



Executive Summary

Planning and Zoning Guidance for Electric Vehicle Charger Deployment October 2023

This is a summary of the [Planning and Zoning Guidance for Electric Vehicle Charger Deployment](#)¹ developed by RMI and The Interstate Renewable Energy Council (IREC), under the direction of the Sustainable Energy Action Committee (SEAC). The guidance provides information and actionable recommendations that municipalities and other Authorities Having Jurisdiction (AHJs) can use to make local approval processes for siting and installation of electric vehicle (EV) charging infrastructure clear, predictable, and equitable. The full document contains specific case studies and references for each of the recommendations presented below.

Local government permitting approval is a key element of local EV readiness. There are three major parts to permitting approval:

1. Building and electrical code compliance
2. Planning and zoning review
3. Approval process

Interviews with national EV charging providers indicate that planning and zoning reviews are the greatest bottlenecks to local government permit approval. Therefore, this guidance focuses on planning and zoning issues, and related application and approval processes.

The planning and zoning process covers:

1. Planning Documents
2. Zoning and Use Designation
3. Parking Requirements
4. Design, Aesthetics, Equipment Location
4. On-street charging

Parking requirements include subcategories for parking counts, charger accessibility, and EV charger readiness. EV charger readiness addresses EV Capable and EV Ready ordinances.

Many local plans, zoning ordinances, and other regulations are unclear and do not contain provisions for EV chargers, resulting in both the AHJ and the project developer spending unnecessary and significant time and effort on their projects. A more transparent and less time-consuming approval process will result in more EV chargers installed at a lower cost per charger for both parties.

Planning Documents

Challenges: Municipal planning documents often do not address EV chargers. The absence of EV chargers from municipal planning documents (such as comprehensive or general plans, capital improvement plans, climate action plans, transportation plans, design guidelines, municipal codes, and zoning codes) can result in little or no regulatory guidance for AHJs. As a result, what

¹ <https://tinyurl.com/EV-Guidance>

should be a predictable and transparent process to regulate EV charger development can be difficult and time-consuming.

Recommendations:

- Local jurisdictions should address EV chargers in comprehensive plans, supporting plans, zoning codes, and design guidelines in a manner that equitably serves the community.
- Planners should conduct an inclusive planning process, paying particular attention to residents who do not have access to dedicated off-street parking.
- AHJs should collaborate with regional planning organizations and utilities as part of the planning process.
- AHJs should inventory existing and proposed locations of public EV charging infrastructure.

Zoning and Use Designation

Challenges: Zoning codes often do not reference or properly categorize EV supply equipment (EVSE). Zoning officials may misclassify charging stations as traditional gas fueling stations, or they may conclude that a property is not zoned for hosting a charging station, or that a zoning classification for a charging station does not even exist. This misclassification can trigger zoning reviews and result in delays that can add months to the lifetime of a project and increase its cost significantly. For local governments, these misclassifications cause staff to spend extra time interpreting and applying codes to EV charging projects.

Recommendations:

- Local governments should adopt zoning language that defines the terms and requirements associated with EV charging.
- In most cases, ordinances should classify EV chargers as an accessory use to a site, not as a traditional fueling station, and as allowable in all zones.
- In instances where EV chargers are clearly a primary use, the ordinance should indicate that they are allowed as an approved use that is not subject to a conditional use permit and zoning review, and subject to clearly articulated design standards.
- Local jurisdictions should identify which levels and locations of EV charging may be approved administratively, and clearly identify those exceptions that require zoning board, city council, or county board approval.

Parking Requirements

The issues related to EV charging and vehicle parking are intertwined. This summary covers three key issues:

- Parking count and mandates
- Charger accessibility
- EV Readiness (EV Capable/EV Ready)

Parking Count and Mandates

Challenges: Many local governments' permit approvals require that developers provide a minimum number of parking spaces for projects. These requirements typically differ with building use category and zoning district. Some perceive that converting a standard space to a dedicated EV charging space reduces minimum parking, violating parking requirements. In

areas of parking scarcity, EV charging infrastructure projects may face significant community opposition. Internal combustion engine (ICE) vehicles or non-charging EVs parked in EV charging spaces prevent EVs from using chargers.

