



Home Electric Vehicle Charger Installation Manual

Contents

Contents.....	1
Charging your Clean Car.....	2
Level 2 Home Charger.....	2
Eligibility.....	4
Acceptable Chargers.....	4
Charging Safety.....	4
Installation.....	4
Licensed Contractors.....	5
Installation Estimate.....	5
Approval.....	5
Reimbursement.....	5
Portable Charger and Pre-paid PEX Charging Card.....	6
Frequently Asked Questions.....	6
Attachment A: Home Charging Installation Estimate Summary Form.....	A:1-3
Attachment B: Home Charger Reimbursement Request Form.....	B:1
Attachment C: Home Charging Invoice Summary Form.....	C:1-3

Charging your Clean Car

The Clean Cars for All (CCFA) program offers additional funding for a Level 2 home charger for your new, used, or leased plug-in hybrid (PHEV) or battery electric vehicle (BEV). Grantees who are unable to install a Level 2 home charger may be eligible in the future for a Level 2 portable charger and a \$1,000 PEX public charging card package Figure 1 below details the three different types of chargers. Availability of these options are dependent on funding and may not be offered if funding is exhausted.

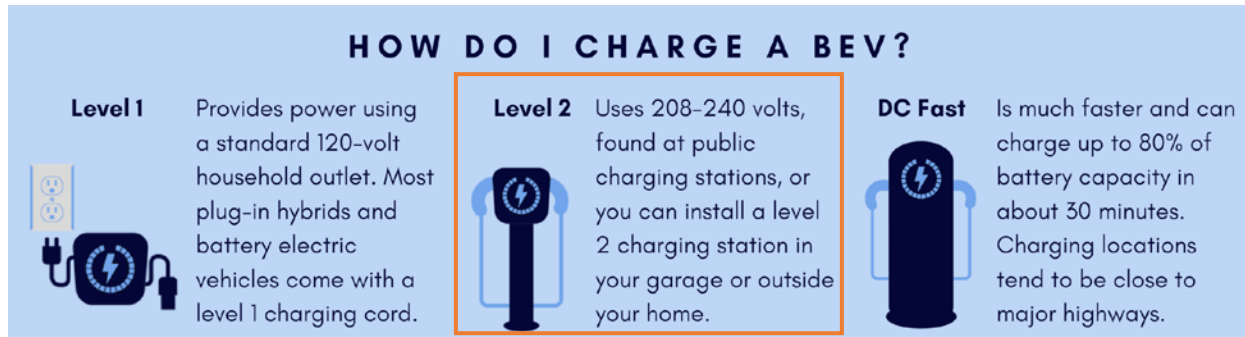


Figure 1. Types of EV Chargers

The time it takes to charge an electric car can vary between 30 minutes or more than 12 hours. There are 5 main factors that affect the time it takes to charge an electric vehicle.

- **Battery size:** The bigger your vehicle's battery capacity (measure in kWh), the longer it will take to charge
- **State of charge (empty vs. full):** A battery that is empty will take longer to charge than a battery that is 50% full.
- **Maximum vehicle charging rate:** Not all vehicles can charge at the same rate. Vehicles have a maximum charge rate that they can accept. For example, if your vehicle's maximum charge rate is 3.3 kW, you won't charge any faster by using a 7kW charger.
- **Maximum rate of charger:** The time it takes to charge also depends on the charging rate of your charger. For example, even if your vehicle can charge at 11kW, it will only charge at 7kW on a 7kW charger.
- **Temperature:** A colder ambient temperature can increase charging times, especially when using a DC Fast charger.

Level 2 Home Charger

The following sections outline the eligibility, installation, and reimbursement processes you must follow to receive up to \$2,000 for a Level 2 home charger. Figure 2 below outlines the steps you must take to receive this rebate.

