California Electric Transportation Coalition

# MEDIUM- AND HEAVY-DUTY ELECTRIFICATION PROCESS

Electric vehicle (EV) charging infrastructure will need to be deployed at a massive scale to meet California's goal of transitioning medium- and heavy-duty (MHD) trucks to zero-emission EVs. Open and frequent communication between the utility and customer is an essential part of the electrification process. This summary provides a simplified overview of the coordination between the utility and customer that is necessary to install infrastructure for MHD EVs.

## Vehicle Deployment Plan

The process to electrify MHD trucks begins with the customer developing a vehicle deployment plan that includes the vehicle acquisition schedule and the proposed charging infrastructure solution. Developing this **vehicle deployment plan** may require:

- Customer support from a private consultant or electrical engineer as the charging infrastructure solution may be a combination of the types of chargers, managed charging techniques, and any planned battery storage or self-generation, e.g. solar.
- Essential information on the customer's expected timing of charging infrastructure build out and the incremental electricity load the customer will need from the utility.

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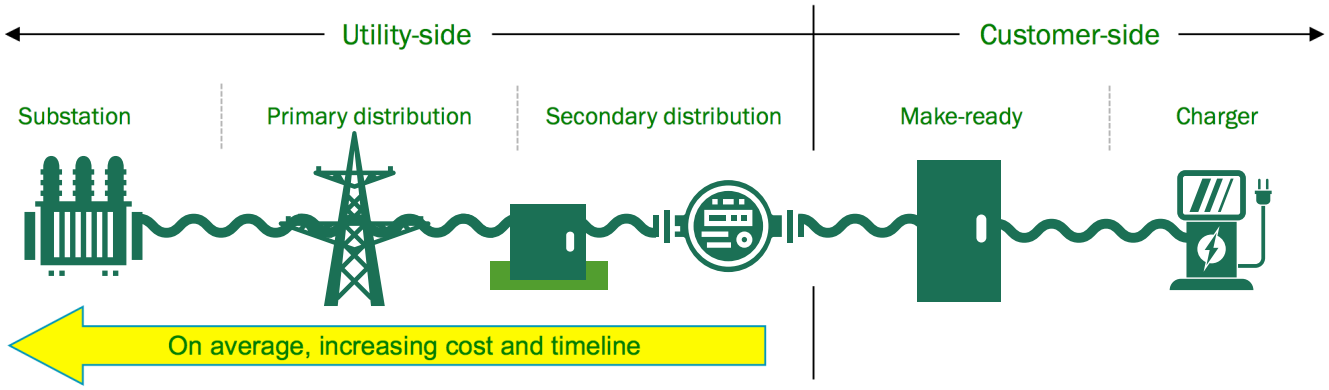
## Preliminary Engineering Design

The customer's initial service request to the utility will require the customer to provide the utility with information and plans for the project in a **preliminary engineering design** that includes details of the project's characteristics:

- The amount of additional power the project will require,
- The location of the charging infrastructure,
- Some utilities allow the customer to propose a utility-side project design, which is subject to review and approval by the utility, and
- The customer may need to pay the utility an engineering fee, but this fee is not universal.




**The utility uses the customer's preliminary engineering design to review the utility-side infrastructure needs, determine whether a utility-side upgrade will be necessary, and if so, design the utility-side upgrade.**

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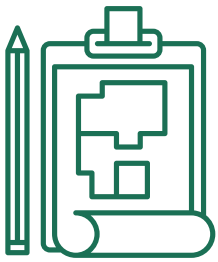
## Assessing Environmental and Property Issues

Finalizing the customer- and utility-side charging infrastructure design requires **reviewing the site's environmental and property issues**:

- The customer will need to apply for and secure the necessary permits and determine whether an additional easement will need to be granted to the utility.
- The utility will need to conduct a field verification of existing utility-owned infrastructure to ensure safety, job coordination, and identify the necessary utility procedures and equipment installations.



## Final Plans and Approved Permits

A considerable amount of work is needed to design and permit the customer- and utility-side infrastructure projects, however, once the **final plans are approved and permits acquired**:

- A pre-construction meeting may be required to coordinate the stages of construction, discuss timelines, and inspect the property.
- Once construction is complete and the meter is installed, the site will need to pass its final inspection, and upon approval, the site can begin commercial operation.

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## Timelines for Completion

**Timelines for completing charging infrastructure projects** can vary significantly depending on the size, location (on site versus in the public right-of-way), uniqueness of the project, and the existing utility- and customer-side electricity infrastructure. The following are estimated timelines:

- Three to eight months for the preliminary design phase;
- Six and ten months for the final design and construction phase, which is highly dependent on the size and location; and
- 24+ months for the final design and construction phase for large and complex projects, for example 5-10 MW projects.

## Support for Infrastructure Buildouts

Utilities may offer **support for MHD EV infrastructure buildouts** through SB-350 or other incentive programs. The support is intended to help customers navigate the charging infrastructure installation process, develop plans, such as engineering designs, and cover a portion of the costs. More information can be found at the links below and customers are encouraged to contact their utilities for more information about these programs.

- **PG&E EV Fleet Program**
- **SCE Charge Ready Transport Program**
- **SDG&E Power Your drive Program**
- **SMUD Commercial Fleet Pilot**
- **LADWP Commercial EV Charging Station Rebate Program**

**Please contact Kristian Corby at kristian@caletc.com if you have any questions or for more information on utility programs.**