EV Charging Road Map

EV CHARGING ROAD MAP REQUIREMENTS

The EV Charging Road Map for a multi-residential property participating in the ChargeYYC – Multi-Residential Pilot program (the "Program") must be completed by a qualified professional. This document contains all that must be included in an EV Charging Road Map for the final document to be eligible for the rebate.

Note that only one EV Charging Road Map is eligible for a rebate per each Multi-residential Property (the "Property"). In many cases, a Property will be made up of a single multi-residential building. However, in some cases, multiple standalone multi-residential buildings can make up a single Property (i.e. multiple buildings that share the same street address and/or are all part of the same condominium but each unit has different unit numbers).

Please refer to the Program Terms and Conditions for full eligibility details.

WHAT IS AN EV CHARGING ROAD MAP?

An EV Charging Road Map is a customized plan for a specific Property that recommends a solution for having electric vehicle (EV) charging in the Property. The professional costs associated with developing the EV Charging Road Map are eligible for a rebate through the Program.

WHO CAN COMPLETE AN EV CHARGING ROAD MAP?

To be eligible for the Program rebate, the EV Charging Road Map must be completed by a qualified professional meeting the following qualifications:

- A Professional Engineer licensed to practice in the Province of Alberta; or
- A Master Electrician certified to practice in the Province of Alberta.

WHAT QUALIFIES AS A POSSIBLE SOLUTION THAT CAN BE PART OF THE EV CHARGING ROAD MAP?

The following can all be part of the solution(s) recommended by an EV Charging Road Map:

- Level 1 chargers/120V or 240V outlets;
- Level 2 chargers; and/or
- Electric vehicle energy management systems (EVEMS).

WHAT SHOULD BE INCLUDED IN AN EV CHARGING ROAD MAP?

A completed EV Charging Road Map should have the following five sections.

NOTE: Your EV Charging Road Map MUST be organized using the five section headings and bullet point sub-headings below.

1. Property Information

- Property address
- Type of Property: condominium or purpose-built rental
- Number of residential units
- Type of parkade: outdoor and/or indoor
- Number of parking stalls by type: residential assigned, residential unassigned, visitor, commercial
- Please indicate which are outdoor and which are indoor
- Number of existing EV Chargers by type: Level 1, Level 2
- Property Owner/Condominium Corporation contact information
- If applicable: Property Management contact information
- Contractor/consultant contact information, qualifications, and signature (physical or electronic)

2. Resident Survey Summary + Needs Assessment

The qualified professional completing the study must work with the Property owner(s)/condominium corporation and Property residents to develop and distribute a short survey to understand the future needs of the Property. Each unit should be encouraged to submit one survey response and the responses must be summarized.

The survey questions should be designed to allow the qualified professional to develop response summaries for the following points, which must be included in the final EV Charging Road Map:

- Average number of vehicles/unit in the Property;
- Number of existing EVs among residents in the Property;
- Proportion of units where the resident is the unit owner vs. where the resident is a renter;
- Average number of parking stalls/unit;
- Number of units where residents are considering purchasing an EV (i.e. either a battery electric vehicle or a plug-in hybrid) in the next five years;
- Average daily km's that Property residents drive on a typical day each weekday;
- Average daily km's that Property residents drive on a typical day each weekend;
- Average annual km's that Property residents drive;
- Average number of visitors (who drive) to each unit per month; and
- Average number of hours that visitors use visitor stalls per visit.

3. Electrical Capacity

The qualified professional completing the study must determine and report the following:

- Existing electrical main service size in the Property (in kW), calculated as per the current edition of the Canadian Electrical Code.
- Spare electrical capacity in the Property prior to additional EV charging installation (in kW), calculated as per the current edition of the Canadian Electrical Code.

