

February 2020

DC Fast Charger Streamlined Permitting Guidebook for Local Governments



NEW YORK
STATE OF
OPPORTUNITY.

Charge NY

DC Fast Charger Streamlined Permitting Guidebook

New York State has set the ambitious goal to have two million electric vehicles (EVs) on the road by the year 2030 and invested in several educational and incentive programs across multiple State agencies to accelerate EV market growth. Because vehicle purchase decisions are frequently based on the availability of existing charging infrastructure, any delays in the commissioning of new charging infrastructure will reduce the rate of EV market growth and jeopardize fulfillment of New York's EV goals. One of the barriers noted for the growth of EVs has been the relatively slow charging capability of the existing charging infrastructure. Recently, a much more rapid method has been developed, called Direct Current Fast Charging (DCFC).

Though streamlined permitting projects have been previously conducted in the State, these projects were primarily focused on charging stations designed for single-family residential buildings. The technology and concerns of DCFC are substantially different. The New York State Energy Research and Development Agency (NYSERDA) contracted with Gladstein, Neandross & Associates (GNA) to assess existing DCFC permitting practices within the State and provide resources and information to Building Code Officials that can be used to streamline the DCFC permitting process.

To reach this end, a survey of DCFC permitting practices in the State was conducted in August 2019. More than 45 New York authorities having jurisdiction (AHJs) of varying sizes were surveyed to assess existing DCFC permitting policies and practices and permitting staff's expertise in handling DCFC permit applications. In cooperation with the New York State Building Officials Conference, this guidebook and accompanying templates were workshopped in person at the 2019 Annual Meeting by select building code officials representing jurisdictions from across the State.



Map of AHJs surveyed

Concurrently, telephone interviews were conducted with experienced DCFC project developers. These conversations revealed challenges and helped refine the permitting processes and identify additional needs.

This guidebook presents the survey results of AHJs and developers. These findings can be used proactively to identify pain points in the permitting process and offer remedies to enhance the overall experience for both permitting authorities and permit applicants during the plan check portion of the project.

The guidebook also offers an introduction to both EV's and EV charging in general including DCFC. Following the EV charging overview, an analysis of selected survey results presents highlights of some of the permitting challenges experienced. Based on these challenges, the guidebook offers a number of recommended best practices, which have the potential for simplifying and speeding up the DCFC station permitting process.



The Guidebook contains the following chapters:

- **EV 101:** This chapter provides an overview of electric vehicle market facts, trends and technology characteristics. Plan checks are most effective when both parties come from a common core of understanding (i.e. familiarity with technology and use).
- **DCFC Permitting Challenges as Reported by AHJs and Applicants in New York:** This chapter reflects the current baseline or state-of-the-art in New York State with regards to EV charger permitting. Survey results describe AHJs experience with DCFC projects and their average permit processing times.
- **Recommended Best Practices:** This chapter offers a concise overview of the administrative and technical best practices already tested and in-use in New York State or elsewhere in the country. Best practice guidance is provided for permit applicants in addition to permitting authorities.
- **Appendices:** Tools and resources for AHJs including a guidance document on accessibility requirements, model ordinances and a sample permit application.

This Guidebook is advisory only and its contents are not legal advice. These resources are not intended for adoption precisely as they are written, and each municipality should delete, modify, or add other provisions as appropriate to suit local conditions, comprehensive plans, and existing land use and zoning provisions. Neither NYSERDA, nor any of its employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information. AHJs and other entities are welcome to use and distribute the Guidebook. AHJs and individuals should consult with an attorney prior to adopting ordinances and/or implementing the permits described herein.

NYSERDA offers continuing free technical assistance to local governments to help further understand the issues addressed in the Guidebook for DC Fast Charger Streamlined Permitting. Please contact the program team at NYSERDA by emailing EVpermitting@nyserdera.ny.gov for additional help or questions.

You can download the Guidebook for DC Fast Charger Streamlined Permitting at
nyserdera.ny.gov/DC-Fast-Charger-Guidebook

Table of Contents

| | |
|--|-----------|
| EV 101 | 3 |
| DCFC Permitting Challenges as Reported by AHJs and Applicants in New York | 9 |
| Recommended Best Practices | 13 |
| Appendices | 19 |

Charger ID100288-01

EV 101



Section Contents

- 1. **Types of EVs**5
- 2. **Types of Chargers**6
 - 2.1 Level 1 Chargers 6
 - 2.2 Level 2 Chargers..... 6
 - 2.3 DC Fast Chargers 6
- 3. **DC Fast Charger Market Growth and Use Cases** 7

1. Types of EVs

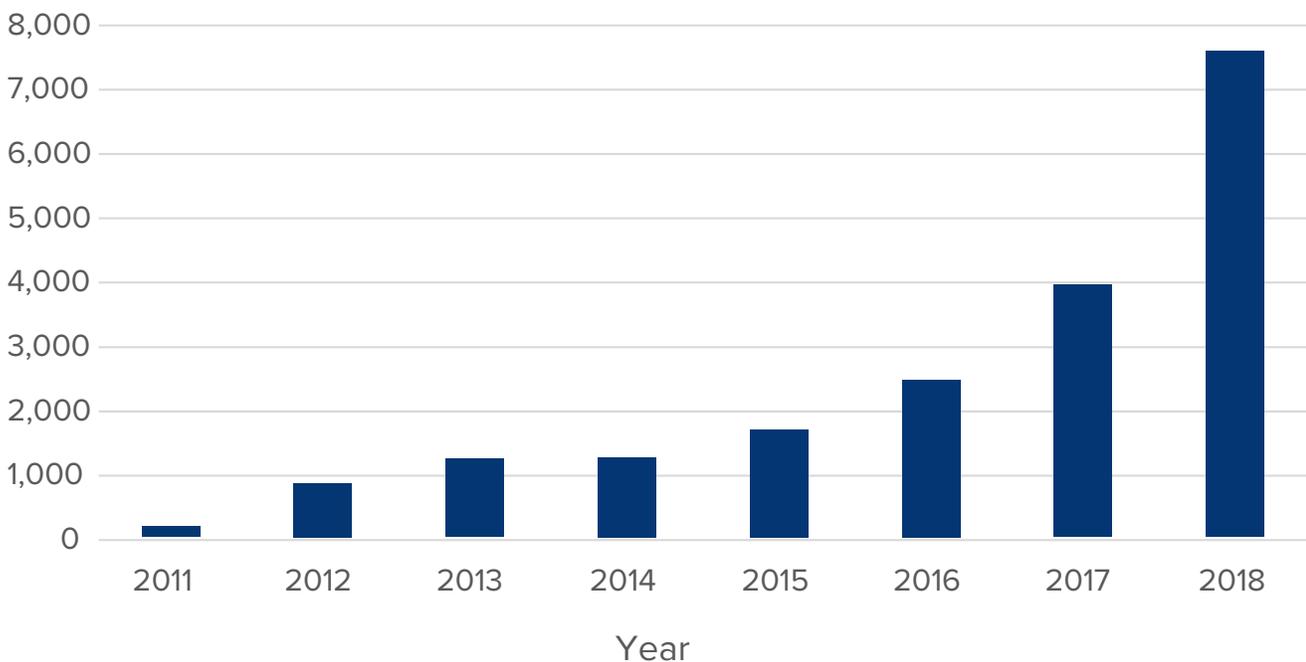
EVs may come in either a plug-in hybrid electric (PHEV) or battery electric (BEV) form. PHEVs use both a battery to power an electric motor as well as gasoline or diesel to power an internal combustion engine (ICE). These vehicles usually can travel 20–50 miles on the battery alone and can be plugged in to charge. A BEV, however, is powered solely by a battery that drives an electric motor and must be plugged in to charge.

