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Electric Connections Guide for Commercial Developments & Services and Residential Developments

Massachusetts

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We understand the importance of your electric connection project. Here is some important information about the different types of projects.

This guide outlines your responsibilities as well as ours and provides estimated timelines to help you effectively plan and manage your electric connection projects. Every electric connection project follows a series of phases and steps. Please remember that the timelines provided in this guide are estimates and are subject to change. Factors such as project scope, specific requirements, customer and contractor responsibilities, weather conditions, and unforeseen emergencies and customer-driven delays can impact the overall timeline. Flexibility and adaptability are crucial during the process.

The Scope of Your Project

Understanding the scope of the project — the specific tasks and objectives that need to be accomplished — is essential for customers and contractors. It outlines the extent, details and responsibilities of the work to be done, which can include installation, removal, relocation, repair, or upgrade of electrical systems or equipment. By clearly defining the scope, we can effectively plan, execute, and complete the electric job to meet the desired outcomes and requirements.

Prior to beginning the planning and approval process with the city/town, you should consider clearances, utility capacity needs and equipment placement on your property. We may be unable to use existing utility equipment and structures as new construction typically requires more capacity than the existing equipment can provide. Therefore, your design must consider space for poles, conduits, foundations, transformers and other equipment. We also require adequate space surrounding our equipment to allow truck access within 10 feet. Additionally, meeting and maintaining minimum approach distance clearances to overhead wires should be accounted for. Meeting with us ahead of the planning process and understanding our requirements can help minimize cost and avoid redesign or other project delays.

Account Management Engagement

Existing customers with large and/or multiple accounts, as well as new customers or developers with prospective large load and service needs, may consider working actively with our Account Management team. We are committed to developing strong one-on-one relationships with our customers as we support them on their energy journey. For Account Managed customers, this involves engaging with various groups within your organization, including facility, finance, and sustainability teams, to gain a comprehensive understanding of your business as a whole. By identifying your future load needs, opportunities for electrification, and energy efficiency goals, we can align our services with your goals.

In addition, we offers services for long-term planning and options analysis for proposed electric services. A Support Services Agreement is put in place for needed engineering resources to differentiate options the customer is pursuing. Please contact your Account Manager for more details.

Step Zero

A Step Zero inquiry is a preliminary investigation that is requested by developers or customers, generally 200kW or larger, looking to understand how existing National Grid infrastructure and capacity surrounding a proposed site may impact the customer cost and schedule to install new electric service.

This information is useful for customers who have not purchased or secured property rights for a location or who are evaluating options at existing sites for expansion and assessing potential electric system costs for their project.

The engineer's review will determine whether or not capacity is available. The account manager or the job owner for the Step Zero review will notify the customer/developer of the results and if an electric distribution study is required. The results are valid for the day they are delivered due to the frequency of requests from other customers in any given area. To initiate a Step Zero inquiry, customers need to open a work order with National Grid.

Inquiries requiring a study may, in some cases, explore a high level scope and estimate prior to the new service work request being initiated, giving the developer or customer a general idea of what to expect. Estimates are order of magnitude and non-binding. A full study is required to assess project costs beyond this estimating stage.

Engineering Studies

Engineering studies are required if system capacity does not exist to serve the customer's or developer's requested load. Customers and developers requesting 200kW of use, or more, should never assume there is system capacity to serve their project. Engineering studies will evaluate existing system conditions and identify a feasible, least-cost-to-serve solution to connect the customer. The cost and duration of an engineering study can vary based on several factors including, but not limited to, available system capacity, requested load, and geographical location. On average, the cost to conduct an engineering study can run between $20,000 to $100,000 and take 4 to 6 months.

Upon completion of an engineering study, the customer will be informed of:

- the system modifications and/or upgrades required to provide the requested level of service;
- the estimated cost (+50%/-25%) associated with the upgrades; and
- high-level timeline to complete design and construction.

The study results are valid for the day they are delivered. Customers need to submit a construction work request in order to lock in the study results provided and hold their position in the work queue as multiple customers may submit requests in parallel.

