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)

- 100 Percent ZEV Sales Requirement
- Drayage Trucks
- State and Local Government Fleets
- High Priority Fleets
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

50 percent of purchases must be ZEV or NZEV

January 1, 2027

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

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

Work truck means any single-unit truck that is not a box truck, van, bus, or Class 8 specialty vehicle.
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 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
- 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
- ACF email: zevfleet@arb.ca.gov
- Hotline: 1-866-634-3735
Energy Infrastructure Incentives for Zero-Emission MD/HD Commercial Vehicles

**Funding Lanes**

- **EV Fast-Track:** Applicants in this funding lane are ready to go and may already have prior experience applying for commercial MD/HD EV funding.
- **EV Jump Start:** Applicants in this funding lane will need to meet specific eligibility criteria and will be allotted more time to submit required documents.
- **EV Public Charging Station:** Applicants in this funding lane intend to develop public or shared charging stations for commercial MD/HD EVs.
- **Hydrogen:** Applicants in this funding lane intend to develop a hydrogen infrastructure project for commercial MD/HD vehicles.

**Set-Asides**

- **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.
Open Now

Drayage Public Set Aside
Public School Bus Set Aside

Opening Soon

Drayage Set Aside
Transit Set Aside

Opening Soon

Workshop
March 26, 1-2:30p
Register here:
# Incentive Structure: Summary

<table>
<thead>
<tr>
<th>Applicant Category</th>
<th>EV Fast Track</th>
<th>EV Jump Start</th>
<th>EV Public Charging Station</th>
<th>Hydrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>First Come, First Served</td>
<td>Competitive</td>
<td>Competitive</td>
<td>Competitive</td>
</tr>
<tr>
<td>Incentive Structure</td>
<td>50% of Hardware and Software Costs Incurred*</td>
<td>75% of Hardware and Software Costs Incurred</td>
<td>50% of Hardware and Software Costs Incurred*</td>
<td>50% of Hardware and Software Costs Incurred*</td>
</tr>
<tr>
<td>Project Cap</td>
<td>$500k*</td>
<td>$750k</td>
<td>$500k*</td>
<td>$3M*</td>
</tr>
</tbody>
</table>

*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).
ENERGIZE: ZEV INFRA SUCCESS

Project Launch
February 2022

DEPLOYMENT OF NEARLY
2000
EV CHARGERS/DISPENSERS

Awarded Projects
>$100M SUM

Processed
350 Applications

High User Friendliness

Strategic Partnerships

65%
Of Submitted Applications Are Awarded

Stackable Funding
- Utilities
- Air Districts
- Local Governments

PRESENTATION BY ENERGIZE
Additional Funding Opportunities

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.

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

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Californiavip.org

3+ Items
Agriculture

4+ Items
Cargo-Handling Equipment (CHE)

13+ Items
Construction

15+ Items
Large Forklifts

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?
Thank you!

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Director of Infrastructure
Incentive Administration

ahaerle@calstart.org
infrastructure@calstart.org

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

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**Apply** → **Reserve** → **Permits** → **Design & Build** → **Rebate**
Make-Ready Infrastructure Defined

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

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/DC service.

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

Program covers costs associated with service drop and meter. SCE infrastructure ends at interconnection point with customer-provided panel.

Customer will provide panel and construct all conduits and wires leading to interconnection point with charging equipment.
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%

<table>
<thead>
<tr>
<th>Do you qualify for a charger equipment rebate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three customer classes qualify for the charger equipment rebate:</td>
</tr>
<tr>
<td>1. Transit agencies</td>
</tr>
<tr>
<td>2. School District</td>
</tr>
<tr>
<td>3. Project sites in Disadvantaged Communities, except for businesses on the Fortune 1000 list.</td>
</tr>
</tbody>
</table>