The range for light-duty vehicles has historically been limited to 60 to 120 miles; however, that is changing as more models are coming to market with a range of 200 to 400 miles. With more light-duty vehicle options available today than at any previous time, at a variety of price points, it's becoming easier for consumers to purchase EVs. Those who have experienced the technology-rich ride of an electric car know how fast and smooth acceleration is and how responsive the vehicles are. The cars are quiet, save money on fuel, and require less maintenance than conventional gasoline cars, not to mention their incredible greenhouse gas reduction benefits. Commercial fleets are also now preparing to deploy Class 4–8 electric vehicles, including school buses, box trucks, and Class 8 tractors.

The world's largest truck manufacturers—including Daimler, Volvo, Mack, Kenworth, and Peterbilt—have all announced commitments to introduce BEV zero emission trucks for a range of traditionally diesel-dominated applications, including urban delivery, refuse, and regional haul. Battery electric trucks present tremendous future benefits—a reduction in fuel costs, simplified maintenance, and the elimination of tailpipe emissions.

Other companies such as Tesla, Nikola, Rivian, and Workhorse are poised to bring multiple BEV vehicles from pick-up trucks to heavy-duty Class 8 models to market soon. As a result of an increase in EV choices, range and availability of incentives, the number of EVs on the road has dramatically increased both nationally and in the State. In 2018, 7,582 BEV vehicles were registered in the State compared to the 576 BEV vehicles registered in 2012.¹ The current total number of BEV vehicles registered in the State is 20,720—a number that will undoubtedly continue to grow.

Registered BEVs in New York State



¹ nyscrda.ny.gov/All-Programs/Programs/ChargeNY/Support-Electric/Map-of-EV-Registrations

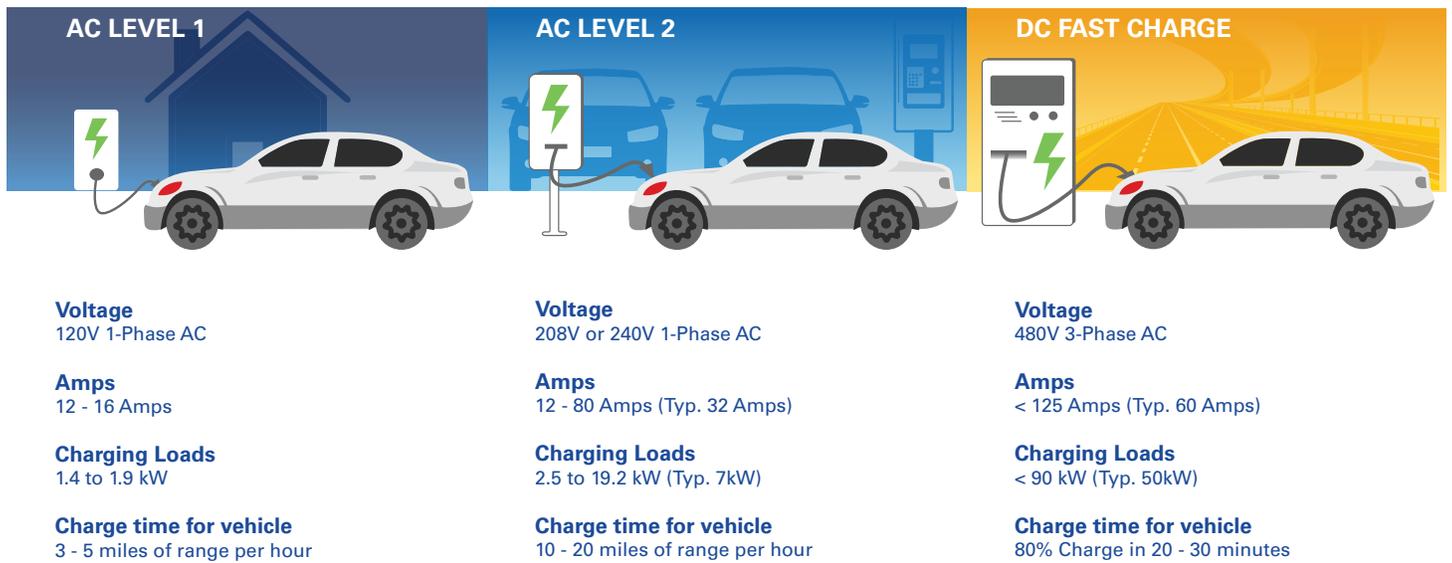
2. Types of Chargers

The speed of electric vehicle charging varies in part based on the type of charger used. EV chargers come in a variety of different kW offerings. They are commonly referred to as Level 1 (120V), Level 2 (208/240V), and Level 3 (480V) or DC Fast Charger, which uses three phase power.

Comparison of EV Charging Power Levels

Produced by GNA for NYSERDA

KNOW YOUR EV CHARGING STATIONS



2.1 Level 1 Chargers

Level 1 charging typically has the slowest charge times, around 17–25 hours with five miles of range per hour of charge and uses the least amount of power at about 1.4kW (12A delivered at 120V). The electricity connection is single-phase alternating current (AC). They are equivalent in power to a space heater.

2.2 Level 2 Chargers

Level 2 charging is faster with a charge time of 4–5 hours, with 12–30 miles of range per hour of charge and uses more power at 6.2–7.6kW (32A delivered at 240V). The electricity connection is also single-phase AC. They are equivalent in power to one home using the maximum amount of energy and have an outlet equivalent to an electric oven or electric dryer.

2.3 DC Fast Chargers

DCFC, the subject of this guidebook, have the fastest charging times. They can charge a passenger vehicle to about 80% in 30 minutes and use the most power. Most existing chargers are at least 50kW (100A delivered at 500V DC). Next generation chargers can exceed 150 kW, equivalent in power to 10–25 homes. The electricity connection is three-phase AC.

It is important to note that unlike Levels 1 and 2, DCFCs require 480V—a service generally not available without substantial upgrades to the electrical service. Furthermore, to provide 480V to the charging station, trenching from the main switchboard is often needed, thus vastly complicating the permitting process in many cases.

3. DC Fast Charger Market Growth and Use Cases

Demand for, and installation of, DCFC is growing rapidly both in New York and nationwide. DCFCs are useful for light-duty vehicles traveling long distances (e.g., long interstate trips), but are essential for the day-to-day operation of large medium- and heavy-duty electric trucks. These vehicles are already hitting the road in select markets and will spur demand for DCFCs, which currently represent only a small fraction of plugs installed each year.