Recommendations:

- Local governments should allow stalls with EV charging and charger-ready parking spaces to count toward minimum parking mandates.
- Wheelchair-accessible charging spaces should be counted as at least two standard automobile parking spaces to allow for a wider stall and required landing zone.
- If EV charging-related equipment cannot be accommodated outside the parking area, parking space minimums should allow for space needed for charging-related equipment.
- Local governments can also allow each space reserved for electric car share vehicles to count as more than one space (e.g., two spaces) for minimum parking requirements up to a fixed percentage (e.g., 25%) of total non-Americans with Disabilities Act (ADA) parking.
- Local governments should update municipal parking ordinances to limit parking in EV charging spaces to charging EVs and enforce the ordinances with clear signage, including towing, impoundment, and citation information.

Charger Accessibility

Challenges: For the most part, regulations concerning accessibility are still evolving. In some local governments, the required number and characteristics of accessible EV charging spaces are unclear. The host preferences for the location of EV chargers may conflict with local and/or state preferences for accessible spaces. The source of the three-phase power needed for Direct Current Fast Charging (DCFC) at a property may be located far from the front door of the building or from the accessible route leading to the building's front door. Increased trenching and other costs can make some accessible spaces very costly to power. In addition, if accessible-only EV charging spaces experience lower use compared to chargers that are open to all, their financial viability may be reduced.

Recommendations:

- Accessible EV chargers should be placed on an accessible route to the entrance of the facility, and not required to be on the shortest accessible route.
- Another best practice is to deploy a scaled approach, basing the number of accessible EV chargers that are required in the total parking count. Note that many grant-funded charging programs require adherence to the design guidelines provided by the [U.S. Access Board](#).

EV Charger Readiness

EV charger readiness refers to efforts to prepare properties for EV charging prior to the actual charger installation. Recognizing that the least expensive time to install EV charging is during building construction, many jurisdictions have adopted EV charger readiness ordinances or codes for new construction and property rehabilitation. These codes generally require a certain number of parking spaces at specified property types be EV Capable, EV Ready, or EVSE-installed. In lay terms, EV Capable means that the property is all set to do the needed wiring;

EV Ready means that the wiring has been done; and EVSE-installed means that the charger is in place.

Challenges: Local opposition to EV charger readiness ordinances often comes from stakeholders, such as building developers, who express concerns about added costs. EV charger readiness costs are site-specific and difficult to estimate. It can also be challenging for AHJs to determine both the number and appropriate mix of EV-capable, EV-ready, and EVSE-installed parking spaces to require for residential and commercial uses for both new construction and property rehabilitation.

Over the past few years, the percentage of EV-ready spaces required has been increasing. For example, while it was common to see 10% to 20% of multifamily spaces required to be EV-ready or EV-capable a few years ago, recent activity such as the 2022 California building code ([CALGreen](#)) and the [proposed 2024 IECC codes](#) suggests that 20% to 50% or even 100% of spaces be so designated.

Recommendations:

- Enact an EV charger readiness ordinance or building code requirement that clearly specifies EV charger readiness requirements for new development and major renovations.
- In developing and publicizing the ordinance, provide information about the average costs and benefits of compliance.
- Collaborate with the utility on grid capacity and complementary programs.

Design, Aesthetics, and Equipment Location

Challenges: Guidance for compliance with design requirements can be unclear. Sometimes guidance can mix aesthetic and design considerations with health and safety concerns. Unreasonable height limitations and screening requirements may make some EV charging projects unworkable. EV charger signage concerns may not be addressed separately from other signage restrictions.

