

Electrical Vehicle Charging Infrastructure Requirements

The purpose of this information guide is to provide the requirements for Electrical Vehicle (EV) Charging infrastructure in new construction.

The information contained within this guide is for convenience only and does not serve to substitute or supersede applicable City Bylaws, governing Provincial / Federal Codes, and laws. Any references to Bylaws, Codes and laws pertain to those effective at the time of this guide's creation or revision. If the date on this guide exceeds three (3) years, the information contained may be outdated- in such circumstance, refer to the current Bylaws, Codes and laws. Building Owners are responsible for ensuring that any existing or proposed construction, and other works, comply with all applicable Bylaws, Codes and laws.

Background

A significant portion of Burnaby's carbon emissions is attributed to transportation. As an integral part of the City's strategy to achieve carbon neutral emissions, the City is aiming to increase access to home, workplace, and on-the-go infrastructure, through *Electrical Vehicle (EV)*-ready requirements for new construction. For more information on the City's strategy to achieve carbon neutral emissions, see the [Climate Action Framework](#), [Environmental Sustainability Strategy](#), and [Community Energy and Emission Plan](#).

This guide is a consolidation of the following information guides:

- Electrical Charging Requirements for New Non-Residential Development (withdrawn)
- Electrical Vehicle Charging Bylaw (withdrawn)

Refer to the glossary at the end of this guide for the definitions of *italicized* terms.

City of Burnaby Information

Development projects are considered to be underway and instream protections apply if the applicable drawings have been produced prior to March 8, 2024 and include the information required to meet the in-stream criteria as noted above. The City must receive a declaration signed and sealed by the

registered professional or registrant of the Applied Science Technologists & Technicians of BC that prepared or reviewed the applicable drawings to certify the required criteria to be in-stream for seismic and adaptable unit requirements are met. The review of a development project's in-stream status will be required prior to the issuance of any Preliminary Plan Approval (PPA) or Building Permit (BP) issuance for a project, and the declaration will also form part of the final approved drawing packages.

It is noted that designers for in-stream development projects can voluntarily apply the BC Building Code 2024 seismic and adaptable dwelling unit provisions ahead of March 8, 2027.

New Residential Developments

For new residential developments, effective as of September 1st, 2018, each provided parking space (excluding visitor parking space) for single, two- and multi-family dwellings, is required to include an *Energized Outlet* capable of *Level 2 Charging*, in accordance with the [Burnaby Zoning Bylaw](#).

Where additional *EV* charging infrastructure beyond the minimum requirements of the Burnaby Zoning Bylaw (such as for new visitor parking spaces, and new parking spaces for existing dwelling units) are proposed to be provided, the Energized Outlets are permitted to:

- Be provided through dedicated circuit or *EVSE*
- Service more than one parking space and use an *EVEMS*

While not required by the Burnaby Zoning Bylaw, *Electrical Vehicle Supply Equipment (EVSE)* installations are encouraged to be completed at all *Energized Outlets* intended for *EV* charging.

These residential requirements do not apply to developments that have applied for a Building Permit or Preliminary Plan Approval or have an active rezoning application that has advanced past Second Reading prior to September 1st, 2018. These requirements also do not apply to new parking spaces serving existing residential uses.

New Non-Residential Developments

For non-residential developments, effective as of July 8, 2024, a minimum of 45% of all required parking spaces are each to be provided with an *Energized Outlet* capable of *Level 2 Charging*, in accordance with the Burnaby Zoning Bylaw. This 45% consists of the total of:

- 35% **with or without** *EVEMS*
- 10% **without** *EVEMS*

All required accessible parking spaces are required to be provided with *Energized Outlets* capable of *Level 2 Charging*, **with or without EVEMS**. These stalls **are permitted** to be counted towards the minimum 45%.

All required *Shared Vehicle Organization* parking spaces are required to be provided *Energized Outlets* capable of *Level 2 Charging*, with at least one (1) stall provided with *EVSE*. These stalls **are not permitted** to be counted towards the minimum 45%.

