

Funding Electric Vehicle Charging Stations

Quick Reference Guide



Governor's Office of Business and Economic Development (GO-Biz)
Zero Emission Vehicle (ZEV) Unit

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Introduction

This resource is designed to make the procurement of electric vehicle (EV) charging infrastructure on state-owned or leased property as seamless as possible. Under the leadership of Governor Brown, the State of California set ambitious zero emission vehicle (ZEV) goals:

- *1.5 million ZEVs on California roads by 2025;*
- *At least 25 percent of state fleet purchases of light-duty vehicles must be ZEVs by 2020;*
and
- *State agencies must electrify at least 5 percent of parking spaces at state-owned facilities.*

Public entities represent a highly visible area for ZEV expansion. Growing ZEV deployment in state government demonstrates use of these technologies at a large scale, helps to meet environmental targets for government operations, and expands consumer awareness among employees and constituents. This guide is intended to help state agencies navigate the funding and decision-making process to procure EV charging infrastructure. In it, you will find a comprehensive overview of the steps that must be taken to secure funding for chargers, guidance in how to prioritize parking sites, and how to go about securing the funding needed for installation.

Key Terms:

Zero Emission Vehicle (ZEV): A vehicle that emits no tailpipe pollutants from the onboard source of power.

- **Plug-in Electric Vehicle (PEV):** A type of ZEV that can be recharged from an external source of electricity.
 - **Battery Electric Vehicle (BEV):** A type of PEV that runs purely on a battery-charged, electric motor.
 - **Plug-in Hybrid Electric Vehicle (PHEV):** A vehicle that is compatible with electric charging and conventional gas fueling – PHEVs qualify as ZEVs because they can run on a purely electric battery, in addition to a combustion engine.
- **Fuel Cell Electric Vehicle (FCEV):** A type of ZEV that converts hydrogen into electric power within a vehicle through use of a fuel cell rather than storing electricity in on-board batteries.

Electric Vehicle Supply Equipment (EVSE): Also known as an EV charger, EVSEs comprise any element in the infrastructure that supplies electricity for the charging of PEVs.

Level 1 Charger (L1): L1 charging is technical jargon for plugging your car into an ordinary household outlet. L1 equipment provides charging through a 120 volt, alternating-current (AC) plug and requires a dedicated 20-amp circuit. Depending on the battery technology used in the vehicle, L1 charging generally takes 8-20 hours to completely charge a fully depleted battery, adding 1.4 kwh, or about 4 miles of range per hour.

Level 2 Charger (L2): L2 equipment offers charging through a 240 volt, AC plug and requires installation of charging equipment. These units require a dedicated 40-amp circuit. Depending on the technology used in the vehicle, L2 charging generally takes 4-6 hours to completely charge a fully depleted battery adding about 6.6 kwh or 20 miles of range per hour.

DC Fast Charger (DCFC): DCFC equipment charges through a 480 volt, direct-current (DC) plug. Most DCFCs provide an 80% charge in 30 minutes.

Make-ready: A parking space wired with electrical infrastructure to support EV charging, without the charger itself.

Fleet Charging: EVSEs dedicated for the purpose of charging fleet vehicles.

Workplace Charging: EVSEs dedicated for the purpose of employee charging (with personal vehicles).

Public Charging: EVSEs open to the public for charging.

Smart vs. Basic Chargers: Smart chargers are enabled to provide use data and shift charging based on grid loads and in accordance to the vehicle owner's needs. Basic chargers are not enabled with this capability.

Distribution Board: A component of an electricity supply system that divides electrical power feed into subsidiary circuits, while providing a protective fuse or circuit breaker for each circuit in a common enclosure.

Publicly/Municipally Owned Utility (P/MOU): A not for profit utility company that is owned by the customers it serves.

Investor Owned Utility (IOU): Business organization providing utility services managed as a private enterprise rather than a function of a government or a utility cooperative.