Account Creation

A 911 address or lot number is required before you can apply for a new electric account. It is crucial for both customers and contractors to ensure that there is a 911 address or lot number associated with the location. A 911 address or lot number is essential for emergency services and helps ensure the safety and well-being of everyone involved in the project. If you do not have a 911 address or lot number, we recommend contacting your local town office to inquire about the process of applying for one. They will provide you with the necessary guidance and information to obtain a 911 address, enabling a smooth and secure electric project experience.

Gathering Technical & Property Details

Are you planning a renovation project or new construction that will require new electric service? Follow these steps to initiate your project smoothly:

1. New accounts and electric service to properties must have a 911 address or lot number associated with the location. Contact your local town office for guidance.

2. Complete the Electric Service Request Form and provide all necessary details to create your job request. ***Important!*** Electricians and contractors must consult the Specifications for Electrical Installations and other construction guidelines as part of understanding the technical and equipment requirements, especially for the metering installation and installations at large developments.

3. Submit your completed form online: Access our user-friendly portal and submit your form digitally at **ngrid.com/electric-connection.** You can also email your form to **workrequest@nationalgrid.com** or call **1-800-375-7405** to provide the details over the phone. A representative will assist you, provide you with a unique work request number for the project, and assign a job owner who will contact you within five business days.

4. Proposal for Electric Service: The job owner will communicate with you throughout the project and may request a Proposal for Electric Service package depending on the project's scope. The information required to complete the Proposal for Electric Service package includes, but is not limited to: site plan, load information, easement information form, and order of conditions. This information is used in the Design phase to define the scope and required rights to install electric infrastructure to provide service. Providing the requested information promptly will avoid delays. Once the job owner receives the completed Proposal for Electric Service package, they will review the project details for completeness and assign a distribution designer to develop a comprehensive plan for your project's needs.

Design

During the design phase of your project, our goal is to develop a comprehensive plan that meets your needs, complies with laws and regulations, and optimizes cost. We want to ensure that the design aligns with your requirements and maintains safe and reliable service for you and neighboring customers.

To begin, a distribution designer will be assigned to review your project. If your project is greater than 200kW, an engineering review is required. Engineering and Distribution Design will work together to review capacity and the design proposal. Customers should not assume there is capacity on the system for their project to connect without system modifications and/or upgrades. An engineering study may be required prior to the design process which may require an engineering study fee.

If a site visit is necessary, the distribution designer will coordinate the site meeting with you or your contractor. It is important to have all key decision makers present during this meeting to discuss a design which meets your needs and adheres to the required standards.

During the site visit, the distribution designer will ensure the customer requirements are aligned with the Proposal for Electric Service package. They will collect information, conduct a thorough site analysis and determine available options to ultimately complete a design. ***Important!*** Metering requirements will be reviewed during the site visit. Ensuring the appropriate metering materials and electrical sequencing of equipment are aligned with company specifications will reduce the risk of delays.

After the site visit, the distribution designer will analyze the site information and consider several factors to estimate a design completion date. Load calculations, voltage requirements, easement requirements, permit requirements and equipment placement all come into play when creating a design that optimizes cost, efficiency and reliability.

Missing information and changing the characteristics of the proposed electric service during the design phase may cause unexpected delays to your project. Unnecessary timelapses and rework can be avoided with a clear scope of work and timely communication.

At the conclusion of the design phase, the request is passed back to your National Grid job owner. You can expect to hear from your job owner with the details of your service agreement, cost, scope of work involved and responsibilities.

Please note that in some cases, you may be responsible for securing easements or permits based on your project requirements. Your designer or job owner will inform you if this is necessary and will guide you through the process.

