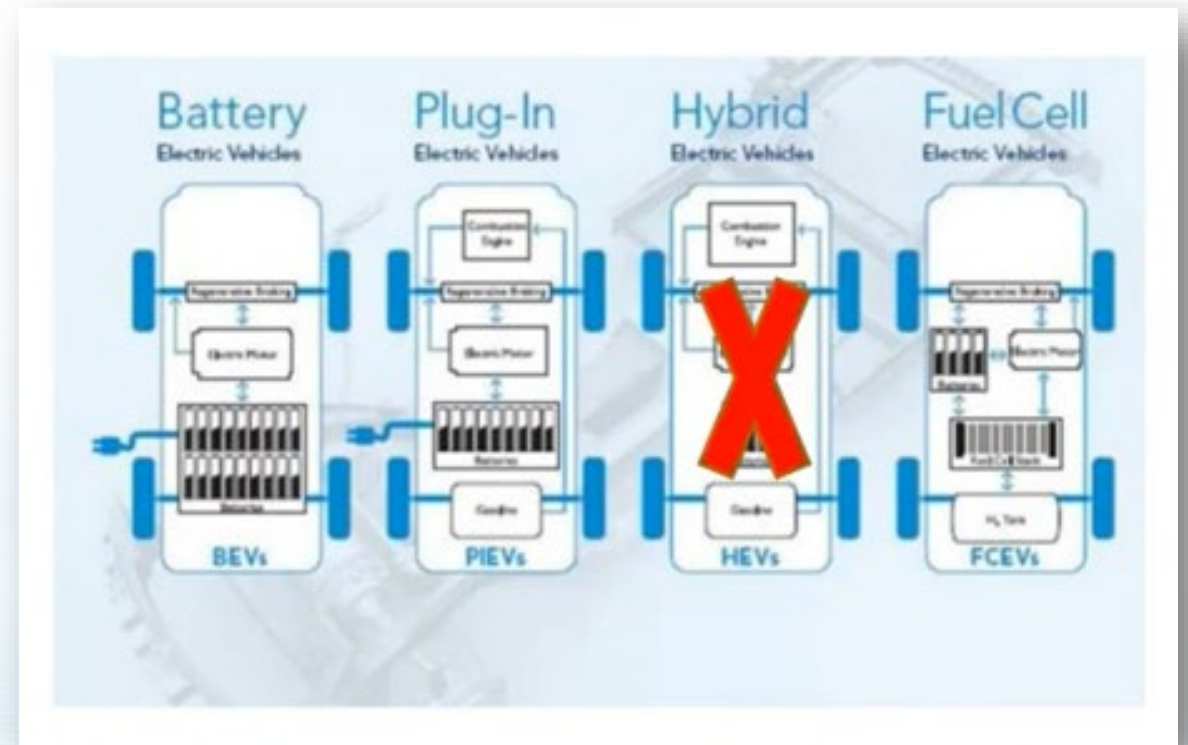


# ZEV Milestones Option Table

Zero-Emission Fleet Percentage	10%	25%	50%	75%	100%
<p>Group 1: Box trucks, vans, 2-axle buses, yard trucks, light-duty package delivery vehicles</p> 	2025	2028	2031	2033	2035
<p>Group 2: Work trucks, pickups, day cab tractors, 3-axle buses</p> 	2027	2030	2033	2036	2039
<p>Group 3: Sleeper cab tractors and Class 8 specialty vehicles</p> 	2030	2033	2036	2039	2042

# ACF Definition - Zero-Emission Vehicle Types

- Battery Electric Vehicles (BEV)
- Hydrogen Fuel Cell Electric Vehicles (FCEV)
- Near-Zero-Emission Vehicles (NZEV)
  - Plug-in hybrid that can achieve a minimum all-electric range.
  - Counts the same as a ZEV with a 2035 or earlier model year.
- Hybrid Electric Vehicles (HEV) are NOT considered ZEVs



# Excluded Vehicles

- School buses defined in (California Vehicle Code §545)
- Emergency vehicles defined in (California Vehicle Code §165)
- Vehicles awaiting sale
- Military tactical vehicles
- Historical vehicles
- Dedicated snow removal vehicles
- Certain two-engine vehicles
- Heavy cranes
- Transit vehicles subject to Innovative Clean Transit regulation
- Vehicles subject to Zero-Emission Airport Shuttle regulation





# Synchronization of Activities and Planning

Vehicle Procurement



Infrastructure Planning and Installation



Fuel Cost Management



# How to Start a ZEV Fleet

- Understand operational needs and dispatch patterns
  - Daily mileage, hours
  - Recharge/refuel window
  - Terrain change, traffic conditions
  - Use of heating, ventilation, and air conditioning
- Build on experienced fleets' success and lessons learned
  - Transit agency technology symposiums (2016 & 2019): <https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit/ict-meetings-workshops>
  - Transit agency ZEB Rollout Plans: <https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit/ict-rollout-plans>
- Examples of managing capital and operational costs
  - Utilize state funding and leverage federal funding
  - Utilize the Local Carbon Fuel Standard (LCFS) Regulation <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard>
  - Fuel cost management tools
  - Joint vehicles and infrastructure procurement
  - Infrastructure co-location and potential public access
- Planning, planning, and planning