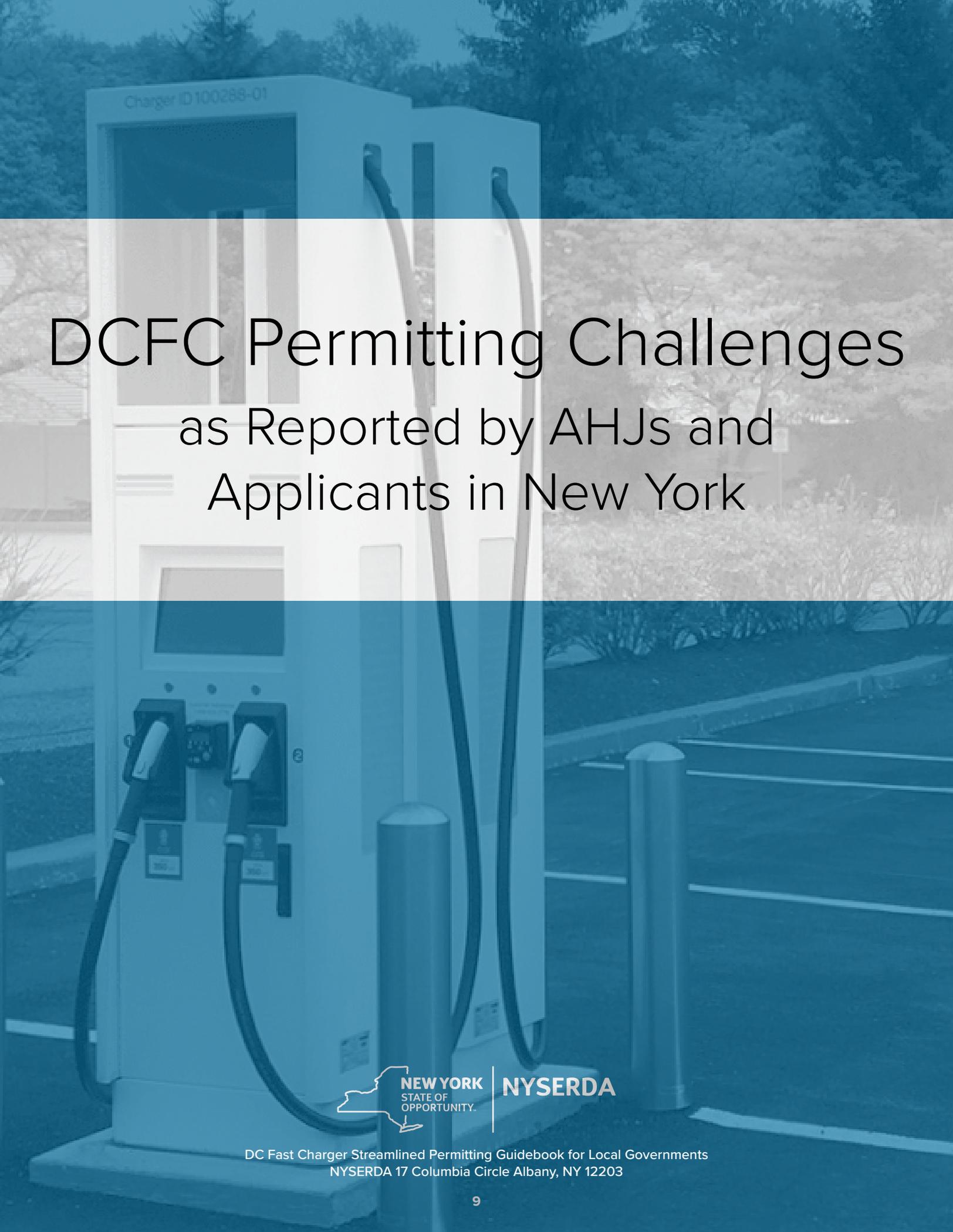


Additionally, DCFCs have extra import in dense urban areas like New York City where drivers often lack dedicated parking such as private driveways or garages and must rely on opportunity charging.

Questions?

If you have any questions about EVs, please email questions to EVpermitting@nyserderda.ny.gov. The NYSERDA team looks forward to partnering with communities across the State.

This page is intentionally left blank.



DCFC Permitting Challenges as Reported by AHJs and Applicants in New York



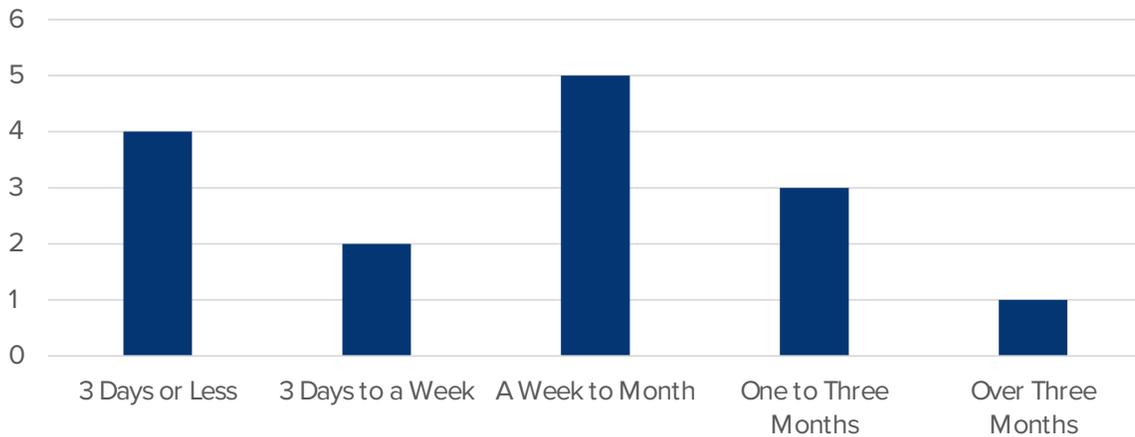
Section Contents

- 1. Experience with Projects 11
- 2. Lack of Specific Guidance 12
- 3. Administrative Processes..... 12

Overview

One of the observations from the survey shows there is a large disparity in the time it takes to process permit applications and issue permits. The survey indicated AHJs demonstrate a range in the length of times required for DCFC plan check. Although some jurisdictions are able to process permit applications in a judicious time, others have plan checks for DCFC that may take 12 months or longer.

Average length of time for administration and plan check of a permit for DC Fast Charger Stations.

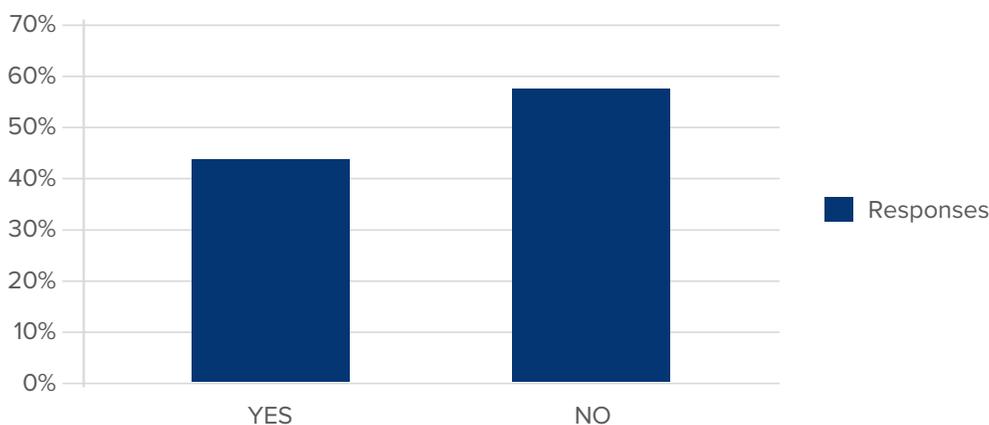


Top reasons for plan check delays include permitting authority staff's unfamiliarity with new DCFC technology, lack of specific guidance on the permitting requirements (i.e., accessibility), and opaque administrative processes that may vary among jurisdictions. Experience from mature markets, such as California, demonstrates these problems do not naturally self-resolve. In Los Angeles, where there has been no coordinated effort to improve DCFC permitting practices, permitting times have worsened over time, whereas in cities such as San Diego that have implemented sophisticated permitting staff support programs, plan check times are continuously improving.

1. Experience with Projects

Although New York currently has about 125 installed DCFC stations, they are heavily concentrated in certain areas of the State, meaning that several municipalities do not have experience in permitting these technologies. The survey noted that more than half of the jurisdictions surveyed have not permitted any kind of EV charging station. Some jurisdictions continue to have long plan check periods with even just Level 2 EV charging projects.

Experience with DC Fast Charger stations — Have you ever permitted an electric vehicle charging station project?