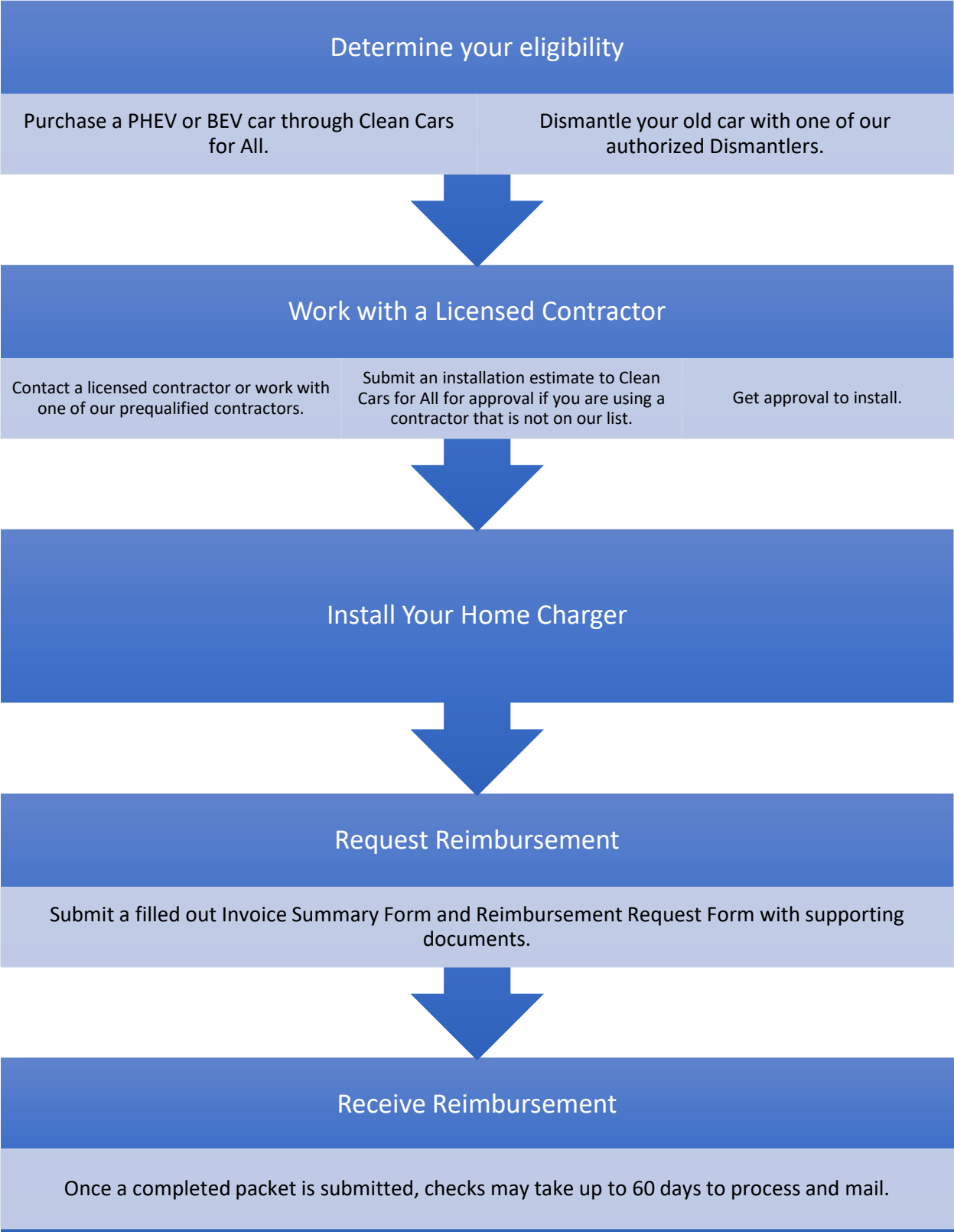


Figure 2. Home Charger Installation and Reimbursement Process

Eligibility

In order to be eligible, you must be a CCFA grantee that has purchased a PHEV or BEV through the CCFA program **and** you must have completed your post-inspection and scrapped your vehicle. Grantees must install a Level 2 home charger within 90 days of purchasing their replacement vehicle. Exemptions may be granted on a case-by-case basis.

If you are interested in a Level 2 home charger, contact GRID Alternatives at 855-256-3656 or CleanCars@gridalternatives.org for more details.

Acceptable Chargers

All home chargers must be a Level 2 charger that's supplied by a dedicated 208 volt or 240 volt supply circuit.