# ACF Resources

- ACF homepage: [arb.ca.gov/our-work/programs/advanced-clean-fleets](http://arb.ca.gov/our-work/programs/advanced-clean-fleets)
  - Multiple factsheets: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/advanced-clean-fleets-fact-sheets>
  - Fleet Calculator: <https://ww2.arb.ca.gov/resources/documents/advanced-clean-fleets-calculator>
  - ZEV TruckStop: <https://ww2.arb.ca.gov/our-work/programs/truckstop-resources/zev-truckstop>
  - Meeting and events presentations and recordings: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/advanced-clean-fleets-meetings-events>
  - Searchable FAQ: <https://ww2.arb.ca.gov/applications/searchable-faq>
  - Technical support: <https://calfleetadvisor.org/>
  - BEV charging cost calculator: <https://ww2.arb.ca.gov/resources/documents/battery-electric-truck-and-bus-charging-cost-calculator>
- Subscribe to ACF and receive updates in the future: [https://public.govdelivery.com/accounts/CARB/subscriber/new?topic\\_id=zevfleet](https://public.govdelivery.com/accounts/CARB/subscriber/new?topic_id=zevfleet)
- ACF email: [zevfleet@arb.ca.gov](mailto:zevfleet@arb.ca.gov)
- Hotline: 1-866-634-3735

# Energy Infrastructure Incentives for Zero-Emission MD/HD Commercial Vehicles

## Funding Lanes

## Set-Asides



### EV Fast-Track

### EV Jump Start

### EV Public Charging Station

### Hydrogen

### Transit

Provides infrastructure funding for transit agencies and tribes

### Drayage

Provides private and public infrastructure funding for MD/HD truck fleets

### Public School Bus

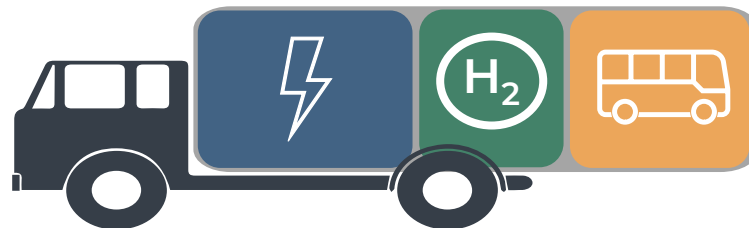
Provides infrastructure funding for eligible public school entities

Applicants in this funding lane are ready to go and may already have prior experience applying for commercial MD/HD EV funding

Applicants in this funding lane will need to meet specific eligibility criteria and will be allotted more time to submit required documents

Applicants in this funding lane intend to develop public or shared charging stations for commercial MD/HD EVs

Applicants in this funding lane intend to develop a hydrogen infrastructure project for commercial MD/HD vehicles



**Open Now**

**Drayage Public Set Aside**

**Public School Bus Set Aside**

**Opening Soon**

**Drayage Set Aside**

**Transit Set Aside**

**Opening Soon**



**energIZE**  
COMMERCIAL VEHICLES

**HYDROGEN FUNDING LANE**  
Opens on April 17, 2024

**PREPARE TO APPLY**





HYDROGEN BUS



**Workshop**  
**March 26, 1-2:30p**  
**Register here:**



# Incentive Structure: Summary

Applicant Category	EV Fast Track	EV Jump Start	EV Public Charging Station	Hydrogen
Application	First Come, First Served	Competitive	Competitive	Competitive
Incentive Structure	50% of Hardware and Software Costs Incurred* 	75% of Hardware and Software Costs Incurred 	50% of Hardware and Software Costs Incurred* 	50% of Hardware and Software Costs Incurred* 
Project Cap	\$500k*	\$750k	\$500k*	\$3M*

*\*If an applicant participates during a funding lane other than Jump Start but meets one or more of the criteria outlined in Jump Start, that project is eligible for the incentive structure outlined under Jump Start. In which case, they are eligible for 75% of eligible costs and an increased project cap of \$750k (\$4M for hydrogen).*

# ENERGIIZE: ZEV INFRA SUCCESS

Project Launch  
February 2022

DEPLOYMENT OF NEARLY

**2000**

EV CHARGERS/DISPENSERS

High User  
Friendliness

Strategic  
Partnerships

AWARDED PROJECTS

**>\$100M** SUM

**65%**

**Stackable  
Funding**

- Utilities
- Air Districts
- Local Governments

Of Submitted  
Applications  
Are Awarded

PROCESSED

**350** APPLICATIONS

# Additional Funding Opportunities

**CALIFORNIA HVIP** [californiahvip.org](http://californiahvip.org)

## HVIP Eligible Vehicles

Start by selecting a vehicle type below. Then select the vehicle(s) you are interested in to see the list of dealers and manufacturers who sell them.