Map of Disadvantaged Communities

<table>
<thead>
<tr>
<th>Charger Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebates cover 50% of equipment cost, up to a cap by power band.</td>
</tr>
<tr>
<td>Chargers must meet AC or DC charging standards for on-road vehicles</td>
</tr>
<tr>
<td>Equipment must be listed on SCE’s Approved Product List (APL).</td>
</tr>
<tr>
<td>For AC chargers and DC standalone chargers, there is one rebate per charger, regardless of the number of ports / connectors.</td>
</tr>
<tr>
<td>For DC modular power cabinet chargers, there is one rebate per power cabinet, regardless of the number of dispensers.</td>
</tr>
<tr>
<td>No rebates available for forklift, TRU, and other off-road chargers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rebate covers 50% of the EVSE cost, up to the rebate cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Band</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>0 kW - 19.2 kW</td>
</tr>
<tr>
<td>19.3 kW – 49.9 kW</td>
</tr>
<tr>
<td>50 kW – 149.9 kW</td>
</tr>
<tr>
<td>150+ kW</td>
</tr>
</tbody>
</table>

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.
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

<table>
<thead>
<tr>
<th></th>
<th>CHARGING INFRASTRUCTURE AND REBATE</th>
<th>Small Site Rebate</th>
<th>NEW CONSTRUCTION REBATE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective</strong></td>
<td>Provide <strong>make-ready infrastructure</strong> for EV charging to non-residential and multifamily sites</td>
<td>Provide a 1-time rebate of $10,000 per port to install up to 4 L2 ports</td>
<td>Incentivize multifamily developers to install charging stations at <strong>new construction projects</strong></td>
</tr>
<tr>
<td><strong>Target Customers</strong></td>
<td>Existing <strong>non-residential and multifamily</strong> properties</td>
<td>Existing <strong>non-residential and multifamily</strong> properties</td>
<td>New construction multifamily properties</td>
</tr>
<tr>
<td><strong>Offering</strong></td>
<td>Covers <strong>make-ready infrastructure</strong> up to EVSE stub-out</td>
<td>Can be used toward all aspects of <strong>design, purchase, construction, and installation</strong> of L2 charging stations.</td>
<td><strong>$3,500 per port</strong> to help offset charging station and infrastructure costs</td>
</tr>
</tbody>
</table>
| **Program Targets** | ~19,500 Level 2 ports and ~200 DCFC\(^1\) ports  
50% ports in DAC  
30% ports at multifamily | Managed as part of the total port target within Charging Infrastructure and Rebate option | Up to ~15,000 Level 2 ports  
50% ports in DAC |

\(^1\) DCFC program option launching April 1\(^{st}\), 2024

**EXTERNA**
## 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
Appendix - Helpful Links

Charge Ready Light Duty Landing Page
Charge Ready Fact Sheet
Charge Ready Light Duty Program Comparisons
Rule 29
To take service under the EV Infrastructure Rule, an applicant must:

- Installed, Owned & Maintained by SCE

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

**Charge Ready Program**
- Customer will provide panel and construct all conduits and wires leading to interconnection point with charging equipment.
- 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.

**EV Infrastructure Rule 29**
- Rule 29 covers costs associated with service drop, meter, SCE infrastructure ends at interconnection point with customer provided panel.
- Customer will provide panel and construct all conduits and wires leading to interconnection point with charging equipment.

**Rule 29 Requirements:**

**APPLICANT ROLE**
- Non-residential and Multi-Family sites
- Own or lease the charging site
- Obtain consent from property owner (if applicable)
- Grant easement rights to SCE (if applicable)
- Project site must be in SCE service territory

**DEPLOYMENT**
- EV-only load allowed
- Min 100 Amps / Max 12,000 Amps allowed
- All charging equipment must be separately metered
- Enroll in commercial EV TOU rate plan
- Must not be participating in any of SCE’s existing Charge Ready Programs

**EQUIPMENT**
- Keep equipment operational for 5 years
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 the 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)  

SCAN HERE TO REGISTER
Contact Information

Omar Faris
Clean Energy Advisor
Southern California Edison
Omar.Faris@sce.com
Questions and Answers