2. Lack of Specific Guidance

As noted, although DCFC stations are technically relatively simple, the installations are fraught with a number of potentially competing codes and ordinances when it comes to siting them. For example, because DCFC stations are intended for public use, access must be uncomplicated. Often, they are located in areas currently used for vehicle parking, necessitating the elimination of existing parking spaces to allow vehicles to access the fast chargers. This may conflict with ordinances that require a specific number of parking spaces. Additionally, although ADA codes may not be specific to EV charging stations, some jurisdictions require handicapped access, including wheelchair ramps, accessible controls, and other features.

The survey noted some jurisdictions may require an environmental review of the application or a review of the aesthetics of the installation to include signage, paving type, equipment colors, etc. Because of their unfamiliarity with DCFC stations, some jurisdictions taking the survey noted specific health and safety concerns must be addressed in the permit application or approval must be granted by an outside agency.

3. Administrative Processes

Several inconsistencies between the jurisdictions surveyed were noted with regard to the specific codes used for permit application review. Older building and electrical codes, including the National Fire Protection Association (NFPA) codes, often predate DCFC charging leaving a void in the requirements for compliance, which complicates plan check. It is essential jurisdictions adopt the latest version of codes to allow the applicant clear guidance into the design of the facility.

The process for the submittal and review of plans varied among the jurisdictions taking the survey. These variations included the ability for concurrent permit application review across the engineering disciplines (civil, mechanical, electrical, etc.); the capability for expedited plan check; and the availability of a checklist to assist the applicant in the submittal process. Plan check fee structure also varies by municipality and is often difficult to ascertain from on-line sources.

Because DCFC stations are primarily electrical in nature, some jurisdictions require buy-off and final designs from the utility company (involved with bringing power to the site) before the applicant permitting process can begin. The utilities may take many months for this process, particularly if a new or upgraded transformer is required.

Questions?

If you have any questions about DCFC Permitting Challenges, please email questions to EVpermitting@nyserda.ny.gov. The NYSERDA team looks forward to partnering with communities across the State.

Recommended Best Practices



Section Contents

| | |
|--|-----------|
| 1. Local Legislatures and Ordinances | 15 |
| 2. For Permitting Authorities | 15 |
| 2.1 Guidance Documents | 15 |
| 2.2 Pre-Application Meetings | 15 |
| 2.3 Concurrent Permitting Reviews | 15 |
| 2.4 Classify EV Charging Stations as an Accessory Use to a Site | 16 |
| 2.5 Establish a Timeline for EV Permit Application | 16 |
| 2.6 Allow Plans to be Approved as Noted | 16 |
| 2.7 Establish a Dedicated Staff for Dealing with DCFC Permits | 16 |
| 2.8 Allow Applicants to Submit Fax or Email Permit Submittals | 16 |
| 2.9 Establish Guidelines Related to Parking Requirements for DCFC Stations | 16 |
| 2.10 Establish, Where Appropriate, Specific Zoning Requirements for DCFC Stations | 16 |
| 3. For Permit Applicants | 17 |

Overview

Based on survey observations, comments from installers, and best engineering practices, the following procedures may offer relief to permit applicants from many of the difficulties commonly encountered. If implemented, these measures will greatly simplify plan review and permit approval (e.g., workload) for the permitting authorities as well.

1. Local Legislatures and Ordinances

Local and State authorities can promote the use of EVs by reducing barriers to charging station deployment. Statewide standardization and simplification of the permit application process, for DCFC as well as all EV charging installations, is seen as a positive approach.

California requires all jurisdictions to have a standardized, streamlined permitting ordinance for EV charging in order to simplify the permit application process. Required under CA Assembly Bill 1236 (AB 1236), which was codified in the State of California Government Code § 65850.7², this administrative approach received widespread acceptance in the State. A sample Model Ordinance is attached as Appendix C and offers consistent guidelines and language that can be adopted by New York local governments as well.

2. For Permitting Authorities

Key Takeaways

- Make Process, Fee Structure, FAQ, and Contact Information Available Online
- Allow Plans to be Approved as Noted
- Manage Expectations with Sample Timelines

2.1 Guidance Documents

Prepare guidance documents (checklists) for permitting and inspection of DCFC stations and make these documents available on the department website to help developers submit better applications. In general, DCFC stations are very similar from installation to installation with the major differences arising because of siting issues and source of connected power. For this reason, municipalities may be able to offer a “cookie cutter” or checklist approach to permitting of these stations. Posting the process on the department website will help applicants understand requirements and lessen questions, which will simplify the permit application review.

2.2 Pre-Application Meetings

Permitting authorities may be able to provide additional assistance to permit applicants by offering pre-application meetings to go over the permit requirements, review, in principle, preliminary plans, and offer suggestions. If demand is sufficient, workshops for multiple applicants could be offered.

2.3 Concurrent Permitting Reviews

Although DCFC installations are primarily electrical in nature, other engineering disciplines or non-technical reviews are often required. The permitting process could be streamlined if each of these diverse requirements are reviewed concurrently with each other. After individual review, comments, or corrections could be consolidated for attention. Concurrent review may require additional sheets in the application and/or segregation of the specific objectives on separate drawings.

² See California Government Code § 65850.7 (2015), available at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1236

2.4 Classify EV Charging Stations as an Accessory Use to a Site

Rarely are DCFC stations constructed as stand-alone facilities located away from existing or new infrastructure. They are usually only an adjunct to the existing infrastructure and could be considered as an accessory to the existing site use. By treating DCFC stations as accessories to the site, they can be separated from the overall permitting process. For example, if a new apartment complex is being designed and permitted with DCFC as part of the parking lot, permitting of the charging station could be treated independently from the remainder of the project and not be encumbered with the more complicated and lengthy overall permitting process.

2.5 Establish a Timeline for EV Permit Application

Except in complicated instances, DCFC projects are generally similar in their design and requirements. To help applicants manage expectations regarding timing, examples of typical wait times for review and approval of station applications can be useful. A sample timeline could also provide examples of time requirements for outlier or more complicated applications with particular considerations such as trenching, upgraded electrical service, etc.

2.6 Allow Plans to be Approved as Noted

A smooth-flowing permit application and review can be achieved if applicants and reviewers work as a team. It generally cannot be expected that all elements of a permit application will be perfect and that approval without comment will occur. If minor errors or omissions are noted, these should not be the reason to reject the application and require the applicant to resubmit corrected plans. Rather, corrections could be noted on the project drawings to be confirmed during the inspection process. Thus, AHJ comments will become part of the construction drawing set.

2.7 Establish a Dedicated Staff for Dealing with DCFC Permits

The permitting process could become more streamlined if a dedicated staff member(s) were nominated to deal with DCFC permit applications. Rather than offering permit applications merely over the counter, such applications would be routed to a specific review specialist knowledgeable of DCFC stations and the codes and ordinances that are applicable.

2.8 Allow Applicants to Submit Fax or Email Permit Submittals

With the advent of electronic communications, permit submittals could be streamlined if AHJs had the capability and capacity to receive documents electronically. Though specialized software may be available, simple email and fax submittals also improve efficiency. Establishing electronic applications would likely need to accommodate permit applications for other projects as well, but given the general simplicity of DCFC installations, this might be a place to start.

2.9 Establish Guidelines Related to Parking Requirements for DCFC Stations

Often the permitting of DCFC stations gets tied up in conflicting ordinances governing parking requirements. These include the need for a specific number of parking stalls for a business or residential complex, allocated ADA spaces, etc. DCFC stations necessarily must be readily accessible to users, but they should not be considered a parking space. DCFC charging by its very nature is a short-term activity, often less than an hour. By not tying approval of DCFC stations to the overall permitting of an associated facility, the charging station could be rapidly and independently approved.