**Approved Dealers** **Archived Vehicles**

- 2b
- ePTO
- Heavy-Duty Bus
- Medium-Duty Bus
- Refuse
- School Bus
- Step & Panel Van
- Straight Truck
- Tractor
- All vehicles

**CALIFORNIA CORE** CATALOG HEAVY-DUTY LANDSCAPE CONTACT

- 3+ items Agriculture
- 4+ items Cargo-Handling Equipment (CHE)
- 13+ items Construction
- 150+ items Large Forklifts

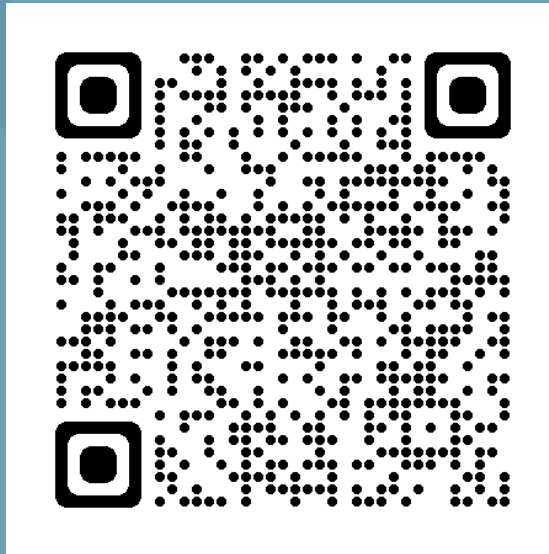
[californiacore.org](http://californiacore.org)





# COMMUNITIES IN CHARGE

**Light Duty  
Infrastructure**



**Level 2 EV  
Charging**



# AQMD Funding Opportunities

- **Carl Moyer On-Road Program**

- Heavy-Duty Trucks and Buses
- Drayage Trucks
- Transit Vehicles (Buses & Fleet Vehicles)
- Solid Waste Collection Vehicles
- Emergency Vehicles
- **Can Stack with HVIP**

- **VW**

- First come, first served
- Freight trucks, drayage trucks, dump trucks, waste haulers, and concrete mixers
- Max funding up to \$240,000 per truck
- For more information and to apply, visit: [www.aqmd.gov/vw](http://www.aqmd.gov/vw)

- **Carl Moyer Infrastructure**

- Light, Medium, & Heavy Duty
- EV & Hydrogen
- Eligible Costs
  - Cost of Design & Engineering
  - Cost of Equipment
  - Meter/Data Loggers
  - On-site Power Generation
- **Can Stack with EnerGIZE and Communities in Charge**

Based on information provided by South Coast AQMD, check your local AQMD for more details in your area

**Want to receive  
more information  
about incentives  
for vehicles and  
infrastructure?**

## Incentives Newsletter Signup Sheet



**Thank you!**

**Alyssa Haerle**  
**Director of Infrastructure**  
**Incentive Administration**



**[ahaerle@calstart.org](mailto:ahaerle@calstart.org)**  
**[infrastructure@calstart.org](mailto:infrastructure@calstart.org)**

**[www.energiize.org](http://www.energiize.org)**



# Charge Ready Transport

Presented by Omar Faris, Clean Energy Advisor, SCE



# About Southern California Edison

## *An Edison International Company*

### Who We Are

- One of the nation's largest electric utilities
- Headquarters in Rosemead, California
- More than 130 years of history

### Who We Serve

- 50,000 square miles of SCE service area across Central, Coastal and Southern California
- 15 million residents in service territory
- 5 million customer accounts

### Clean Energy

- About 48 percent of the electricity that SCE delivers to customers comes from carbon-free resources, including solar and wind. (2019)
- More than 3,600 rooftop solar installations connected on average per month (2018)
- No. 1 utility for energy storage nationally, according to the Smart Electric Power Alliance (2018)