Obtain Rights & Customer Agreements

Rights

To install the needed electric infrastructure, we must obtain all legal and regulatory rights related to the customer's/developer's property as well as in the public way. Examples include, but are not limited to:

1. **State, Local and Agency Permits:** National Grid is obligated to obtain all necessary permits and rights for infrastructure that is installed in public ways, railroads, bridges, etc. managed by local or state agencies. The timeframe for us to initiate and obtain the necessary rights may impact the cost and duration of your project. Your distribution design representative will make you aware of the needed obligations during the design of your project.
2. **Environmental Rights:** The customer is responsible for securing all environmental permits for the proposed electric/gas service. The most common environmental permit required is an Order of Conditions to be obtained by the customer/developer from the local conservation commission. In Massachusetts, an Order of Conditions is required before any work can be done in or near wetland resource areas. This permit ensures that projects comply with the Massachusetts Wetlands Protection Act, which aims to protect wetlands, floodplains, and other resource areas from harmful alterations.

   If the proposed electric/gas service is within a wetland resource area or associated buffer zone, you will need to provide us a copy of your Notice of Intent submitted to the local conservation commission, as well as the Order of Conditions issued to you once approved. Approval from other agencies to include but not limited to: Department of Environmental Protection (MassDEP) Wetlands and Waterways, Natural Heritage and Endangered Species Program (NHESP), Massachusetts Historic Commission (MHC), and Division of Conservation and Recreation (DCR) may also be required. Documentation of secured environmental permits and agency approved site plans shall be furnished to us upon request.

   The second most common environmental concern would be a contaminated site or any site with an Activity Use Limitation (AUL). An AUL is a legal document, often recorded at the Registry of Deeds, that restricts certain activities or uses on a property to prevent exposure to residual contamination that remains after environmental cleanup. It outlines what activities are allowed and not allowed on a property to ensure public health and environmental safety. Most significant in terms of what this will mean for requested utility work is that the customer/developer is responsible for the management and disposal of any excess soil generated from National Grid's work as outlined by the specific AUL requirements.
3. **Easements and Right of Way:** Many commercial projects require special permissions to be granted for access or the use of the land for National Grid equipment installation, operations, and maintenance. A National Grid Right-of-Way representative will draft the required documentation and obtain the needed signatures from the property owner. *(**Important:** **in many cases the customer/developer may differ from the property owner.*** Close coordination between the customer/developer and the property owner can reduce potential delays in obtaining property rights). This may include getting your neighbor's approval or signature on easement documents. If this applies to your project, it is the customer's/developer's responsibility to secure these easements. We will be your guide along the way to let you know what is required and will help ensure all documentation is in place.
4. **Coordination with Other Utilities:** The property owner is responsible for contacting phone providers and utilities other than National Grid. However, if your installation involves complex setups like pole installations, we will coordinate with other utilities to ensure everything is aligned and compliant.

Agreements

In addition to obtaining the required rights, the customer's/developer's contractual agreement (or service agreement) with National Grid must be signed and any required payments by the customer/developer must be made in full.

1. Service Agreement

Your service agreement will be in accordance with the Terms and Conditions for Distribution Service tariff provision (MDPU 1570 Dist TCs 10.01.24.) and any other terms that we deem are reasonably necessary in connection with your installation.

2. CIAC (Contribution in Aid of Construction)

For projects requiring a Contribution in Aid of Construction (CIAC), National Grid will calculate the necessary costs associated with installing the electric system infrastructure to provide an energized service. If applicable, your dedicated Job Owner will discuss this with you in advance. **Please make your payment promptly to avoid delays. Please note that if the payment is not received within 90 days,we may need to recalculate the CIAC based on latest industry costs. This may introduce unexpected delays to a customer's/ developer's project.**

A CIAC Milestone Payment Plan (CMPP) is available to commercial and/or industrial customers requesting new or increased non-residential load, or when a developer, contractor, builder, governmental agency or other entity proposes to construct a commercial or industrial non-residential development where no suitable distribution facilities exist, and when the CIAC is $100,000 or greater and the desired in-service date is at least 6 months from the date the service agreement is provided to the customer. The CMPP includes up to four milestone payments:

Milestone Payment 1: to fund the engineering study;

Milestone Payment 2: to fund the detailed design study, if applicable;

Milestone Payment 3: for 50% of the calculated CIAC due within 90 days of receipt of the service agreement; and

Milestone Payment 4: for the remaining 50% of the calculated CIAC due at a date set to enable completion of the project by the desired in-service date, but no later than 365 days from receipt of the service agreement. By opting into the CMPP, customers receive the benefit of purchase of long-lead materials upon receipt of Milestone Payment 3, which will facilitate progression of the project.

