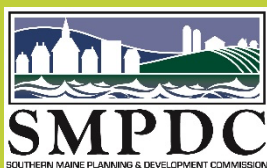


PERMITTING & INSPECTIONS

Municipal EV Readiness Toolkit

2021

Southern Maine Planning & Development Commission
& Maine Clean Communities Coalition



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How to use this guide

Maine municipalities can support the development of Electric Vehicle (EV) infrastructure by simplifying and clarifying permitting and inspection processes for EV Charging Stations (EVCS). This guide provides an overview of the current state of EVCS permitting and inspections in Maine. It also details the permitting and inspection best practices that municipalities can employ regarding EV infrastructure.

Permitting and inspecting EVCS in Maine

With the increase in EVs driven by Maine's residents and visitors, EV charging stations are becoming common sights along Maine's roadways and parking lots. As a result, municipalities are increasingly required to process and approve applications for EVCS installations. EVCS may be installed by municipalities, commercial businesses, institutions, and residents. Installations may be as simple as a standard outlet and dedicated electrical circuit or may require significant system upgrades such as new converters and electrical panels.

Because EVCS are electrical equipment, EVCS must comply with the currently adopted edition of the National Electrical Code (NEC) and any amendments made by the state. NEC Article 625 covers "the electrical conductors and equipment external to an electric vehicle that connect an electric vehicle to a supply of electricity by conductive or inductive means, and the installation of equipment and devices related to electric vehicle charging." It includes requirements on equipment construction and installation design. In July 2021, Maine adopted the 2020 edition of the NEC. The 2020 edition of the NEC contains many significant updates to Article 625 that clarifies the terminology and requirements for EVCS. The Electrician's Examining Board also [amended the article](#) to allow for the installation of smart chargers that can split and regulate the electrical load to prevent circuit overloading.



An electrical permit and inspection are required for EVCS installations in most situations. In Maine, electrical permits and inspections are managed either by a municipality or the State, depending on the capacity and requirements of each municipality. In general, there are three different electrical permitting systems in place:

1. A municipality manages all electrical permitting and inspections.
2. A municipality manages electrical permitting and inspections for some land use types (ex. Single Family Dwellings) but allows the state to oversee permitting and inspections for other land uses (ex. Commercial and Industrial).
3. A municipality does not oversee any electrical permitting and inspections. In this case, the state manages all electrical permits and inspections but **does not** require any permits for Single Family Dwellings.

The Maine Electrician's Examining Board (EEB) is responsible for overseeing electrician licenses, issuing permits, and managing inspections across the state. The EEB curates [a list of towns that manage some or all of their electrical permits](#).

The following section presents the best practices municipalities that oversee electrical permitting can employ to simplify and clarify permitting and inspection processes for EV charging stations. An overview of state level electrical permitting requirements is provided in Appendix A. For those municipalities that do not manage any electrical permitting, Best Practice 2, "Make the process for permitting clear and transparent", is important for helping your residents and commercial property owners comply with state level requirements.

Best practices

Municipalities that manage their own electrical permitting and inspections are responsible for ensuring the safe installation of EV charging stations. According to EVCS providers, expensive, complex, protracted, and/or non-uniform permitting and inspection procedures are a significant barrier to charger installations. Delays and confusion can result in residents and businesses giving up on EVCS installations. In Maine, the state has not yet issued any guidance on how municipalities should be permitting and inspecting EV charging stations.

To encourage and expedite EVCS installations, permitting and inspection processes should be designed to:

1. Clarify the requirements for EV charging stations
2. Simplify the permitting and inspection process, and
3. Ensure permitting fees do not place a significant cost burden onto the EVCS owner.

Best practices for EVCS permitting and inspections include:

1. Create a separate permit for EV Charging Stations

To clarify the permitting process for EV charging stations, Maine municipalities may choose to create a specific permit for EV charging stations. The EV charging station permit would be used instead of having applicants use the standard electrical permit form. Doing so helps applicants understand the requirements for EV charging stations and makes it easier to apply. This is particularly important for multi-family and commercial EVCS installations which might require more documentation such as site plans. It also allows the municipality to better track the installation of EV charging stations to meet community-wide EV infrastructure goals.

Example EV permit forms include:

- [Connecticut Electric Vehicle Charging \(EVC\) Station Uniform Permit Application](#)
- [City of Irvine, CA EVCS Permit Application for Single Family Dwelling](#)

Alternative: Specifically call out EV charging station as a work item in the municipality's electrical permit.