# SCE's Charge Ready Transport program provides infrastructure for fleet electrification

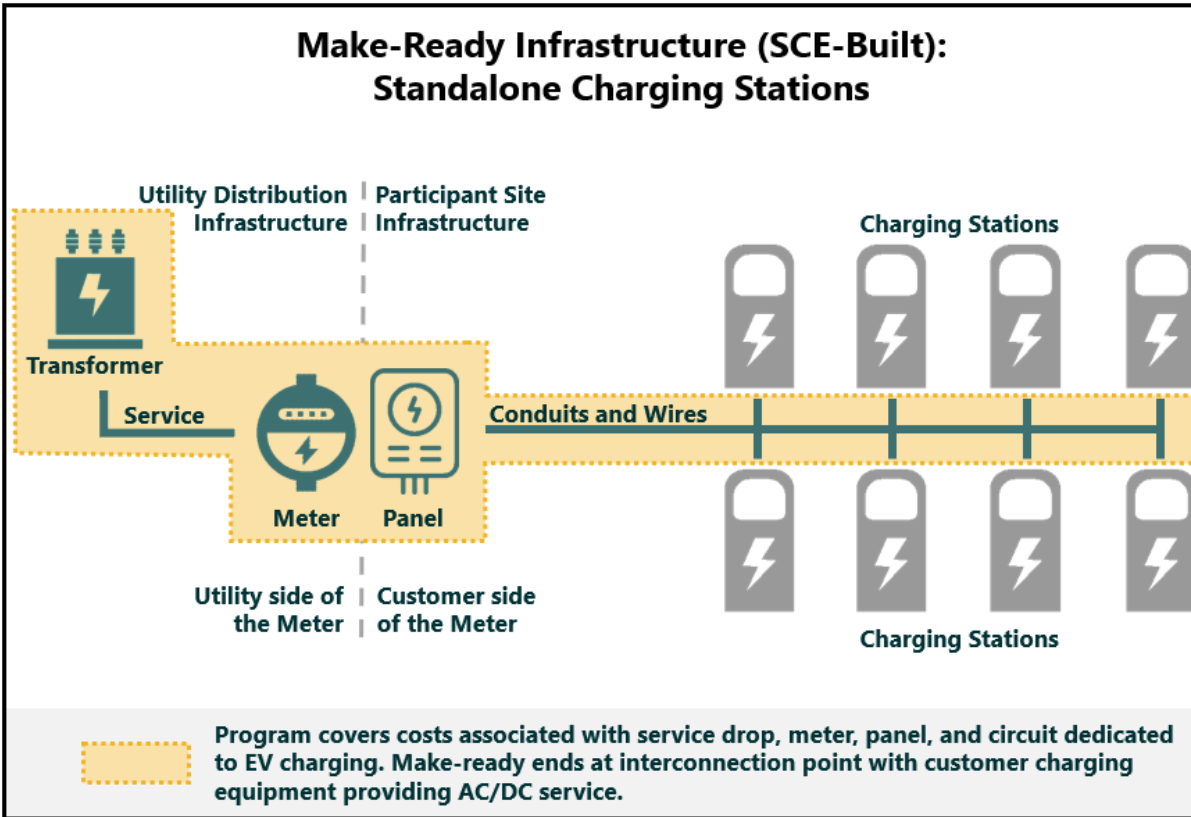


- Approved total program budget of **\$356.4M**
- Achieve minimum **500 sites** with **8,490 electric vehicles** procured or converted
- **Covers cost of all infrastructure** needed up to charging station
- **Charging station rebates** available for **transit/school buses** and **sites in disadvantaged communities**

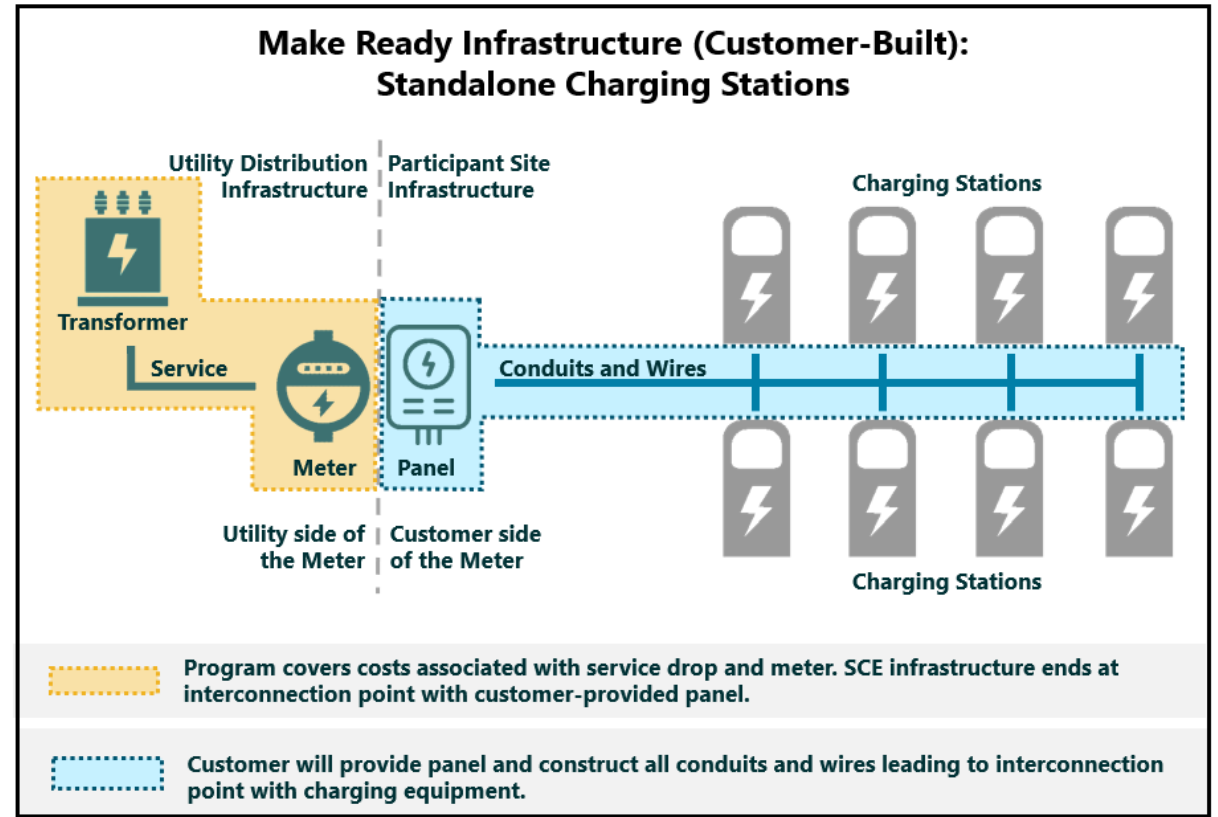


# Make-Ready Infrastructure Defined

## Make-Ready Infrastructure (SCE-Built): Standalone Charging Stations



## Make Ready Infrastructure (Customer-Built): Standalone Charging Stations





# Charge Ready supports a variety of medium and heavy-duty electric vehicles

## On-road vehicles

### Eligible Classes:

- Medium-Duty vehicles
- Heavy-Duty vehicles
- School Buses
- Transit Buses
- Truck Stop Infrastructure

Vehicles must have GVWR (max loaded weight) 6,000 lbs. and above (class 2-8)

## Off-road vehicles

### Eligible Classes:

- Yard trucks
- Forklifts
- Transportation Refrigeration Unit (TRU) infrastructure
- Airport ground support equipment (GSE)

No specific weight minimum

### New-Technology Vehicles:

Contact us for eligibility about new vehicle types coming to market, such as cargo handling equipment, agricultural vehicles, or construction vehicles.



