

## EV Ready fleet plan requirements

EV Ready fleet plan requirements effective January 22nd, 2024.

Your EV Ready fleet plan must include the requirements outline below.

### Purpose of the EV Ready fleet plan

This plan will:

- Assist an organization to develop a comprehensive plan to convert some or all of their internal combustion engine fleet vehicles to zero emission vehicles.
- Provide an organization with a preliminary zero emission fleet vehicle replacement schedule
- Develop a capital and operation budget, and projected cost and emission savings to support business case development and decision-making.
- Enable BC Hydro to determine how much incentive it can provide customers to complete their electrical infrastructure upgrades identified in their EV Fleet ready plan.

### Who can create an EV Ready fleet plan?

- One company must be identified as the lead author on an EV Ready fleet plan.
- Two items in the EV Ready fleet plan must be completed by following electrical professionals:
  - Section 4 - The electrical capacity assessment must be completed by either a certified, licensed electrical contractor or a licensed electrical engineer registered with the Engineers and Geoscientists of British Columbia.
  - Section 5 - The single line diagram under 'Electrical infrastructure plan' must be completed by an electrical engineer registered with the Engineers and Geoscientists of British Columbia.

### EV fleet plan eligibility criteria

- Companies must have light, medium- and/or heavy-duty vehicles (Class 1, Class 2b through 8, including pickup trucks) in their fleet to participate in the EV Ready fleet program
- Your EV Ready fleet plan must at minimum support the design for 6 light, medium- and/or heavy-duty vehicles that could be switched to zero emission in the next three years. This is the minimum number of vehicles required to be purchased and implemented into your fleet to be eligible to apply for incentives to assist with the electrical infrastructure costs. Please note your plan can design for more than 6 EV's to be acquired within the next three years if that's what your business prefers.
- Organizations have 6 months from the date of receiving funding approval from BC Hydro to complete their EV Ready fleet plan and submit it online for review by BC Hydro.

### EV Ready fleet plan elements

Your EV Ready fleet plan must include the following elements:

#### 1. Property and company details

- a. Date the EV Ready fleet plan was prepared
- b. Company name and building address
- c. Name and contact information (address, email, and phone number) of the person overseeing the development of the plan
- d. Name and contact information (address, email, and phone number) of who the plan was created by

## **2. Fleet assessment**

### **a. Fleet inventory spreadsheet:**

Include all light-, medium- and heavy-duty vehicles in an organizations fleet.

**Minimum requirements:** one row per vehicle including:

- Annual mileage, age, vehicle make and model, and location.

**Optional to be included if information is available:**

- Average and maximum daily driving distance
- Average and maximum engine idle hours
- Typical payload (cargo and passengers)
- Need for auxiliary power (e.g. power takeoff)
- Vehicle location
- Actual maintenance and fuel cost (historical)
- Average hours used per day (e.g. charging window)

### **b. Fleet EV suitability assessment**

#### 1) Total cost of ownership and financial analysis

Complete a total cost of ownership (TCO) and financial analysis to determine the recommended vehicles for zero emission replacement. For each vehicle, provide a comparison of the combustion engine vehicle (i.e. business as usual) and the zero emission vehicle replacement. TCO should include but is not limited to:

- Purchase price and depreciation for vehicle, including, if available, incentives for zero emission vehicles
- Annual fuel and electricity costs (both energy and demand charges)
- Include energy required (kWh) versus liters of fuel and the associated GHG reduction per replacement vehicle
- Carbon pricing
- Maintenance cost

- Costs for electrical vehicle supply equipment (EVSE) including network subscription fees and EVSE maintenance costs, as well as (if available) incentives for EVSE
- Electrical infrastructure costs to support charging needs

### **Fleet vehicle ZEV replacement schedule**

Based on the TCO analysis identify the zero-emission vehicle replacement schedule for a minimum of 6 vehicles customer will be incorporating into the fleet within a period no longer than 3 years.

### **3. Charging (electric vehicle supply equipment – EVSE) plan**

Based on the vehicles chosen for replacement, analyze estimated EV charging system requirements:

- a. Specify the number, type of EVSE, power level and location of EVSE's required to meet the minimum needs of the vehicles identified for replacement. This requires consideration of the likely daily energy requirements for proposed ZEV replacements based on usage profiles considered under the suitability assessment, and assumptions around worst case scenarios.
- b. Is an EV energy management system being used? Y/N. Explain why or why not.
- c. Provide estimated charger costs including maintenance costs (planned maintenance, unplanned repairs, ongoing network fees to enable load management (if applicable) and other services).

### **4. Electrical capacity assessment**

Identify and include:

(If multiple facilities are part of your design please include this information for each facility)

- The existing electrical main service size
- The existing peak demand in kW on the main service and how it was determined
- The spare capacity prior to charger installation
- The potential charger load based on the charging plan
- The spare capacity after charger installation and whether or not a service upgrade is required

Include the name and contact information (including phone number and email address) and electronic signature of who completed the electrical capacity assessment (must be a licensed electrical contractor and/or a registered professional electrical engineer).

### **5. Infrastructure plan**

Determine electrical infrastructure requirements to support the customer's charging and vehicle acquisition plan

- Provide a conceptual design that includes the location of charging equipment. Concept design should consist of:

- Single-line diagram
- Estimate electrical infrastructure costs including any necessary electrical service upgrades (if required)
- Estimated electrical infrastructure implementation schedule for the vehicles identified for replacement
- Reference any design provisions for future expansion of charging to support fleet electrification growth

Include the name, contact<sup>1</sup> information (including phone number and email address) and electronic signature of who completed the single-line diagram (must be a registered professional electrical engineer).

#### **6. EV Ready fleet plan summary**

- Include the number of vehicles that could be procured in the next three years
  - Include electricity consumption in kWh
  - Include GHG (in tCO<sub>2</sub>e) reductions
  - Include electrification demand in kW based on charging plan
- Estimate electrical infrastructure costs including any necessary electrical service upgrades
- Estimated charger costs
- Summary of the total cost of ownership (TCO) and financial analysis
- Consultants' recommendation to implement the EV Ready fleet plan based on the results