Before You Start:

1. *Identify your agency's facilities*
 - *For owned facilities, visit green.ca.gov/buildings/*
2. *Read [DGS Management Memo 16-07](#)*
3. *Complete DGS Phase 1 Infrastructure Survey*
4. *Complete the collection of questions below (note: questions are written with a single property in mind but can be applied to a collection of properties):*
 - *Does your agency/department own the subject property?*
 - *Does your agency/department lease the subject property from an entity other than DGS?*

- Which electric utility serves the property?
 - How many parking lots do you have on the property?
 - For each parking lot, how many spaces are in each parking lot?
 - What is the current use mix of the parking spaces (public, fleet, workplace, or combination)?
 - What is the electrical capacity of the property?
 - How much of your internal budget is available to install, operate, and maintain charging infrastructure?
 - Disadvantaged Community (DAC) Status – is the property in a Disadvantaged Community? Use this [map](#) to determine DAC status.
5. *Have the following information on hand:*
- Utility customer account number/service account number
 - Federal tax ID number
 - County tax assessor parcel number for site
 - Name of Authority Having Jurisdiction (AHJ) to issue building permit approvals (for State owned properties, it's DSA)
 - Lessor contact information

Prioritize Facilities Most in Need of Charging Infrastructure Based On:

1. *Existing Fleet*
 - Are there any ZEVs in your fleet currently for which there is not enough charging infrastructure? If so, at which properties are they located or tend to travel to?
 - Which facilities house the highest volume of fleet vehicles?
 - Which facilities house the most utilized fleet vehicles?
 - Which facilities could support both fleet and workplace charging with the same EVSEs?
2. *Future Fleet*
 - Where are ZEVs purchased in the next 5 years likely to be domiciled?
3. *Workplace Charging*
 - Which facilities house the highest volume of workplace parking stalls? How many of those have over 200 workplace parking stalls? For many of the IOU programs, the minimum number of stalls is 10 (5% of 200 stalls total).
 - Which facilities have more EV drivers than charging stations?
 - Which facilities have employees who would purchase/lease PEVs if charging were available?
 - Which facilities are located in high EV adoption regions?
4. *Public access*
 - Which facilities support public parking?
 - Which facilities have high public visibility?

If you own or lease property in an IOU territory, read on:

The three major IOUs in California—Pacific Gas & Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) —are implementing pilot programs to install EV charging infrastructure at multi-unit dwellings, workplaces, and public interest destinations. Each will install chargers for fleet vehicles under certain circumstances (i.e., shared fleet/workplace parking lots). Programs will either cover the full cost of installation, maintenance, and operation of the chargers, or they will offer a rebate towards the cost of installation. Even if a program is not currently accepting applications, you must join the interest/waiting list now in order to participate in the program once the application opens.

SDG&E: Power Your Drive

What you should know:

- Program status: Open
- Ideal location: parking lot with adjacent transformer.
- Qualifications: Minimum of 10 spaces for charging (some exceptions if the project requires minimal electrical upgrade); must include some workplace.
- What is covered: Full cost of installation, operation, and maintenance of the chargers at no cost to the site host.
- Fees: None if located in DAC (according to [Cal Enviro Screen](#)), otherwise \$630/charging port.
- Cost structure: stations will be metered separately from the site host's electric service and account, so it will not impact the site host's utility bill (i.e., EV charger and regular utility bill will be separate).

How to apply:

1. Join [Interest List](#)
2. Follow-up phone call
 - a. SDG&E will schedule a 20-minute call to tell you more about Power Your Drive and learn more about your charging needs
3. Submit an online application after the introductory phone call.
 - a. If you need assistance, email SDG&E at ev@sdge.com
4. Site visit
 - a. SDG&E will conduct a site walk, assess your project, and confirm the charging station location.
5. Sign easement
 - a. Sign the Power Your Drive easement. [Sample Easement](#).
 - b. Note: your agency's legal team will work with SDG&E's legal team to discuss the terms of the right of way SDG&E requires to complete the project.

6. Design and installation
 - a. Select an EVSE (ideally from an approved state contract) and SDG&E will design your site; SDG&E will install the chargers and provide driver sign-up instructions. SDG&E will maintain the stations and keep them operational.