# Many fleets qualify for charging hardware rebates up to 50%

## Do you qualify for a charger equipment rebate?

Three customer classes qualify for the charger equipment rebate:

- 1. Transit agencies
- 2. School District
- 3. Project sites in Disadvantaged Communities, except for businesses on the Fortune 1000 list.

[Map of Disadvantaged Communities](#)

## Charger Info

Rebates cover 50% of equipment cost, up to a cap by power band.

Chargers must meet AC or DC charging standards for on-road vehicles

Equipment must be listed on SCE's [Approved Product List \(APL\)](#).

For AC chargers and DC standalone chargers, there is one rebate per charger, regardless of the number of ports / connectors.

For DC modular power cabinet chargers, there is one rebate per power cabinet, regardless of the number of dispensers.

No rebates available for forklift, TRU, and other off-road chargers.

## Rebate covers 50% of the EVSE cost, up to the rebate cap

Power Band	Rebate Cap
0 kW - 19.2 kW	\$1,700
19.3 kW – 49.9 kW	\$7,400
50 kW – 149.9 kW	\$22,000
150+ kW	\$37,000

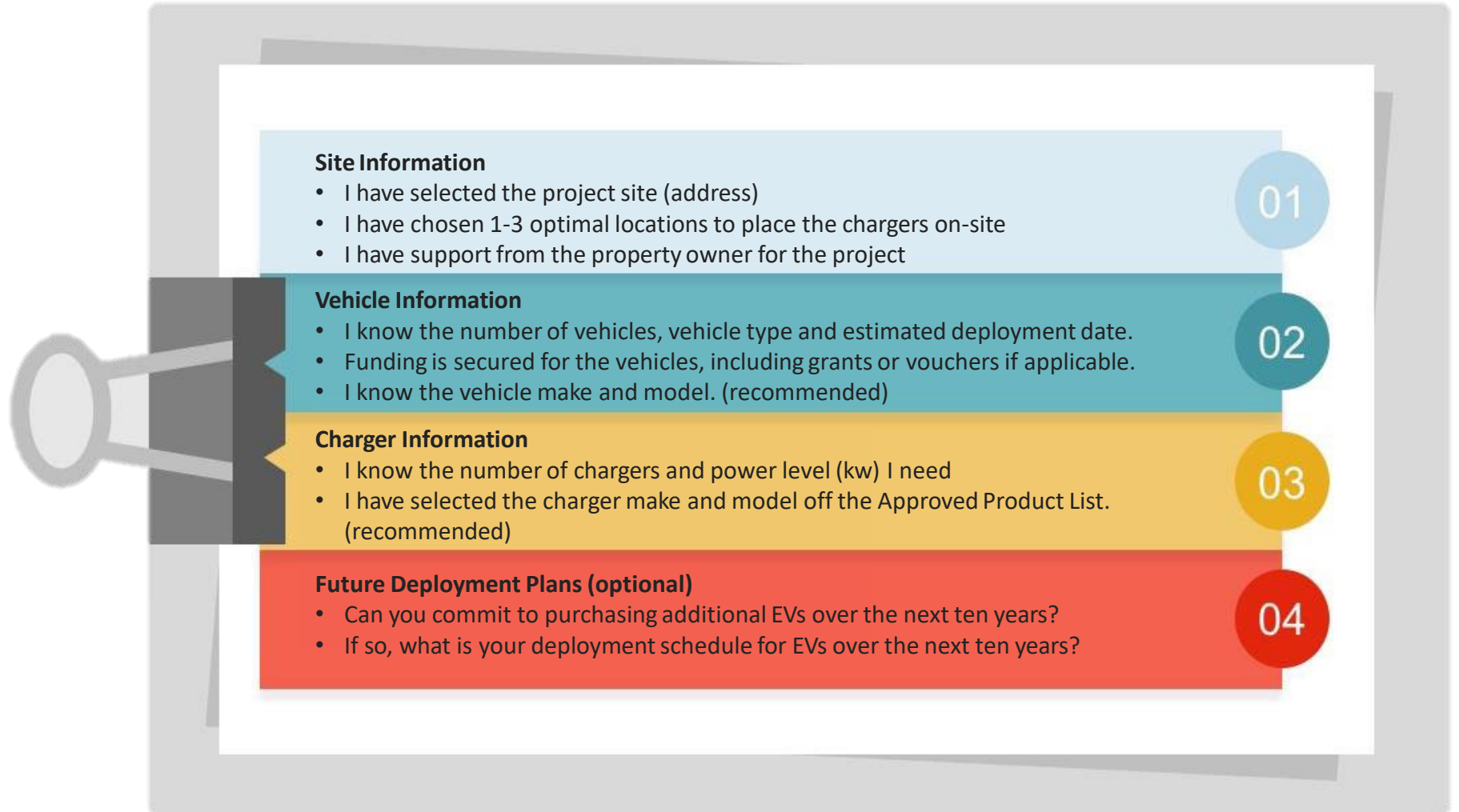
Rebate table is current as of August 2022. Rebate structure may be updated in the future. View the [current rebate structure at the Approved Product List \(APL\) website](#).