2.10 Establish, Where Appropriate, Specific Zoning Requirements for DCFC Stations

Many existing zoning and use requirements predate EV charging stations. In general, DCFC stations have a very limited impact on the locations where they are situated. They have little effect on area traffic, do not consume unnecessary space, and have a short window of operation per vehicle. Restrictive zoning requirements, equating charging stations to filling stations, are detrimental to the proliferation of this needed infrastructure. Changing zoning requirements is an often difficult task, but if DCFC stations were exempted from existing zoning, the permitting process would be substantially easier. Also, it is important to not allow neighborhood associations or aesthetics to condition project approval.

3. For Permit Applicants

Key Takeaways

- Coordinate with utilities before submitting permit applications
- In New York City, work with an expeditor
- Establish an ombudsman to advocate for consistent requirements across jurisdictions

Although DCFC stations are generally not complicated, many jurisdictions do not have experience with or have permitting ordinances and guidelines in place for them. This often requires extra time and effort made by the applicant.

The survey of designers and installers indicated there was no single source to determine the nuances of permitting, including jurisdictional requirements, listing of currently adopted codes and ordinances, and other factors. It was suggested this condition could be alleviated by establishing a statewide clearing house for the industry that would track and report permitting requirements. In part, this guidebook will fulfill this need. Additionally, it was recommended that a spokesperson or ombudsman be nominated by the industry that would be an advocate for consistency and transparency in statewide permitting requirements for DCFC installations. This action would require coordination between interested parties, but it could help streamline and simplify the permitting process.

As part of this, the industry could, through the ombudsman, establish a forum to educate and train developers and other permit office customers. This would include the preparation of permitting guidelines and checklists for both parties as well as offering seminars to present the best practices.

The survey also revealed several actions that applicants can take to streamline the permitting process for DCFC stations. These include the following:

1. Conclude arrangements with the electric utility prior to applying for permits. As previously noted, electrical connections to DCFC stations will require a 480v service, which is not always immediately available to the DCFC station site. If this is the case, an upgraded transformer may be required as well as connections from a distant electrical source. Trenching, and the attendant backfill, compacting, and resurfacing, will add additional complexity to the permitting process.

Generally, the utility will conduct this work, and plans and specifications will be required as part of the permitting process. Additionally, a single-line electrical diagram and load calculations of the connection and the new system are required, which will be prepared by the electric utility.

At some desired DCFC locations, it may not be possible to provide 480v electrical service or the cost may be prohibitive because of a lengthy connection or other requirements. By dealing with the utility first, this possibility is known up front before detail station design and permit applications begin, thus avoiding the costs of a failed project.

Finally, some electric utilities have experience in the development of DCFC stations and may be able to offer useful design and permitting information.

2. Obtain the services of an expeditor. DCFC station permitting can be a daunting task, if the applicant and the permitting authorities are inexperienced in the process. This is particularly true for complicated installations involving two or more engineering and design disciplines. Commercial expeditors are experienced in all aspects of the permitting process and are usually familiar with the administrative and inspection staff involved.

3. Ensure that applications for DCFC stations are complete and submitted in accordance with the AHJ's requirements. Applications must:
 - Follow permitting ordinances, codes, guidelines, and requirements precisely.
 - Include accurate and complete plans
 - Consider land use issues including rights of way for electrical use and access
 - Address access for station maintenance and emergency vehicles
 - Follow ADA guidelines
 - Provide solutions to drainage issues, storm water control, and possible impact on wetlands.
 - Show adherence to parking restrictions and “taking” of spaces for charging stalls
 - Address traffic and noise issues
 - Where applicable, address resiliency requirements
 - Provide for appropriate signage for access to and use of charging facilities.
 - Include crash protection (bollards) in the design
 - Consider ventilation requirements for indoor installations

These suggestions, either adopted in whole or in part, may greatly improve the permitting experience by project proponents.

Questions?

If you have any questions about the recommended best practices, please email questions to EVpermitting@nyserda.ny.gov. The NYSERDA team looks forward to partnering with communities across the State.

Appendices



NEW YORK
STATE OF
OPPORTUNITY.

NYSERDA

Section Contents

| | |
|--|----|
| 1. Appendix A. Interpreting Accessibility Requirements for EV Chargers | 21 |
| 2. Appendix B. Model Administrative Permitting Ordinance for Small Jurisdictions | 22 |
| 3. Appendix C. Model Technical Permitting Ordinance for Small Jurisdictions | 24 |
| 4. Appendix D. Sample EV Charging Station Permit Application | 27 |

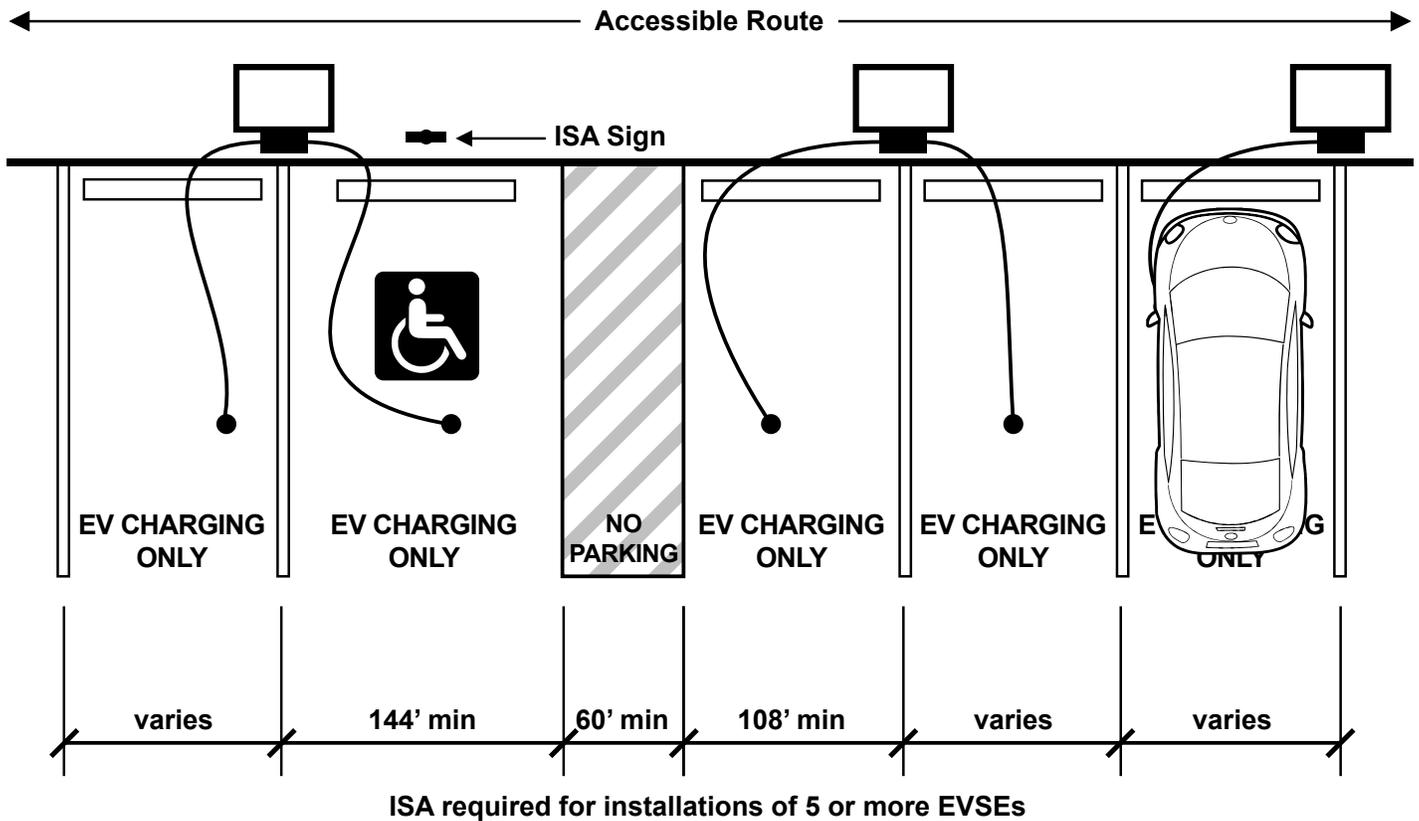
1. Appendix A. Interpreting Accessibility Requirements for EV Chargers

Accessibility requirements for electric vehicle charging are not well defined in current code, and New York State has not created supplemental guidance documents to clarify further. Building code staff, however, may wish to use guidance from other states (e.g., California) to assist in their own interpretations.