Full payment of the CIAC is required prior to commencement of construction, whether the customer chooses to utilize the CIAC Milestone Payment Plan or not.

Construction

Once necessary rights and agreements are completed, the scheduling and construction activities of the project commence, which involves:

1. Customer Trench Inspection: You may be required to install at your cost the underground civil infrastructure needed on your property if we need to install underground cables on your property. After installation and approval by a National Grid trench Inspector, you will turn that installation over to us. ***NOTE: padmount transformer installations, which may be required to be installed prior to you obtaining a municipal inspection, cannot be delivered until the trench inspection is approved.*** Timeliness of the completion of trench installation may impact our ability to meet your schedule.

NOTE: *We may need to install a pole to complete your trench installation. The riser pole cannot be set until signed easements/licenses, environmental rights, service agreement/CIAC may are obtained from you. Delays may impact the installation of the riser pole and completion of any trench inspection.*

2. National Grid Civil Infrastructures in the Public Way: In cases where you are connecting a service to underground distribution system in the public way, we will install civil infrastructure in the public way for you to connect to. In cases where all rights are obtained and service agreement/CIAC are completed, we may advance installation of the underground civil infrastructure in advance of you being ready for service.

3. National Grid Construction Pre-Checks: This is a crucial step in the process. Our goal is to address any concerns and ensure that the site meets all the requirements for safe and reliable construction. A National Grid field supervisor will review the scope of work and conduct a field visit to the site to ensure it is prepared and ready for construction. If any issues are identified, we will communicate with you and discuss the necessary changes needed to progress your project to the construction phase. (***Important:*** Site readiness issues such as other construction vehicles, equipment, and or other obstacles can delay the start of construction). Where complex metering is required, a representative from our metering department may need to deliver necessary materials to the contractors/electrician and align on metering assignments, such as for apartment buildings.

4. National Grid Overhead and Underground Construction: Once our pre-check confirms that the site is ready for construction, your project will be scheduled for the initial construction phase. Equipment and resources are scheduled to ensure that construction can be carried out accurately, safely, and in compliance with regulations. Type of construction activity will vary depending on customer's premise and electrical needs; the required work required in the nearby public way to make connections to infrastructure on customer's premise; and needed system upgrades identified in the engineering study, if any.

5. Customer Municipal Wiring Inspection: A municipal wiring inspection is required before we can energize your new service. A licensed municipal wiring inspector must approve the customer's/developer's electrical installation.Final connections and metering installations cannot proceed until confirmation. The electrician installing the new service is responsible for requesting this inspection by contacting the local municipal wiring inspector of the town your project is in. The municipal wiring inspector will then notify National Grid once the new service has passed the inspection.

6. Final Connections and Metering Installations: Once we receive notification that the new service has passed the municipal inspection, a National Grid crew will be scheduled to make final connections to energize the electrical service. If the construction crew on-site is authorized to install your meter(s) based on the scope of your project, they will do so. However, if they are not authorized, a qualified metering technician will be scheduled to complete the meter installation(s).

Once metering installations are completed, the electrical service is fully energized. The customer's account will be activated and be included in the next billing cycle.

Duration of the Phases

The actual timeline from the initiation of a customer development and/or service to the final connections and meter installations is influenced by numerous factors. The complexity of your project, the availability of resources, materials and equipment, weather conditions, prior scheduled work, unforeseen emergencies, and customer driven delays can all impact the estimated timeline. We will do our best to keep you informed of any changes or delays that may occur. Delays in providing timely information, as well as changes to your original request during the design phase or afterwards, will have an impact on your project's schedule and potentially cause delays to installing your service.