# Am I Ready to Apply?

If you can answer these questions, you are ready to submit a Charge Ready Transport application.

Apply using our online portal or on the phone with your Account Manager or SCE advisor, who can walk you through the process.

To take the next step, contact your Account Manager or one of SCE's TE Advisors.



# Appendix - Helpful Links

[Charge Ready Transport Main Page](#)

[CRT – Quick Reference Guide](#)

[CRT – Fact Sheet](#)

[Map of Disadvantaged Communities](#)

[Approved Product List](#)

[Fleet Fueling Calculator](#)



# Charge Ready Light Duty



# Charge Ready Program Offerings

	1 CHARGING INFRASTRUCTURE AND REBATE	2 Small Site Rebate	3 NEW CONSTRUCTION REBATE
Objective	Provide <b>make-ready infrastructure</b> for EV charging to non-residential and multifamily sites	Provide a <b>1-time rebate of \$10,000 per port to install up to 4 L2 ports</b>	Incentivize multifamily developers to install charging stations at <b>new construction projects</b>
Target Customers	Existing <b>non-residential and multifamily</b> properties	Existing <b>non-residential and multifamily</b> properties	<b>New construction multifamily properties</b>
Offering	Covers <b>make-ready infrastructure</b> up to EVSE stub-out	Can be used toward all aspects of <b>design, purchase, construction, and installation</b> of L2 charging stations.	<b>\$3,500 per port</b> to help offset charging station and infrastructure costs
Program Targets	<ul style="list-style-type: none"> <li>~19,500 Level 2 ports and ~200 DCFC<sup>1</sup> ports</li> <li>50% ports in DAC</li> <li>30% ports at multifamily</li> </ul>	Managed as part of the total port target within Charging Infrastructure and Rebate option	<ul style="list-style-type: none"> <li>Up to ~15,000 Level 2 ports</li> <li>50% ports in DAC</li> </ul>

<sup>1</sup> DCFC program option launching April 1<sup>st</sup>, 2024

**EXTERNAL**

# Charge Ready Key Program Requirements

### APPLICANT ROLE

- **Non-residential** SCE customer
- **Own, lease, manage**, or be the customer of record of charging site
- Obtain **consent from property owner** (if applicable)
- Grant **easement rights** to SCE
- Project site must be **located in SCE service area**

### DEPLOYMENT

- **Minimum of four** Level 1 or Level 2 charging ports except New Construction Rebate
- All charging equipment must be **separately metered** (optional for New Construction Rebate)
- Enroll in a **demand response program**

### EQUIPMENT

- Select from **SCE's Approved Product List (APL)** to qualify for the rebate
- Keep equipment **operational for 10 years**
- Provide **monthly charging data**
- Report **prices charged** to EV drivers

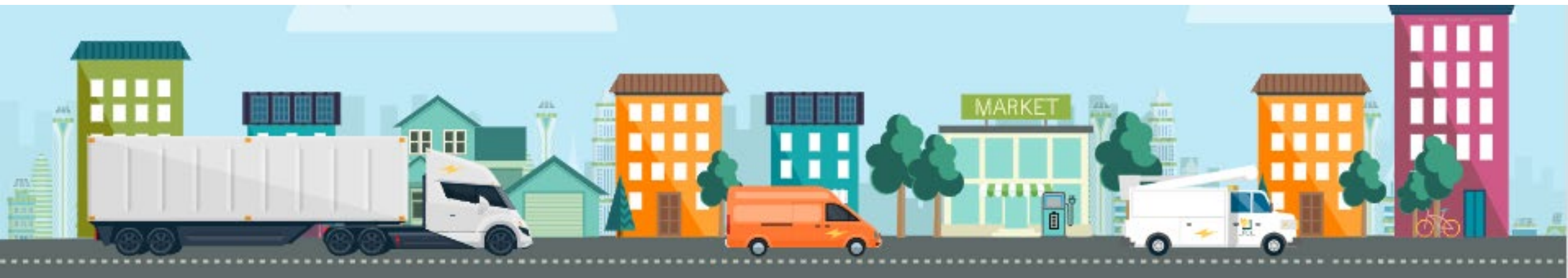
**EXTERNAL**

# Appendix - Helpful Links

[Charge Ready Light Duty Landing Page](#)

[Charge Ready Fact Sheet](#)

[Charge Ready Light Duty Program Comparisons](#)