Level 2 home chargers typically cost between \$500-\$700. The Level 2 home charger may either be purchased by the grantee or contractor. There is no maximum price for the Level 2 home charger a grantee can purchase, however, total reimbursement is capped at \$2,000 and grantees may only purchase one Level 2 charger. The following items are eligible for reimbursement from CCFA:

- Level 2 charger
- Labor costs to prepare site and install charger
- Permitting costs
- Panel and Sub-panel Upgrades
- Material costs including, but not limited to conduit, wire, breakers, miscellaneous fittings and connectors

Level 2 home chargers must deliver a minimum of 16 amps. Keep in mind that Level 2 home chargers that are below 40 amps require a significantly higher amount time to charge your electric vehicle.

Charging Safety

Charging an electric vehicle is very safe and easy when done with proper, independently certified equipment. Underwriter's Laboratory (UL), is a nationally recognized testing laboratory that performs extensive laboratory safety testing that products must pass before they can be safety certified and made available to the public for sale. We recommend all grantees purchase a UL-listed charger that meet strict safety standards and have undergone rigorous testing.

Installation

Level 2 home chargers can be plugged into an existing 208 volt or 240 volt NEMA outlet, however, if there isn't one available, grantees may use the rebate to install an outlet or have the charger directly hard wired to an electric service panel.

Any required permits must be secured, and any work done must be coordinated with utility companies and permitting agencies as required by state and local laws. Required permits and associated costs must be submitted in order to receive reimbursement.

Grantees must either be the property owner of the residence where the charging station is installed or they are required to receive permission from the property owner (e.g. landlord, homeowners association, etc.).

Licensed Contractors

The Air District will establish an Authorized Contractor list¹; however, grantees may use a contractor not on the list only if the selected contractor holds and maintains a valid California State License Board (CSLB) C-10 or C-46 License. Contractors on the Authorized Contractor list will not need approved estimates and will be reimbursed directly by the Air District.

Grantees that use a licensed contractor not on the Authorized Contractor list will need their estimates approved by GRID Alternatives or Air District staff prior to any work being done (see Installation Estimate section below). Grantees will pay the licensed contractor directly for the invoice balance after the installation is completed. The Air District will not directly reimburse contractors that are not on the Authorized Contractor list and will directly reimburse grantees when a reimbursement request with all required documentation is submitted. Reimbursement may take up to 60 days to process.

Installations performed by non-licensed contractors are not eligible for reimbursement. Grantees should check their contractor's license number and verify that it is current and active. Here's a link to where you can verify your contractor: <https://www.cslb.ca.gov/onlineservices/checklicensell/checklicense.aspx>

Installation Estimate

Grantees who use a contractor not on the Authorized Contractor list must get their estimates approved by a GRID Alternatives Case Manager or Air District staff prior to installation. To get approval, submit the Installation Estimate (Attachment A) form along with the contractor's official estimate to cleancars@gridalternatives.org. The Installation Estimate form can be found in Attachment A below. The Grantee's full name and installation address should appear on the estimate.

Approval

Once you have received approval from GRID Alternatives or Air District staff to move ahead with installation, you may proceed with the licensed contractor that provided the estimate. If you decide to use a different contractor than the one you received approval for, you must submit a new Installation Estimate form to receive another approval. Minimal changes to the scope of work and home charger selection after an estimate approval do not require resubmission but must be reflected on the Home Charging Invoice Summary Form (Attachment C) and on supporting documents with the final reimbursement request.

Reimbursement

Once a Level 2 home charger is installed, Grantees must ensure that they receive a valid itemized invoice and proof of payment from the licensed contractor. Grantees must submit a completed Reimbursement Request Form (Attachment B), Invoice Summary Form (Attachment C) signed by the grantee and licensed contractor, and supporting documents (itemized invoices, proof of payment, permit, and

¹ At the time this Manual was published, the Authorized Contractor List was still in development and is estimated for release in Fall 2020. Please contact cleancarsforall@baaqmd.gov for updates.

photo) within 14 days of the installation completion date or final payment of the invoice. Exemptions will be evaluated on a case-by-case basis (see Attachments B and C).

The Grantee must also submit a photo of the installed charger at their home. If a grantee purchases a portable charger, the charger must be plugged into the existing NEMA outlet.