(Example: [Town of Scarborough Electric Permit](#))



2. Make the process for permitting clear and transparent

It is helpful for municipalities to clearly identify where to find the EVCS or electrical permit application, permitting steps and associated timelines, permitting fees, and the municipal point-of-contact. Efficient identification helps applicants navigate through the application and any plan review process. It also ensures that applicants can gather all necessary documentation before permit submission, making permit application review faster. Municipalities can do this by:

- Clearly describing the permitting process on the Code Enforcement website (including fees, timeline, and required application materials for different kinds of installations)
 - Examples: [City of Fremont, CA EVCS permitting page](#) and [Schaumburg, IL EV Charging Station Page](#)
- Creating a guidance document or factsheet for permitting and inspecting charging stations at single family dwellings, multi-family dwellings, and commercial locations.
 - Examples: [City of San Diego Permit Guide](#), [City of Atlanta Permitting Process](#), and [City of Houston Permit Guide](#)
- Ensuring that guidance materials specify the permit requirement differences between single family dwellings, multi-family dwellings, and commercial EVCS installations as well as any specific requirements for Level 3 or DC fast chargers.
 - Example: [Prince Georges County, MD Guidelines for Permitting Electric Vehicle Charging Stations](#)

3. Standardize the permit review and inspection process

A permit review checklist should be used by code enforcement officers and their staff when reviewing and evaluating EVCS permits. A checklist ensures complete, consistent, and efficient review of EV permit applications.

Example EVCS permit checklists include:

- [City of Oxnard, CA Permit Application and Plan Review Checklist for Electric Vehicle Charging Station \(EVCS\)](#)
- [City of Atlanta, GA Electric Vehicle Plan Review Checklist \(Commercial\)](#)

An inspection checklist ensures that electricians can provide more consistent applications, plans, and charging station installations and that inspections comply with the currently adopted electrical code.

Example EVCS inspection checklist:

- [County of San Luis Obispo Electric Vehicle Supply Equipment \(EVSE\) Inspection Checklist](#)

4. Offer options to submit permit applications electronically

While not all municipalities have the resources to implement online permitting, doing so can decrease applicant wait times and reduce the staff time needed for permit review and administration.

Examples: [City of Houston, TX online permit platform](#) and [City of Irvine, CA EVCS Permit Application for Single Family Dwelling](#)

Alternative: Provide fillable PDF permit applications on the Code Enforcement Office website. This decreases applicant wait times at the permit counter and helps standardize and clarify the permit process.

5. Reduce and standardize permitting and inspection fees

Maine municipalities have the authority to set their fee structures for electrical and other permits. As a result, fees may be inconsistent and vary widely, confusing applicants and contractors.

To increase EV infrastructure, EVCS permit fees should be low cost and standardized. This is particularly important for residential and multi-family EVCS installations to ensure the affordability and accessibility of EVCS to low-income community members.

Examples:

- [City of Houston, TX](#) has standard fees for Level 1, Level 2, and Level 3 charging stations.
- [Town of Scarborough, ME](#) has a standard \$30 fee for an EV charger

Bonus: Adopt a permit fee incentive or waiver for EV charging station installations. The [City of Encinitas, CA](#) provides an “energy efficiency permit fee waiver” for residential EVCS applications.

HOUSTON PERMITTING CENTER

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Electrical Vehicle Charging Outlets Permit ☆

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ELECTRICAL INSPECTIONS - HPWCODE1056

ABOUT APPLY PLAN REVIEW INSPECTIONS

City of Houston online permitting platform for EV Charging stations

Required	Required	NOT Required
FEE Level 1: \$83.23; Level 2: \$89.18; Level 3: \$95.12	ADMIN FEE \$29.72	PLAN REVIEW FEE May be subject to valuation plan review
	VALID PERIOD 180 days	PROCESSING TIME Subject to online processing or in person sales window

HOUSTON PUBLIC WORKS
Electrical Inspections
📍 1002 Washington Ave., 4th Floor
Houston, TX 77002
📞 832.394.8860
✉️ hpcelectricalsection@houston.tx.gov
🕒 8 am to 4:30 pm



Appendix A: Current state of Maine electric permitting requirements for EVCS

State-level electrical permits are managed by the Electrician's Examining Board (EEB). In municipalities where the state manages all or some of the electrical permitting, a state permit and inspections are required for EVCS installations. The exception to this is for single-family dwellings. For municipalities that do not have their own permitting and inspections, residents of single-family dwellings only need to obtain a certification of the electric work. All EVCS installations must conform with the National Electric Code 2020 Article 625.

For all other EVCS installations, state electrical permits may be obtained by a licensed electrician from the EEB [online permit platform](#). There is no specific EVCS permit and there are currently no plans to adopt a specific EVCS permit at the state level. The current permit process is the same for Level 1, Level 2, and Level 3 chargers. According to the Senior State Electrical Inspector, permit processing times are quick, taking as little as thirty minutes.

Electric permit fees (not required for single-family dwellings) for EVSC are a minimum of \$75. There are additional charges for each new service (\$7.50), panel (\$7.50), and outlet (\$0.50 each). In general, state fees are low compared to Maine's municipal electric permitting fees.

For those municipalities that utilize state permitting, efforts should be made to make the permitting process clear and transparent (Best Practice 2). Specifically, the municipal website and other guidance materials should clearly indicate:

1. Which land uses require a municipal permit, which require a state-level electrical permit, and which installations only require certification (i.e. single-family dwellings)
2. Links to the [Electrician Examining Board website](#) and the [online permit application](#)
3. Contact information for the [State electrical inspector](#) in your jurisdiction