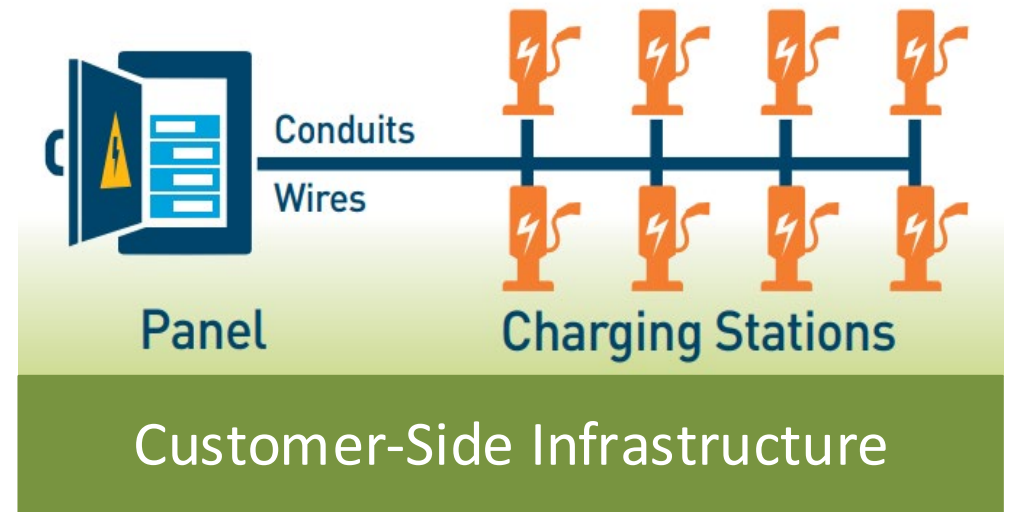
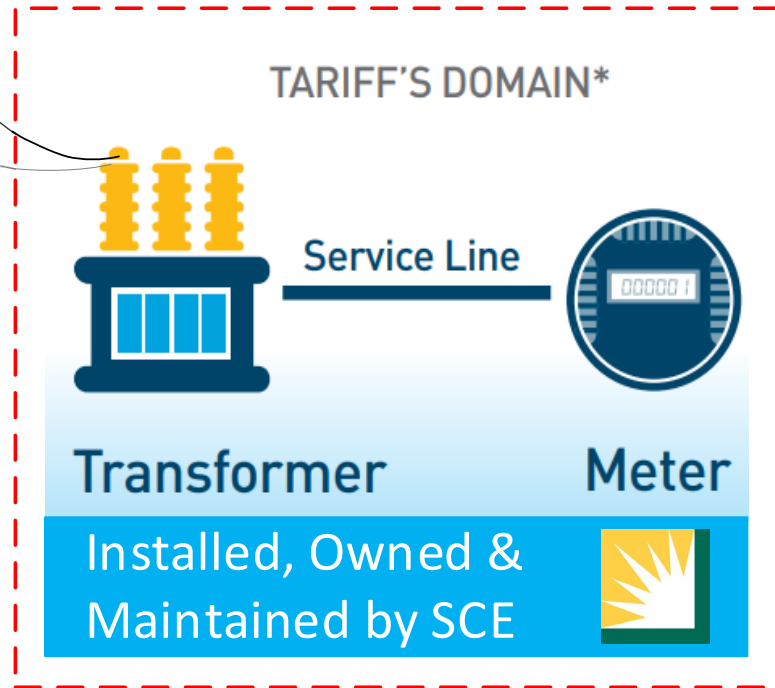
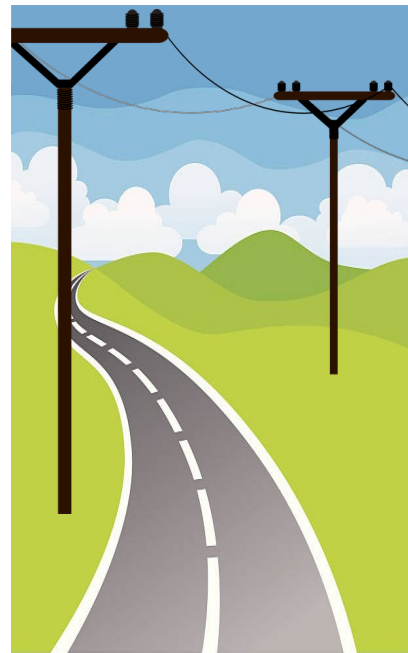