These non-residential requirements do not apply to developments that have applied for a Building Permit or Preliminary Plan Approval or have an active rezoning application that has advanced past First Reading prior to July 8th, 2024. These requirements also do not apply to new parking spaces serving existing non-residential uses.

Other EV Charging Infrastructure Requirements

Other requirements as related to *EV* charging infrastructure are as follows.

- Annual Operating Permit
 - Prior to issuance of Electrical Permits associated with installation of *EV* charging infrastructure, Electrical Division will review and determine whether an Annual Operating Permit is required. See the [Mechanical Equipment Installation & Retrofits in Existing Multi-Unit Residential Buildings](#) guide for more information.
- Communications Technology
 - All projects implementing *EVEMS* must be provided with communications technology necessary for the functions of the proposed system, such as cellular repeaters, wireless action points, and / or cabled infrastructure.
- Certification of EVSE
 - All *EVSE* must be designed to meet the governing edition of CSA C22.2 No. 280, Electric Vehicle Supply Equipment (Tri-national Standard with UL 2594 and NMX-J-677-ANCE), certified by Canadian testing agencies such as CSA, Intertek, or cUL / ULC.
- Electrical Meter
 - For buildings with shared parking areas, *EV* charging infrastructure should be separately metered from the common areas so strata, building owners, and energy utilities can distinguish between common area and *EV* charging electricity usage.
- Location & Labelling of *Energized Outlets*

- Location of all *Energized Outlets* shall be indicated on drawings submitted for Building Permit. The Building Permit application shall include electrical drawings of the *EV* charging system, signed and sealed by a professional engineer for all non-residential applications and some residential applications (depending on [R1 lot housing options](#)). Each *Energized Outlet* must be labelled with its intended purpose.

Further Information

For general information on *EV* technology, vehicles and incentives, refer to the [PlugInBC](#) website.

For further information on requirements and guidelines for *EV* charging infrastructure, refer to the [Burnaby EV](#) webpage and the [Burnaby Electric Vehicle Charging Infrastructure Technical Bulletin](#).

If you have questions regarding Burnaby's climate action strategy, please contact the Climate Action & Energy Division at 604-294-7850, or climateactionandenergy@burnaby.ca.

If you have questions regarding *EV*-ready requirements for your development, please the contact Planning Division at 604-294-7220, or planning@burnaby.ca.

If you have any questions regarding Building Permit submission requirements relative to *EV* charging infrastructure, please contact the Building Division at 604-294-7130, or building@burnaby.ca.

Glossary

Definitions of the following terms are referenced from the [Burnaby Zoning Bylaw](#) and [Burnaby Street & Traffic Bylaw](#). Note that these definitions may contain additional or reduced information- for compliance purposes, always refer to the Bylaw listed definitions.

“Electric Vehicle (EV)” means a vehicle that uses electricity for propulsion, and that can use an external source of electricity to charge the vehicle’s batteries.

“Electric Vehicle Energy Management System (EVEMS)” means a system to control electric vehicle supply equipment loads through the process of connecting, disconnecting, increasing, or reducing electric power to the loads and consisting of any of the following: monitor(s), communications equipment, controller(s), timer(s) and other application devices.

An *EVEMS* must ensure that every *Energized Outlet* for *EV* charging receives at least 12kWh over an 8-hour period as a minimum performance standard.

“Electric Vehicle Supply Equipment (EVSE)” means a complete assembly consisting of conductors, connectors, devices, apparatus, and fittings installed specifically for the purpose of power transfer and information exchange between a branch electric circuit and an electric vehicle.

“Energized Outlet” means a connected point in an electrical wiring installation at which current is taken and a source of voltage is connected to supply utilization equipment.

“Level 2 Charging” means a Level 2 electric vehicle charging level as defined by SAE International J1772 standard. This level is identified as nominal supply voltage of 1 phase 208V to 240V AC, with max current not more than 80A continuous.

“Shared Vehicle” means a four-wheeled automobile, van, or pick-up truck owned and operated by a Shared Vehicle Organization.

“Shared Vehicle Organization” means a corporation, society, association, co-operative, or other legal entity which provides members with paid hourly car-sharing service, an entity of which is authorized to operate within the City of Burnaby.