For example, in California, all plans must demonstrate compliance with the accessibility provisions shown in the following table.

| Total Number Of Chargers At Facility | Minimum Number (by type) Of Chargers Required | | |
|--------------------------------------|--|---|---|
| | Van Accessible | Standard Accessible | Ambulatory |
| 1-4 | 1 | 0 | 0 |
| 5-25 | 1 | 1 | 0 |
| 26-50 | 1 | 1 | 1 |
| 51-75 | 1 | 2 | 2 |
| 76-100 | 1 | 3 | 3 |
| 101 and over | 1, plus 1 for each 300 or fraction of over 100 | 3, plus 1 for each 60 or fraction of over 100 | 3, plus 1 for each 50 or fraction of over 100 |

Example of Non-Residential EVSE Configuration³



³ Based on Checklist for Residential and Nonresidential Permit Application March 30, 2017 by San Joaquin Valley Air Pollution Control District.

2. Appendix B. Model Administrative Permitting Ordinance for Small Jurisdictions

PLEASE NOTE: Templates are provided for your suggested use and are written for your Jurisdiction. You may consider adopting an ordinance as either an Administrative Ordinance, where it would reside in your administrative chapter of your Municipal or County Code, or a Technical Ordinance, where it would be among your technical chapters. An advantage of an Administrative only Ordinance is that you will not have to create new Chapters due to legislative changes.

The Model Ordinance is intended to be advisory, and users should not rely upon it as legal advice. A municipality is not required to adopt this Model Ordinance. Municipal officials are urged to seek legal advice from their attorneys before enacting a electric vehicle charging station expedited permitting law. Municipalities must carefully consider how the language in this Model Ordinance may be modified to suit local conditions, comprehensive plan, and existing land use and zoning provisions.

ORDINANCE NUMBER [_____]

AN ORDINANCE OF THE [CITY COUNCIL] / [COUNTY BOARD OF SUPERVISORS]
OF THE [CITY OF _____] / [COUNTY OF _____]

SETTING FORTH PROCEDURES FOR EXPEDITING PERMITTING PROCESSING
FOR ELECTRIC VEHICLE CHARGING SYSTEMS

WHEREAS, the State of New York and the [City of _____] / [County of _____] has consistently promoted and encouraged the use of fuel-efficient electric vehicles; and

WHEREAS, creation of an expedited, streamlined permitting process for electric vehicle charging stations would facilitate convenient charging of electric vehicles and help reduce the [City's] / [County's] reliance on environmentally damaging fossil fuels.

NOW, THEREFORE, THE [CITY COUNCIL] OF THE [CITY OF _____] / [COUNTY BOARD OF SUPERVISORS] OF THE [COUNTY OF _____] DOES ORDAIN AS FOLLOWS:

SECTION 1. TITLE, WORDS AND PHRASES

This Ordinance shall be known as the [City of _____] / [County of _____] Electric Vehicle Charging Station Permit Expediting Ordinance.

SECTION 2.

Section [_____] of the [City of _____] Municipal Code / [County of _____] County Code is hereby added to read as follows:

Section [_____] Expedited Electric Vehicle Charging Station Permitting

Electric Vehicle Charging Stations shall be subject to the administrative permitting procedures set forth in the [City's] Electric Vehicle Charging Station Permit Expediting Ordinance.

SECTION 3. EXPEDITED REVIEW PROCESS

The Building Official shall implement an expedited administrative permit review process for electric vehicle charging stations, and adopt a checklist of all the requirements an applicant seeking to install electric vehicle charging stations shall comply with in order to be eligible for expedited review. The expedited administrative permit review process and checklist may refer to the recommendations in the checklist prescribed by the most current version of the "Plug-In Electric Vehicle Infrastructure Permitting Guidebook" published by the New York State Energy Research and Development Agency (NYSERDA). The [City's] / [County's] adopted checklist shall be published on the [City's] / [County's] website.

SECTION 4. ELECTRONIC SUBMITTALS

The Building Official shall allow for electronic submittal of permit applications covered by this Ordinance and associated supporting documentations. In accepting such permit applications, the Building Official shall also accept electronic signatures on all forms, applications, and other documentation in lieu of a wet signature by any applicant.

SECTION 5. ASSOCIATION APPROVAL

The Building Official shall not condition the approval for any electric vehicle charging station permit on the approval of such a system by an association, meaning a nonprofit corporation or unincorporated association created for the purpose of managing a common interest development.

SECTION 6. CONSTRUCTION PERMIT APPLICATION PROCESSING

A construction permit application that satisfies the information requirements in the [City's] / [County's] adopted checklist shall be deemed complete and be promptly processed. Upon confirmation by the Building Official that the construction permit application and supporting documents meets the requirements of the [City] / [County] adopted checklist, and is consistent with all applicable laws, the Building Official shall approve the application and issue all necessary construction permits. Such approval does not authorize an applicant to energize or utilize the electric vehicle charging station until approval is granted by the [City] / [County]. If the Building Official determines that the construction permit application is incomplete, he or she shall issue a written correction notice to the applicant, detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance.

SECTION 7. TECHNICAL REVIEW

It is the intent of this Ordinance to encourage the installation of electric vehicle charging stations by removing obstacles to permitting for charging stations so long as the action does not supersede the Building Official's authority to address higher priority life-safety situations. If the Building Official makes a finding based on substantial evidence that the electric vehicle charging station could have a specific adverse impact upon the public health or safety, the [City] / [County] may require the applicant to apply for a use permit.

SECTION 8.

Any provision of the [City of _____] Municipal Code / [County of _____] County Code or appendices thereto, inconsistent with the provisions of this Ordinance, to the extent of such inconsistencies and no further, are hereby repealed or modified to that extent necessary to effect the provisions of this Ordinance.

SECTION 9.

If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of any competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The [City Council] / [County Board of Supervisors] hereby declares that it would have passed this Ordinance, and each and every Section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the Ordinance would be subsequently declared invalid or unconstitutional.

SECTION 10.

The [Mayor] shall sign and the [City] / [County] Clerk shall attest to the passage of this Ordinance. The [City] / [County] Clerk shall cause this Ordinance, or a summary thereof to be published once in the official newspaper within 15 days after its adoption. This Ordinance shall become effective on [_____].

APPROVED AS TO FORM:

NAME

[City Attorney] / [County Counsel]

3. Appendix C. Model Technical Permitting Ordinance for Small Jurisdictions

ORDINANCE NUMBER [_____]

AN ORDINANCE OF THE [CITY COUNCIL] / [COUNTY BOARD OF SUPERVISORS] OF THE [CITY OF _____] / [COUNTY OF _____]

SETTING FORTH PROCEDURES FOR EXPEDITING PERMITTING PROCESSING FOR ELECTRIC VEHICLE CHARGING SYSTEMS

WHEREAS, the State of New York and the [City of _____] / [County of _____] has consistently promoted and encouraged the use of fuel-efficient electric vehicles; and

WHEREAS, creation of an expedited, streamlined permitting process for electric vehicle charging stations would facilitate convenient charging of electric vehicles and help reduce the [City's] / [County's] reliance on environmentally damaging fossil fuels.