# Rule 29



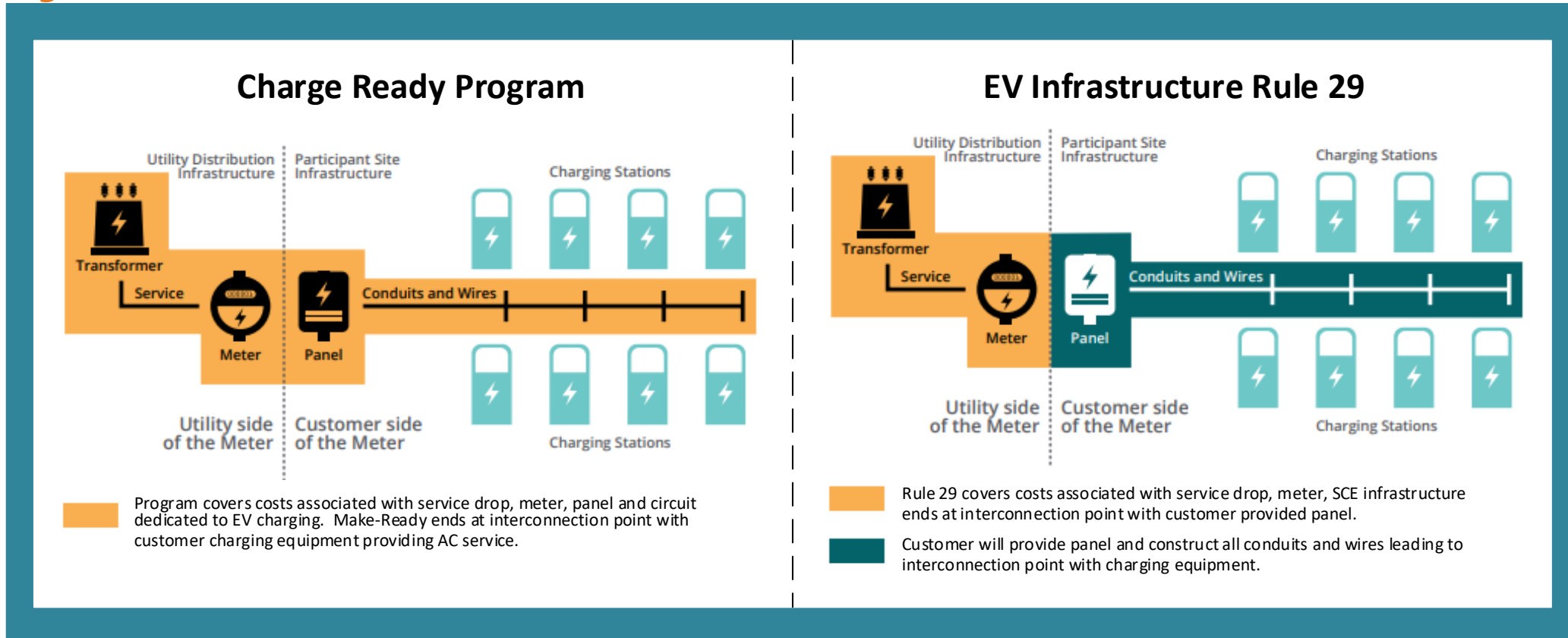
# EV Infrastructure Rule 29

## Utility-Side (before-the-meter) EV Infrastructure



This diagram represents a general scenario. Please note, rule application will vary depending on the type of service voltage and SCE's applicable design standards according to relevant tariffs.

# Key Differences Charge Ready vs. EV Infrastructure Rule 29



## Rule 29 Requirements:

APPLICANT ROLE	DEPLOYMENT	EQUIPMENT
<ul style="list-style-type: none"> <li>• <b>Non-residential and Multi-Family sites</b></li> <li>• <b>Own or lease</b> the charging site</li> <li>• Obtain <b>consent from property owner</b> (if applicable)</li> <li>• Grant <b>easement rights</b> to SCE (if applicable)</li> <li>• Project site must be in <b>SCE service territory</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>EV-only load</b> allowed</li> <li>• <b>Min 100 Amps / Max 12,000 Amps</b> allowed</li> <li>• All charging equipment must be <b>separately metered</b></li> <li>• Enroll in commercial EV <b>TOU rate plan</b></li> <li>• Must <b>not</b> be participating in any of SCE's existing Charge Ready Programs</li> </ul>	<ul style="list-style-type: none"> <li>• Keep equipment <b>operational for 5 years</b></li> </ul>

# Engage With SCE **Early & Often** For Your Load Energization Project

In Addition to Sharing the Long-Term Electrification Plan, **Customers Should Contact SCE as Early as Possible for Your Load Energization Project!**

While ***Each Location Has Different Levels of Capacity and Complexity***, In General, SCE Strongly Suggest That Applicant Should Inform SCE As Follows:

- **Any Size Project:** No lesser than 2 years
- **3-10 MW Project:** No lesser than 3 years
- **10-15 MW Project:** No lesser than 5 years

\*Timing **depends on the capacity & complexity of the localized distribution grid**. The times suggested above are for guidance only and may be substantially longer if project with licensing requirements are triggered

**System Upgrades Take Time!**

**Approximately....**

- **18 months for simple upgrades** (e.g. upgrade to existing circuits)
- **3+ years for moderate upgrades** (e.g., new circuits)
- **6+ years for major upgrades** (e.g., new substations)



# Webinar on Maximizing Funding for your EV Fleet

- Joint IOU Webinar coming up...please share with any Fleets/stakeholders that could benefit
- **Maximizing Funding for Your Fleet**
- ***Webinar Date: March 26, 2024 at 11:00am PST***

Join us for an exclusive funding webinar hosted by San Diego Gas & Electric (SDG&E), Southern California Edison (SCE), and Pacific Gas & Electric (PG&E). This interactive session is tailored to medium- and heavy-duty fleet owners and operators in California who are ready to electrify and are looking for the best EV funding opportunities available in 2024. Listen in as funding experts share how the funding landscape has rapidly changed in California, what are the top funding programs to know in 2024, and what you can do now to maximize funding for your fleet in the year ahead.

## **Attend this 1-hour webinar to:**

- Learn what programs have changed in 2024 and what fleets can expect for the year ahead
- Gain insight into how much your fleet could save with funding programs available now
- Connect directly with EV fleet experts to learn about the EV infrastructure funding available today and how to apply
- Hear actionable next steps and best practices for maximizing funding opportunities and accelerating your fleet electrification journey

Registration Link:

[Maximizing Funding for Your Fleet - ACT News \(act-news.com\)](https://act-news.com)

**SCAN HERE TO REGISTER**



# Contact Information

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# Questions and Answers