Reimbursements shall not exceed the final amount invoiced for the complete installation of a residential Level 2 home charger or \$2,000, whichever is smaller.

Reimbursement checks will be mailed out by the Air District within 60 days of receiving a correctly filled out Reimbursement Request Form (Attachment C), Invoice Summary Form (Attachment C) and required supporting documents.

Portable Charger and Pre-paid PEX Charging Card

Still under development. If you are interested in a portable charger or public charging card, contact us a [CleanCarsforAll@BAAQMD.gov](mailto:CleancarsforAll@BAAQMD.gov).

Frequently Asked Questions

Can I install a used charger?

No, all equipment must be new.

Can I install a Level 1 or DC Fast charger?

No, Clean Cars for All will only reimburse for the installation of a Level 2 charger.

I am a handy person or licensed contractor; can I install my own charger and get reimbursed for my time?

No, grantees are not permitted to install their own home charger.

Can I get reimbursed for installing a charger at a different location than the address I used to apply to Clean Cars for All?

No, you may not install a charger at a different address than your home. However, if a compelling reason exists for a different installation location, you may request an exemption by emailing cleancars@gridalternatives.org.

Do I have to pay for the installation and wait for reimbursement, or will Clean Cars for All pay the contractor directly?

If you use a contractor on the Authorized Contractor list (estimated to be released in Fall 2020), the Air District will reimburse the contractor directly. If you choose to use your own licensed contractor, you must pay for the installation up front, and the Air District will mail you a reimbursement check once we receive a correct Reimbursement Request Form and all eligibility requirements have been met.

Do I need to pay taxes?

Funding from this program is required to be reported as taxable income. You will receive a 1099-G for the reimbursement costs.



Home Charging Installation Estimate Summary Form

Submit this form along with the official contractor estimate to cleancars@gridalternatives.org for approval before beginning your installation. This form summarizes the cost estimates for a Level 2 electric vehicle supply equipment (EVSE) installation and should be completed by the contractor and signed by both the contractor and grantee.

Contractor Information	
Business Name	
C-10 License Number	
Contact Name	
Business Address	
Phone Number	
E-mail Address	
Estimate Date	
Charger Costs*	
Make	
Model	
Amperage	
Price	
Sales Tax	
Shipping and Handling (if applicable)	
Total	

Installation Costs	
Number of Hours	
Hourly Rate (if available)	
Total Labor Costs	
Permit Costs*	
Material Costs	
Total	
Grantee Information	
Grantee Name	
Project Number	
Installation Address	

* If the charging station is not purchased by the contractor, include a screen shot of the charging station that includes the price and equipment specifications.

**If applicable permit fees are not available at the time of the estimate, they must be included with the Home Charging Invoice Summary Form.

- Confirm that the CCFA replacement vehicle is a battery electric or a plug-in hybrid vehicle.
- Confirm that EVSE is a Level 2 charger with a minimum 16 amps.
- Confirm that EVSE is supplied by a dedicated 208 volt or 240 volt supply circuit.
- Confirm that EVSE installation will be either hard wired directly to an electrical service panel, utilize a pre-existing NEMA receptacle, or installation of a new NEMA receptacle, to be indicated on EVSE installation contractor estimate.
- Confirm that (1) amperage supplied to EVSE is at or above 40 amps, to be indicated on EVSE installation contractor estimate, OR (2) amperage supplied to EVSE is below 40 amps
- Provide EVSE installation cost estimate from licensed contractor to include items listed above and the following additional items:
 - Participant’s name, installation location, load calculations (demonstrating that the supply circuit and electrical service panels are sized for continuous EVSE load), equipment specification sheets for EVSE equipment, itemized costs or estimated costs for components, labor cost, and identification of permits necessary for Level 2 charger installation. If EVSE is not purchased from EVSE installation contractor, a separate cost estimate from EVSE equipment supplier must be provided; in this case, the EVSE installation contractor estimate must still identify the EVSE equipment to be installed by name and model number.

Comments:

Contractor Signature REQUIRED:

I, _____ verify that I have completed the EVSE Installation Estimate Summary Form and confirm all the above are correct and true. I understand that the EVSE Installation Estimate Summary Form is just a summary of the estimate and not a contract.