NOW, THEREFORE, THE CITY COUNCIL OF THE [CITY OF _____] / [COUNTY BOARD OF SUPERVISORS] OF THE [COUNTY OF _____] DOES ORDAIN AS FOLLOWS:

[MUNICIPAL CODE / COUNTY CODE CHAPTER _____]

SECTION 1. PURPOSE

The purpose of this Chapter is to promote and encourage the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health and safety and preventing specific adverse impacts in the installation and use of such charging stations.

SECTION 2. DEFINITIONS

“Electric vehicle charging station” or “charging station” means any level of electric vehicle supply equipment station that is designed and built in compliance with the latest approved version of the National Electrical Code and delivers electricity from a source outside an electric vehicle into a plug-in electric vehicle.

“Specific, adverse impact” means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified, and written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

“Electronic submittal” means the utilization of one or more of the following:

Electronic mail or email.

The internet.

Facsimile.

SECTION 3. EXPEDITED PERMITTING PROCESS

The Building Official shall implement an expedited, streamlined permitting process for electric vehicle charging stations, and adopt a checklist of all requirements with which electric vehicle charging stations shall comply with in order to be eligible for expedited review. The expedited, streamlined permitting process and checklist may refer to the recommendations contained in the most current version of the “Electric Vehicle Charging Permitting Guidebook” as published by the New York State Energy Research and Development Agency.

SECTION 4. PERMIT APPLICATION PROCESSING

Prior to submitting an application for processing, the applicant shall verify that the installation of an electric vehicle charging station will not have specific adverse impact to public health and safety and building occupants. Verification by the applicant includes but is not limited to: electrical system capacity and loads; electrical system wiring, bonding and overcurrent protection; building infrastructure affected by charging station equipment and associated conduits; areas of charging station equipment and vehicle parking.

A permit application that satisfies the information requirements in the [City's] / [County's] adopted checklist shall be deemed complete and be promptly processed. Upon confirmation by the Building Official that the construction permit application and supporting documents meets the requirements of the [City] / [County] adopted checklist and is consistent with all applicable laws and health and safety standards, the Building Official shall approve the application and issue all necessary construction permits. Such approval does not authorize an applicant to energize or utilize the electric vehicle charging station until approval is granted by the [City] / [County]. If the Building Official determines that the construction permit application is incomplete, he or she shall issue a written correction notice to the applicant, detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance.

The Building Official shall allow for electronic submittal of permit applications covered by this Ordinance and associated supporting documentations. In accepting such permit applications, the Building Official shall also accept electronic signatures on all forms, applications, and other documentation in lieu of a wet signature by any applicant.

SECTION 5. TECHNICAL REVIEW

It is the intent of this Ordinance to encourage the installation of electric vehicle charging stations by removing obstacles to permitting for charging stations so long as the action does not supersede the Building Official's authority to address higher priority life-safety situations. If the Building Official makes a finding based on substantial evidence that the electric vehicle charging station could have a specific adverse impact upon the public health or safety, as defined in this Chapter, the [City] / [County] may require the applicant to apply for a use permit.

In the technical review of a charging station construction permit application the Building Official shall not condition the approval for any electric vehicle charging station permit on the approval of such a system by an association, meaning a nonprofit corporation or unincorporated association created for the purpose of managing a common interest development.

SECTION 6. ELECTRIC VEHICLE CHARGING STATION INSTALLATION REQUIREMENTS

Electric vehicle charging station equipment shall meet the requirements of the New York Electrical Code, the National Electrical Code, the Society of Automotive Engineers, the National Electrical Manufacturers Association, and accredited testing laboratories such as Underwriters Laboratories, and rules of the Public Utilities Commission or a Municipal Electric Utility Company regarding safety and reliability.

Installation of electric vehicle charging stations and associated wiring, bonding, disconnecting means and overcurrent protective devices shall meet the requirements all applicable provisions of the New York Electrical Code.

Installation of electric vehicle charging stations shall be incorporated into the load calculations of all new or existing electrical services and shall meet the requirements of the New York Electrical Code. Electric vehicle charging equipment shall be considered a continuous load.

Anchorage of either base-mounted or wall-mounted electric vehicle charging stations shall meet the requirements of the New York Building or Residential Code as applicable per the provisions of the manufacturer's installation instructions. Mounting of charging stations shall not adversely affect building elements.

SECTION 7.

Any provision of the [City of _____] Municipal Code / [County of _____] County Code or appendices thereto, inconsistent with the provisions of this Ordinance, to the extent of such inconsistencies and no further, are hereby repealed or modified to that extent necessary to effect the provisions of this Ordinance.

SECTION 8.

If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of any competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The [City Council] / [County Board of Supervisors] hereby declares that it would have passed this Ordinance, and each and every Section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the Ordinance would be subsequently declared invalid or unconstitutional.

SECTION 9. The [Mayor] shall sign and the [City] / [County] Clerk shall attest to the passage of this Ordinance. The [City] / [County] Clerk shall cause this Ordinance, or a summary thereof to be published once in the official newspaper within 15 days after its adoption. This Ordinance shall become effective on [_____].

APPROVED AS TO FORM:

NAME

[City Attorney] / [County Counsel]

4. Appendix D. Sample EV Charging Station Permit Application

Electric Vehicle (EV) Charging Station Permit Application

COMPLETE THIS APPLICATION IN ITS ENTIRETY AND SUBMIT TO THE PERMITS DEPARTMENT ALONG WITH ALL REQUIRED DOCUMENTATION LISTED BELOW.

Subject Address: _____
 Bldg/House # Street Suite

| FOR OFFICE USE ONLY | |
|---|---|
| PLACE STICKER HERE | |
| Filing Date: _____ | By: _____ |
| Zoning Letter for Applicant: <input type="checkbox"/> Yes <input type="checkbox"/> No | As-built Survey Required <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Zoning Approval Date: _____ | By: _____ |
| Plans Examiner Approval Date: _____ | By: _____ |
| Approved to Issue Date: _____ | By: _____ |
| Issued Date: _____ | By: _____ |
| Permit Expiration Date: _____ | |
| Special Conditions of Permit: _____ | |
| Filing Fee: \$ _____ | Receipt #: _____ |
| Permit Fee: \$ _____ | Receipt #: _____ |
| Total Fee: \$ _____ | C/O Issued: _____ |

| PERMIT TYPE (select one): | |
|---|---|
| Level 1 – 120 VAC* <i>NO PERMIT REQUIRED</i> | Residential properties only. Level 1 refers to using a standard house outlet to charge an EV. Homeowner to obtain an Electrical Underwriters Certificate after installation and submit to the Building Division Records Department. |
| <input type="checkbox"/> Level 2 – 240 VAC* No. of Stations: _____ | This voltage is the type that supports ovens and other large appliances |
| <input type="checkbox"/> Level 3 – 480 VAC* No. of Stations: _____ | Commercial properties only. Also called DC fast chargers, these chargers use a 480 plug to provide direct current (DC) electricity to the battery. |

* Levels of electrical current are called VAC or “Volts Altering Current”.