4. Recommended 5-Year Solution

The 5-Year Solution should be the recommended immediate EV charging solution for the Property, to meet the anticipated demands for the next 5 years. The recommendation for the 5-Year solution should be developed through conversations with Property owner(s)/the condominium corporation and residents as well as by considering the outputs of the previous sections of the EV Charging Road Map.

For many Properties, the 5-Year Solution may only recommend limited charging infrastructure to meet short-term demands, even if the Property may require a more comprehensive solution in the longer-term future.

This section must include a summary of the Recommended 5-Year Retrofit Solution, specifying:

- How many chargers are recommended, at which stalls, and what types
- NOTE: Level 1 chargers/120V or 240V outlets and/or Level 2 chargers are eligible to be part of the solution
- The rationale for the recommendation (informed by information gathered through Section 2 of the EV Charging Road Map)
- If the existing service is sufficient for this solution (and why) or the itemized details of the service upgrades that are required
    - NOTE: EVEMS is eligible to be part of the solution
    - NOTE 2: The Qualified Professional is strongly encouraged to talk to ENMAX during the development of the solution to ensure that the proposed solution is feasible, even if it will not be implemented immediately
- How many existing EV chargers will be integrated into the new EV charging system, including load analysis and the effects on the main distribution panel/systems
- Conditions of the existing telecom/network infrastructure and if it can handle the new EV charging equipment
- A high-level cost estimate (in 2024 $) associated with the permitting, electrical, telecom, and network hardware and infrastructure that is required for this solution
    - NOTE: For solutions including EVEMS, the costs should include all communications equipment, control systems installation, licensing, and permitting required to operate the system

• The specific products that will be compatible with the recommended solution for both chargers and EVEMS (if applicable)

• Estimated charging performance per average EV in the Property postimplementation

  - Include minimum kW and km charged/hour

• Main service spare capacity (in kW) post-implementation of the recommended solution, calculated as per the current edition of the Canadian Electrical Code and consumer's remaining service capacity

• Recommendations for how the Property owner(s) will charge residents for charging and the recommended maintenance schedule and responsibilities.

5. Recommended 100% Retrofit Solution

The 100% Retrofit Solution should be the recommended long-term EV charging solution for the Property, that will enable all residents to have access to EV charging. This section is intended to help inform Property owner(s)/ condominium corporations what they may want to consider for the future.

Note that this section is not necessary if the Recommended 5-Year Solution is full retrofit of all parking spaces.

This section must include a summary of the Recommended 100% Retrofit Solution, specifying:

• How many chargers are recommended, at which stalls, and what types

  - NOTE: Level 1 chargers/120V or 240V outlets and/or Level 2 chargers are eligible to be part of the solution

• The rationale for the recommendation (informed by information gathered through Section 2 of the EV Charging Road Map)

• If the existing service is sufficient for this solution (and why) or the itemized details of the service upgrades that are required

  - NOTE: EVEMS is eligible to be part of the solution
  - NOTE 2: The Qualified Professional is strongly encouraged to talk to ENMAX during the development of the solution to ensure that the proposed solution is feasible, even if it will not be implemented immediately

• How many existing EV chargers will be integrated into the new EV charging system, including load analysis and the effects on the main distribution panel/systems

• Conditions of the existing telecom/network infrastructure and if it can handle the new EV charging equipment

• A high-level cost estimate (in 2024 $) associated with the permitting, electrical, telecom, and network hardware and infrastructure that is required for this solution

- NOTE: For solutions including EVEMS, the costs should include all communications equipment, control systems installation, licensing, and permitting required to operate the system

• The specific products that will be compatible with the recommended solution for both chargers and EVSE (if applicable)

• Estimated charging performance per average EV in the Property post-implementation

- Include minimum kW and km charged/hour

• Main service spare capacity (in kW) post-implementation of the recommended solution, calculated as per the current edition of the Canadian Electrical Code and consumer's remaining service capacity

• Recommendations for how the Property owner(s) will charge residents for charging and the recommended maintenance schedule and responsibilities.