Signature: _____ Date: _____

Grantee Signature REQUIRED:

I, _____, understand that the EVSE Installation Estimate Summary Form is just a summary of the estimate and not a contract. I also understand that if the proposed installation provides amperage less than 40 amps for electric vehicle charging that this amperage level may significantly increase the time required to fully charge my vehicle.

Signature: _____ Date: _____

(Page intentionally left blank)



Clean Cars for All Home Charger Reimbursement Request Form

Grantee Name: _____

Home Address: _____

Address of Home Charger: _____

(If this is different than your Home Address, you must include an email from the Air District approving installation at another address.)

Date Installation Completed: _____

Total Project Costs (installation, charger, permit costs): \$ _____

Total amount requested for reimbursement (max \$2,000): \$ _____

Please check the boxes that apply to you and sign below.

I have purchased a Plug-in Hybrid or Battery Electric Vehicle through the Clean Cars for All Program.

I took my old car to an Authorized Dismantler prior to the installation of my Home Charger.

I have attached a photo of my installed Home Charger.

I have attached a copy of any required permits.

I have attached an itemized Invoice and Proof of Payment, that includes the following information:

1. Brand of charger (with kWh or amperage)
2. Charger costs
3. Labor costs
4. Materials costs
5. Permitting costs (if applicable)
6. Taxes and shipping costs
7. Total costs
8. Address of installation site and grantee's full name
9. Contractor name, business address, and license number
10. Proof of payment (e.g. receipt, copy of check, deposit slip, paid invoice with \$0 balance)

I have installed my Home Charger at a different location than the address I put on my Clean Cars for All application and have attached an email with approval for this change.

(Page intentionally left blank)



Home Charging Invoice Summary Form

Only complete this form if nothing has changed since your contractor provided your home charger installation estimate for your electric vehicle supply equipment (EVSE) installation. If this is the case, you must still submit official invoices for the charging equipment and completed installation along with Attachment B – Reimbursement Request Form.

Charger Costs	
Make	
Model	
Amperage	
Price	
Sales Tax	
Shipping and Handling (if applicable)	
Total	
Installation Costs	
Number of hours	
Rate per hour (if available)	
Total labor costs	
Permit costs	
Material costs	
Panel or subpanel upgrade	
Taxes	
Total	



Please attach the contractor estimate that includes a description of work to be performed with this summary.

- Confirm that the CCFA replacement vehicle is a battery electric or a plug-in hybrid vehicle.
- Confirm that EVSE is a Level 2 charger with a minimum 16 amps.
- Confirm that EVSE is supplied by a dedicated 208 volt or 240 volt supply circuit.
- Confirm that EVSE installation will be either hard wired directly to an electrical service panel, utilize a pre-existing NEMA receptacle, or installation of a new NEMA receptacle, to be indicated on EVSE installation contractor estimate.
- Confirm that (1) amperage supplied to EVSE is at or above 40 amps, to be indicated on EVSE installation contractor estimate, OR (2) amperage supplied to EVSE is below 40 amps
- Provide EVSE installation itemized invoice from licensed contractor to include items listed above and the following additional items:
 - Participant's name, installation location, load calculations (demonstrating that the supply circuit and electrical service panels are sized for continuous EVSE load), equipment specification sheets for EVSE equipment, itemized costs or estimated costs for components, labor cost, and identification of permits necessary for Level 2 charger installation. If EVSE is not purchased from EVSE installation contractor, a separate cost estimate from EVSE equipment supplier must be provided; in this case, the EVSE installation contractor estimate must still identify the EVSE equipment to be installed by name and model number.

Comments (e.g. what has changed since the estimate was made, extenuating circumstances, etc.):



CLEAN CARS FOR ALL

Contractor Signature REQUIRED:

I, _____ verify that I have completed the Invoice Summary Form and confirm all the above are correct and true. I understand that the Invoice Summary Form is just a summary of the invoice(s) and not a contract.

Signature: _____ Date: _____

Grantee Signature Required:

I, _____, understand that the Invoice Summary Form is just a summary of the invoice(s) and not a contract. I also understand that if the proposed installation provides amperage less than 40 amps for electric vehicle charging that this amperage level may significantly increase the time required to fully charge my vehicle.

Signature: _____ Date: _____