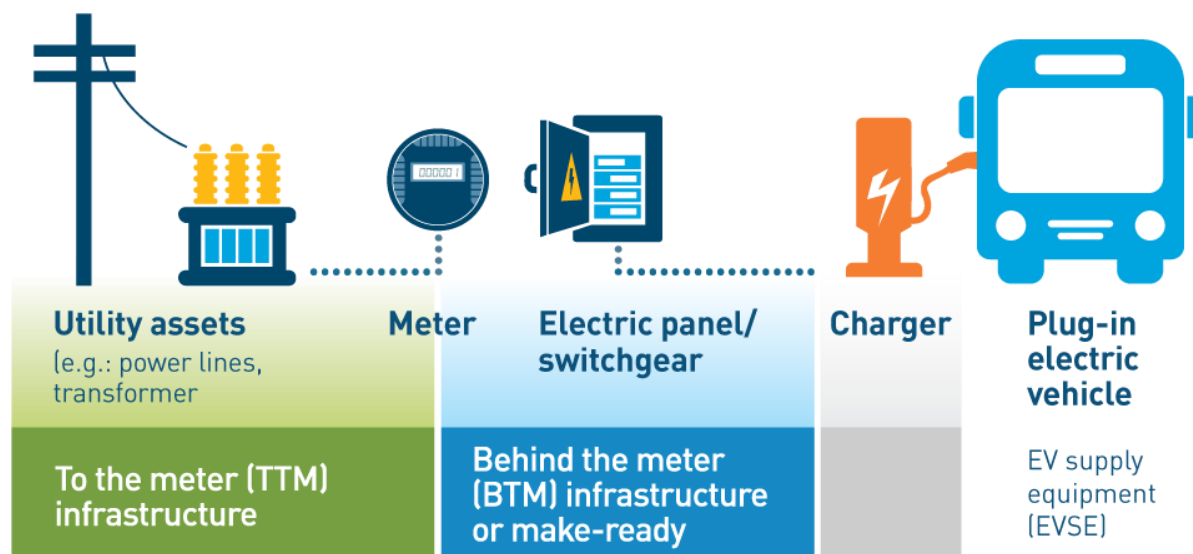


Behind the Meter Infrastructure Design Guidance



Thank you for your interest in the EV Fleet Program! If you participate in this program, PG&E will design, build, and pay for all of the infrastructure up to the utility meter, also called “to the meter” infrastructure or TTM. **You will be required to find qualified contractors to design and build the infrastructure from the meter to the EV charger, called the “behind the meter” infrastructure or BTM.**

This document will give you guidance on how to find a qualified professional to design your BTM infrastructure. **You will need to hire a qualified BTM design contractor before PG&E will issue you a contract for participation in the EV Fleet Program.** You will also need to find a qualified construction contractor at a later date, which is not covered in this document.

What are the minimum qualifications for my BTM design contractor?

Your BTM design contractor must be a professionally licensed electrical engineer. You will need a licensed engineer to sign off on your site drawings when applying for required permits with your local jurisdiction.

How can I find a qualified BTM design contractor?

Try using a search engine and typing in phrases like “EV charging project electrical engineer”. You can also look at the following websites for electrical engineers in your area (can change location at the top of the page):

- [Diamond Certified](#)
- [The Blue Book Building and Construction Network](#)
- [The Better Business Bureau](#)
- [Angi \(formerly Angie's List\)](#)

What questions should I ask the contractor or electrician in order to evaluate if they are suitable to get the job done?

First, make sure that the contractor or electrician is familiar with [PG&E's Greenbook](#), local jurisdiction guidelines about new construction, and the National Electric Code. In addition, we recommend you ask the contractor or electrician the following:

- Have you completed nonresidential EV charging projects before?
- Can you show me some examples of similar projects that you have completed?
- Can you give me any references?
- Are you familiar with PG&E's Greenbook and my local jurisdiction? Or have you completed electrical projects involving PG&E and my local jurisdiction?

How can I tell if the price quoted by the contractor or electrician is competitive?

Obtain quotes from multiple vendors for a comprehensive comparison.

Check the following:

1. Will the design include everything that is needed from the switchgear/meter panel all the way up to the charging station?
2. Will the vendor provide you with permitting support?
3. How will the vendor address design changes if the need arises?

Do I need to submit the BTM design to my PG&E Project Manager?

Yes. Once you sign a contract with the EV Fleet Program, you will need to submit the BTM design to your PG&E Project Manager for engineering technical review.

When does my BTM infrastructure need to be constructed by?

PG&E will not begin construction of the TTM portion of the work until after your BTM infrastructure has been constructed and inspected (meter must be green-tagged). Please contact your PG&E Project Manager regarding any questions, concerns, or delays.

How much will my BTM infrastructure cost?

BTM costs can vary a lot depending on site characteristics, so please work with your BTM design contractor for a cost-effective solution for your site. The **BTM Infrastructure typically costs between \$200k and \$500k** before incentives are issued, depending on the size and complexity of your project.

Factors that may impact the cost of your BTM project:

- **Project size** – Projects with more chargers tend to cost more overall but are cheaper per charger. Likewise, sites that have only a handful of charges may be less expensive overall but cost more per charger.
- **The location of your chargers** – Chargers that are located far from the PG&E meter will require more excavation and materials to run the electrical service, which generally cost more money.
- **The location of your site** – Sites that are remotely located may pay higher rates because the contractor's workers and equipment will have to travel farther to get to you. Sites in the Bay Area may see higher construction costs as well because of the high cost of labor in that region.
- **Your charger selection** – Sites with a lot of load will require a larger switchgear, which is more expensive and may take a long time to be delivered once ordered. Additionally, sites that have a mix of Level 2 and DC Fast Chargers may require extra equipment, such as a step-down transformer, which will increase your project cost.

Please remember that as a part of the EV Fleet Program, you may receive a monetary incentive to offset the cost of your BTM construction.

Does my contractor or electrician need to also purchase and install my chargers?

This is optional and up to your discretion. You may purchase the chargers, or your contractor or electrician may purchase the chargers on your behalf. If you prefer your contractor or electrician to purchase the chargers, ask your contractor/electrician if they have experience doing so to ensure you are working with an experienced contractor/electrician in the electric vehicle space.

What else do I need to know?

- **Permits and Easements** – Program participants should check if they have the necessary permits and easements required to start construction.
- **Changes to the design** – Your design engineer or contractor may suggest that you make changes to your project scope or location after a contract has already been signed with the EV Fleet Program. Changes to the number of chargers, power level of the chargers, or

location of the meter panel are not allowed once a contract is signed except under rare circumstances. Please note that any requested changes to the project may result in additional costs to you and could impact your eligibility for the program.

- **Switchgear procurement** – Your switchgear is the piece of equipment that interfaces between the PG&E meter and your BTM infrastructure. Because of ongoing supply chain challenges, switchgears often take a year or more to arrive. Please make sure you are ready to purchase your switchgear as soon as your contract is signed to avoid delays in your project.