For the forms and applications referenced below, please visit our website at
 <Website>

| SUBMISSION REQUIREMENTS: |
|--|
| The permit submission requirements are located on pages 3 and 4 of this application. |
| For Electronic Submittals: <input type="checkbox"/> PDF files of forms and plans listed <input type="checkbox"/> Email all PDF files to <email> |

| CO REQUIREMENTS: |
|---|
| 1. Inspections: Please provide at least 48 hours’ notice for scheduling of any inspections. Inspections may be required by the Building Division PHONE, Engineering Division PHONE and Fire Prevention PHONE. 2. Electrical Certificate: An electrical certificate, certifying the installation, is required. 3. Other: Other paperwork as may be required by the Inspector. |

Property Owner*:

Business Name Contact Name Email Phone

Mailing Address:

(If different than subject address) No / Street City State Zip

Contractor:

Business Name Contact Name Email Phone

Business Address:

No / Street City State Zip

Design Professional:

(If applicable) Business Name Contact Name Email Phone

Business Address:

No / Street City State Zip

Expeditor:

(If applicable) Business Name Contact Name Email Phone

Business Address:

No / Street City State Zip

* If property was purchased within the last 6 months, a copy of the deed, or closing papers indicating the deed was sent to the County to be recorded is required. If property owner is a corporation or LLC, legal paperwork stating the person signing the application is an authorized signatory for the Corporation or LLC is required.

I understand that before a building permit can be issued, adjoining street must meet minimum standards or be bonded for same and that a Certificate of Occupancy for work done under this permit will not be issued until road damage caused during construction is repaired or bonded for same. This permit issuance expressly implies approval by the landowner of inspections required of the premises. I understand that the jurisdiction is relying on the information provided herein, any inaccuracy may cause delay or additional fees. I swear that this application is a true and complete statement of all proposed work on the described premises, that I have in effect all required insurance, including workers compensation insurance, and that I presently possess a valid home improvement license, if applicable (not required for new home construction). By submitting this application, I acknowledge and agree that a modification or addition may be made to the Certificate of Occupancy/Compliance. No further notice of any resultant modification or addition shall be required.

| | | |
|---|---|---------------------|
| PROPERTY OWNER: | SWORN TO ME THIS | NOTARY STAMP |
| _____ | DAY OF _____, 20 _____ | |
| PRINT NAME | _____ | |
| SIGNATURE | NOTARY PUBLIC | |
| <hr/> | | |
| CONTRACTOR: | SWORN TO ME THIS | NOTARY STAMP |
| _____ | DAY OF _____, 20 _____ | |
| PRINT NAME | _____ | |
| SIGNATURE | COUNTY HOME IMPROVEMENT LIC. # _____ NOTARY PUBLIC | |
| <hr/> | | |
| EXPEDITOR / DESIGN PROFESSIONAL: | SWORN TO ME THIS | NOTARY STAMP |
| _____ | DAY OF _____, 20 _____ | |
| PRINT NAME | _____ | |
| SIGNATURE | NOTARY PUBLIC | |

| | |
|----------------------------|-----------------|
| FOR OFFICE USE ONLY | |
| Total Fee: | \$ _____ |

Submittal Requirements For Electrical Vehicle (EV) Charging Station Permits

The following guidelines are for preparation and submittal of your plans. Specific plan requirements will depend largely upon the extent, nature and complexity of the work to be done. These guidelines reflect a set of standard practices; local requirements may vary and should be amended as necessary to conform with applicable laws, rules, and regulations.

A permit is required before you install a Level 2 or DC Fast Charger. Level 1 charging stations do not require a permit but must be installed by a licensed electrician. DC Fast Charger plan check can take anywhere from one to six months- early coordination with the utility and plan check staff is crucial.

LEVEL DEFINITIONS

(Levels of electrical current are called VAC or “Volts Alternating Current.”):

Level 1 - 120 VAC – Residential properties only. Level 1 refers to using a standard house outlet to charge an EV.

Level 2 - 240 VAC – This voltage is the type that supports ovens and other large appliances.

Level 3 - 480 VAC – Commercial properties only. Also called DC Fast Chargers, these chargers use a 480 plug to provide direct current (DC) electricity to the battery.

PERMIT APPLICATION REQUIREMENTS

1. **Permit Application** – Filled out in its entirety.
2. **Application Fee** – visit [\[WEBSITE LINK\]](#) for the current fee schedule
3. **Approved Site Plan** – *Commercial Only* (see below for Site Plan Submission Requirements)
4. **Survey** – An accurate survey, showing the proposed placement.
5. **Floor Plan (3 copies)** – In situations where equipment is installed within a structure, a floor plan is required. Said plan should show the proposed location of the equipment.
6. **Manufacturers Specifications (3 copies)** – Including the UL Listing.
7. **Single Line Wiring Diagram (3 copies)** – The following information must be included:
 - a. Conductor types and sizes
 - b. Size of the over current device (circuit breaker) supplying the EVCS
 - c. Conduit size, type and location
 - d. The manufacturer and model of the charging stations
 - e. The size of the main electric panel, distribution panels (sub panels) and disconnects
 - f. Type (Level) of charging station
8. **Electrical Load Calculation (3 copies)** – Provide size of existing electrical panel, existing load on the panel, and proposed load/circuits from the electric vehicle charging system in order to determine if there is adequate capacity in the existing panel.
9. **Electrical Service Verification** – Verification shall be made by the Owner/Contractor that the existing main service panel and all panels in the electrical system used for the EVCS are safe and free of electrical hazards. If electrical violations or hazards are present the Owner/Contractor will be required to have a licensed contractor correct the violations and/or hazards. Damaged equipment must be replaced or repaired and will require permits and inspections.
10. **Lockable Disconnect** – A lockable disconnect is required in a readily accessible location for electric vehicle charging stations >60A or 150V to ground. A phenolic plaque with red background and white letter stating “Emergency Power Off – Electric Vehicle Charging Station” must be installed on each disconnect.

11. **Bollard Specs** – Attachment detail for bollard installations where protection of electrical equipment is required.
12. **Approved Sign Elevations** – Contact the Planning Department at [Contact Information].

SITE PLAN SUBMISSION REQUIREMENTS – Commercial Only

1. Site Plan Application – Including all requirements listed in the application
2. Application Fee
3. Limits of Site Plan should include 75' around the area of disturbance and show the following:
 - a. Location and number of charging stations
 - b. Equipment anchorage and support
 - c. Note whether the spaces are specifically reserved for EV charging
 - d. Note whether there is a time limit for parking and/or charging
 - e. Lighting plan (if lighting is proposed)
 - f. Bollard details for vehicle protection
 - g. Screening of installation may be required (site dependent)
 - h. Pavement markings and dimensions
 - i. Conduit locations and disconnects
 - j. Vehicular movement plan (if the proposed location is such that it may impede traffic flow)
 - k. Manufacturers specifications
 - l. Signage location, details and elevations (Planning Division approval required for all elevations)

APPLICATION REVIEW

Your application will be reviewed by various departments, including, but not limited to Engineering, Fire Marshal, Planning and Zoning. It may be determined that additional approvals, variances or relaxations are required, such as setbacks, landscaping and parking. Equipment cannot be attached to any illegal structures. If the structure is not on the Certificate of Occupancy, permits will be required to legalize the structure(s).

Electric vehicle charging stations must be installed in accordance with manufacturer's installation instruction and in accordance with the National Electrical Code and the New York State Uniform Building and Fire Code.

AFTER PERMIT ISSUANCE

Applicant is required to:

1. Schedule all necessary inspections – Building, Engineering, and Fire Marshal
2. Provide all documentation as required by the inspectors, such as:
 - a. Electrical Certificate
 - b. Final survey

This page is intentionally left blank.

This page is intentionally left blank.

This page is intentionally left blank.



NYSERDA

**New York State
Energy Research and
Development Authority**

17 Columbia Circle
Albany, NY 12203-6399

toll free: 866-NYSERDA
local: 518-862-1090
fax: 518-862-1091

info@nyserda.ny.gov
nyserda.ny.gov