PG&E: EV Charge Network

What you should know:

- Program status: Interest list open.
- Ideal location: parking lot with adjacent transformer.
- Qualifications: Minimum of 10 spaces for charging; site must include workplace charging, but exceptions can be made for fleet (speak directly with program assistant).
- What is covered: The full cost of L2 make-ready installation and rebate of up to 25-100% on charging equipment.
- Ownership: Chargers owned/operated by the site host, unless the site is in a DAC, in which case PG&E will own/operate.
- Cost structure: Time-of-use rate to host (lower costs, depending on the time of day when the charger is used); site host is responsible for electricity costs.

How to apply:

1. Join [Interest List](#)
2. Apply online
 - a. Submit an application (once open) with basic information about your site. PG&E will review the application and determine if your site is suitable for the program.
3. Plan the project
 - a. If your site is selected, PG&E schedules a site walk with you to see where to install chargers, look at energy requirements, and estimate costs.
4. Sign your contract
 - a. When the design is finalized, you sign an easement and site host agreement to participate in the program.
5. Installation
 - a. PG&E does the installation, working with you to minimize disruption during construction.
6. Start your service
 - a. PG&E and their program partners work with you to ensure chargers remain operational and meet your needs. Your employees have ongoing access to chargers.

SCE: Charge Ready

What you should know:

- Program status: Pilot round 1 was fully subscribed (began May 27, 2016) and is now closed. The next round of funding is expected to open by the end of 2017. To express interest, email cassie.cuaresma@sce.com (cc Daniel.mendelson@sce.com and kelli.tang@sce.com) with the service address – they will reach out to you when the program reopens.
- Ideal location: Parking lot with adjacent transformer
- Qualifications: 10 spaces available for charging onsite; must include some workplace charging, in addition to dedicated fleet spaces.
- What is covered: Program provides a rebate for some or all of the cost of L2 station installation. [Rebate calculator](#).
- Ownership: Site host owns, operates, and maintains qualified stations; SCE installs and maintains the supporting electrical infrastructure.
- Cost structure: Time-of-use rate to host (lower costs, depending on the time of day when the charger is used).

How to apply:

1. Have the following documents ready:
 - a. Your Customer Account Number and Service Account Number, if you are currently an SCE customer
 - b. Federal Tax ID Number
 - c. County Tax Assessor Parcel Number (if applicable)
 - d. Name of the Authority Having Jurisdiction (AHJ) to issue building permit approvals (if applicable)
 - e. Proposed charging station location for site (optional)
 - f. PDF of property site plan (optional)
 - g. Civil plan, aka base map, with existing utilities (optional)
2. Submit required forms.
3. SCE evaluates your site.
4. You confirm participation (see participation package [here](#))
5. Together with SCE, design the Site Plan.
6. Construction begins.
7. SCE verifies installation and you get the rebate.

EVgo

What you should know:

- Program status: Open.
- Ideal location: 10 closest parking spaces to the electrical room.
- Qualifications: Site host responsible for purchasing and installing the charger itself (though installing the charger itself is not necessary for participation in this program).
Note: chargers typically cost \$3,000 to \$7,000 on state contract, meaning that a site could have 10 chargers for as little as \$30,000.
- What is covered: The full cost of make-ready installation within any of the three major IOU territories (SDG&E, PG&E, SCE), up to \$30,000 per site. If a site costs more than that, site host can participate the overage cost – EVgo will still cover \$30,000 of it.
- Cost structure: Site host responsible for cost recovery (i.e., if/how much to charge for using the chargers)
- Provides infrastructure for workplace charging, but incidental fleet charging is allowed.

How to apply:

1. Email Kevin Kelleher to express interest: kevin.kelleher@evgo.com
2. Contractor will walk your site to assess its viability. This entails figuring out the cost of the project, which has a lot to do with the electrical capacity of your property and the distance from the electrical room to the parking spaces.
3. After the assessment, the contractor will create a proposal communicating exactly how much the work will cost – whether it will be free of cost to you (the project will cost less than \$30,000) or if you will have to participate some of the cost (if it will cost more than \$30,000) – there is NO OBLIGATION at this stage of the process. The site assessment must be done before you agree or not to proceed with the contract/installation.