Locations preferred by the local government for aesthetic considerations may present additional challenges, including:

- EV charging at greater distances from the power source and interconnection results in higher costs, an additional permitting burden, and longer and more complicated construction timelines.
- Placing EV charging away from the public right-of-way may make EV charging more difficult for potential users to find and may increase personal safety concerns and the potential for vandalism.
- Jurisdictions may prevent EVSE in the setback, which is often the optimal location for equipment to minimize the impact on parking count.

Recommendations:

- Local governments should avoid adding aesthetic requirements for surface parking with EV charging that exceed the aesthetic requirements for surface parking without EV charging.

- Ideally, EV charging projects should not trigger additional aesthetic and design requirements that are not related to the charging equipment itself.
- Local jurisdictions should also provide objective, clear, readily available guidelines on all design and aesthetic requirements that apply to EV charging, including illustrations of acceptable and unacceptable designs. This clarity is especially important in sensitive zoning areas, such as historic districts.
- Design and aesthetic guidance should not exceed the requirements for other amenities or infrastructure in such zones.
- For many public charging areas, added signage, lighting, and shelter will increase the safety, comfort, and convenience of those who are charging EVs.

On-Street Charging

Challenges: Coordination is required among multiple local authorities that control curb access or construction on public property. Issues such as ADA compliance, signage, charger aesthetics, and potential for vandalism may raise stakeholder concerns about chargers installed in the right-of-way. Parking can be a major concern. Often there is resistance against EV-reserved spaces on streets with low parking inventory relative to demand.

Recommendations:

- Set deployment goals and priority locations for equitable on-street charging. Such goals signal to charging companies that the community is open to partnership and investment.
- Start the planning process by reaching out to the community and to impacted city departments and utilities to assess demand as well as land use, pricing, and equity considerations.
- Review the capital improvements plan to consider opportunities to install charging as streets are rebuilt or as utility lines are improved.
- Involve impacted neighborhoods in the planning process to hear their questions and concerns about placing curbside chargers in the community.

The Approval Process

The approval process is the administrative process that encompasses the zoning, parking, and design issues previously discussed. It also includes code compliance review for building, fire, and electrical codes. The approval process includes the application process and application review.

Application Process

Challenges: In some local governments the application process is unclear or inconsistent and does not include guidance documents, application checklists, and/or timelines. Other issues include no dedicated EV charging application forms as well as wet signature requirements for forms. Because EV charging providers are often not local to a site, a wet signature requirement can be a significant barrier.

Recommendations:

- Local jurisdictions should provide a user-friendly, all-electronic application process, with an online checklist, an intake form for all permit requirements and accept electronic signatures for permit applications.
- Online information should clearly identify the location of the applications, application materials, application processes, fees, average application review timelines, and point(s) of contact.
- The local government should offer pre-application meetings to developers to discuss the project approval process.
- As a best practice all forms should be available for single-family, multifamily, workplace, public, and commercial medium- and heavy-duty charging in cases where requirements differ.

Application Review

Challenges: In many local governments the application review process is inconsistent and lacks transparency. Different local government staff may interpret codes and ordinances inconsistently and some jurisdictions have sequential multiple-department reviews, clearances, and inspections involved. Additional reviews by an architectural review board, planning commission and/or council, or a common-interest association might be required. New issues are sometimes introduced by local governments after the initial review comments have been provided. The local jurisdiction may include requirements to address legacy issues with the host site unrelated to the current application, including changes in the parking count.

Recommendations:

- Local governments should administratively approve accessory use EV charger permit applications that meet all the requirements.
- They should have concurrent reviews across appropriate departments to reduce or to eliminate sequential reviews.
- Ideally, there should be an assigned point person to help applicants through the entire permitting process.
- Local governments should train plan reviewers and inspectors on EV charging-specific codes and ordinances to ensure that these requirements are interpreted and applied consistently.
- Zoning board approval requirements should be removed for all accessory use EV chargers, other than for clearly defined exceptions such as EV charging in historic or sensitive zones.