Local Incentive Programs

Publicly Owned Utilities (POUs)

If you are served by a publicly owned utility (POU), you are eligible to apply for their incentives.

City of Anaheim Public Utilities Department

Public Access EV Charger Rebate Program

- Up to \$5,000 rebate for L2 or DCFC EVSEs installed at public access locations.
- Up to \$10,000 rebate for L2 or DCFC EVSEs installed at schools and affordable housing locations (maximum of 4 charging stations).
- Application status: closed, but JOIN INTEREST LIST by calling 714-765-4184 or emailing EVRebates@anaheim.net.
- Anaheim will pay the City's permit application fee for the EVSE.
- [Website](#)

Burbank Water & Power

Charging Station Rebate

- Residential and commercial customers who install a L2 charger are eligible for a rebate from Burbank Water & Power.
- Application status: OPEN. Find the application [here](#).
- Up to \$1,000 per EVSE, and up to (4) rebates are available per commercial account.
- Mandatory time of use rates.

Los Angeles Department of Water and Power (LADWP)

Charge Up L.A.!

- Rebates available to compensate commercial (including public agencies) LADWP customers for costs incurred on the purchase of EVSEs.
- Application status: OPEN (expires June 30, 2018)
- Up to \$4,000 rebate for each hardwired EVSE installed. Additional connectors, beyond the first one on the same charger, are eligible to receive an incentive of up to \$750 per connector.
- One L2 rebate is available for a commercial customer that has a minimum of 3 parking spaces available to employees, customers, visitors, or tenants. One additional rebate is available for every 10 additional parking spaces at the same location.
- Maximum of 20 rebates are available per location.
- For application and more information, see LADWP's [website](#).

Pasadena Water & Power

Electric Vehicle Charger Incentive

- Rebate of up to \$400 to customers who purchase and install a qualifying L2 PEV charger.
- Email: solar@cityofpasadena.net
- Application status: OPEN.
- Application instructions [here](#).

SMUD

Workplace Charger Incentive

- Incentive (rebate) for L2s installed in SMUD territory
- Application status: OPEN.
- \$1,500 rebate for each L2 (208/240V) hardwired wall or pedestal mounted EV charger port. Up to 20 incentives available per location.
- Must serve workplace charging needs.
- Since this a rebate, the site host is responsible for installing, operating, and maintaining all of the infrastructure. Once you have proof of completion of the installation, SMUD will give you the rebate.

DCFC Fast Charging Incentive

- Incentives (rebates) for DCFC stations installed in SMUD territory
- Interest list: OPEN.
- \$100,000 rebate for each DCFC project, incentives available for up to 6 projects
- Must serve workplace charging needs.

Air Districts

To determine the air district in which your subject property is located, refer to this [map](#).

Bay Area Air Quality Management District

Charge! Program

- Offers grant funding to help offset portion of the cost of purchasing, installing, and operating new publicly available charging stations at qualifying facilities within the Air District's jurisdiction.
- Application status: OPEN. [Application form](#).
- Up to \$500,000 for public charging stations in total.
- EVSEs must be available to general public.
- Site host must operate for a minimum of 3 years.
- Projects must qualify for at least \$10,000 in Charge! funding
 - Typically can be achieved by deploying at least one DCFC or at least three L2 dual port EVSEs.
- Full [eligibility criteria](#).

San Joaquin Valley Air Pollution Control District

Charge Up! Program

- This [program](#) provides funding for public agencies and businesses in the Valley to install EVSEs for public access.
- Application status: OPEN. [Application](#).
- Up to \$5,000 per L2 single port, up to \$6,000 per L2 dual port, with a \$50,000 annual cap per applicant.
- Funding only available for publicly accessible L2 EVSEs.
- On a case-by-case basis, DCFC applications may be eligible.
- Site host owns, operates, and maintains EVSEs
- Full application guidelines [here](#).

Northern Sonoma Air Quality Control District

3-2-1 Go Green!

- Grant program for community EVSE site hardware and installation in NSCAPCD.
- Application status: OPEN.
- Grant amounts:
 - \$5,000 for each DCFC installed
 - \$2,000 for each L2 charger (240 VAC) installed

- \$1,000 for each L1 charger (120 VAC) installed
- \$3,000 each, or \$15,000 total, for installation
- Application available [here](#).
- Contact: airquality@sonoma-county.org

South Coast Air Quality Management District

Electric Vehicle Charging Equipment Rebates for Non-Profit and Governmental Organizations

- Rebate of up to \$7,500 per charger, with an additional \$5,000 for solar panels associated with the PEVs. Grant funds limited to no more than \$42,500 per site.
- Rebate can cover: equipment costs, including charging stations and solar panels, and installation costs, including electrical upgrades and construction.
- To participate, contact Michael Morris at (909) 396-3282 or mmorris@aqmd.gov
- More information about eligibility and program requirements [here](#).

Other

Transportation Authority of Marin

Electric Vehicle Supply Equipment Grant Program

- Assists public agencies that install employee-only or publicly accessible EVSEs.
- Application status: OPEN
- Up to \$1,500 rebate per L1 charging head, or up to \$3,000 per L2 charging head.
- Limit of (6) charging head grants per agency per year.
- Must be maintained/operated by site host for at least 3 years.
- If networked, the EVSE must use an open-standard protocol for network interoperability.
- If not free, the EVSE must accept credit card as payment and shall not require a subscription fee or membership.
- Eligible Project Costs:
 - Labor and material construction costs
 - Labor and fees associated with cost to obtain permits
 - Equipment and equipment shipping costs
- To apply, reserve your grant with an email to Nicholas Nguyen at nnguyen@tam.ca.gov (include the quantity and estimated date of installation), or call Nicholas at 415-226-0831.
- For more information, see [website](#).

Using Internal Agency/Department Funding

- If unable to secure funds through one of the external programs above, operating funds must be used. In this case, follow home agency's normal construction contracting procedures to purchase both the installation of electrical infrastructure and the chargers themselves.

- DGS can provide construction management services for installation of EVSE. Contact sustainability@dgs.ca.gov to request assistance with your installation.
- Use this [link](#) to search the contract ID (8-digit sequence) and view all relevant information about using the contract, including user instructions.
- Note: if you wish to install basic L1 or L2 EVSEs, you must use either 1-14-61-13B or 1-14-61-13C.

The following EVSEs are on state contract as of June 15, 2017. To find out if more have been added, go [here](#).

- **Envision Solar**
 - Mobile solar charger
 - Paired with any EVSE
 - Mandatory
 - Statewide
 - Open to Local Agencies
 - Contract Administrator: Rudolph Jimenez
- **1-14-61-13B: Pacific Lighting Management, Inc.**
 - Basic L1 and L2
 - Contract dates: 3/1/2014 – 2/28/2018
 - Mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-13C: Broadband Telecom Power, Inc.**
 - Basic L1 and L2
 - Contract dates: 1/6/2015 – 2/28/2018
 - Mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-14A: Broadband Telecom Power, Inc.**
 - Smart L2
 - Contract dates: 10/24/2014 – 10/23/2017
 - Not mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-14B: EV Connect, Inc.**
 - Smart L2
 - Contract dates: 10/24/2014 – 10/23/2017
 - Not mandatory
 - Statewide
 - Open to local agencies

- Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-14C: OP Connect, Inc.**
 - Smart L2
 - Contract dates: 10/24/2014 – 10/23/2017
 - Not mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-14D: Pacific Lighting Management, Inc.**
 - Smart L2
 - Contract dates: 10/28/2014 – 10/27/2017
 - Not mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-14F: ABM Electrical Power Services, LLC.**
 - Smart L2
 - Contract dates: 11/4/2014 – 10/27/2017
 - Not mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-14G: Chargepoint, Inc.**
 - Smart L2
 - Contract dates: 10/29/2014 – 10/28/2017
 - Not mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390
- **1-14-61-14H: Clean Fuel Connection, Inc.**
 - Smart L2
 - Contract dates: 10/29/2014 – 10/28/2017
 - Not mandatory
 - Statewide
 - Open to local agencies
 - Contract administrator: Rudolph Jimenez (916) 375-4390