

ONTARIO ENERGY BOARD

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# ELECTRIC VEHICLE CHARGING CONNECTION PROCEDURES

FEBRUARY 16, 2024



Ontario

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# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>2</b>	<b>DEFINITIONS</b> .....	<b>2</b>
<b>3</b>	<b>ELECTRIC VEHICLE CHARGING CONNECTION PROCEDURES OVERVIEW</b> .....	<b>2</b>
<b>4</b>	<b>PRELIMINARY CONSULTATION (STEP 1)</b> .....	<b>3</b>
<b>5</b>	<b>CONNECTION REQUEST AND COMPLETION CHECK (STEPS 2 TO 3)</b>	<b>5</b>
<b>6</b>	<b>OFFER TO CONNECT (STEP 4)</b> .....	<b>6</b>
	6.1 NEW OR MODIFICATION TO CONNECTION ASSET ONLY .....	9
	6.2 EXPANSION WITHOUT CAPITAL CONTRIBUTION .....	11
	6.3 EXPANSION WITH CAPITAL CONTRIBUTION .....	14
	6.4 ALTERNATIVE BID .....	18
<b>7</b>	<b>PROJECT DEVELOPMENT, CONSTRUCTION, ENERGIZATION AND FINAL ECONOMIC EVALUATION (STEPS 5 TO 7)</b> .....	<b>19</b>
	7.1 PROJECT DEVELOPMENT AND CONSTRUCTION .....	19
	7.2 ENERGIZATION .....	20
	7.3 FINAL ECONOMIC EVALUATION .....	20
<b>8</b>	<b>EXPANSION DEPOSIT RETURN AND EXPANSION REBATE</b> .....	<b>21</b>
	APPENDIX 1. DISTRIBUTOR-SPECIFIC REQUIREMENTS FOR EVSE CONNECTIONS (TEMPLATE) .....	<b>22</b>
	APPENDIX 2. OFFER TO CONNECT COMPONENTS .....	<b>26</b>
	APPENDIX 3. EVPCIR/EVPCR TEMPLATE FORMS .....	<b>28</b>
	APPENDIX 4. GLOSSARY .....	<b>29</b>



## 1 INTRODUCTION

The Electric Vehicle Charging Connection Procedures (EVCCP) document is a consolidation of procedures, timelines, workflows and template forms issued by the Ontario Energy Board (OEB). Collectively, they are intended to streamline the process for connecting public charging facilities that commonly service multiple Electric Vehicles (EVs) – such as those found along highways and at service centres – as well as fleet charging stations designed for commercial use.

The EVCCP **is applicable** to Electric Vehicle Supply Equipment (EVSE) connections including, but not limited to, non-residential customer applications including Level 2 and Level 3<sup>1</sup> charging stations, such as publicly accessible direct current fast charging stations, workplace charging, charging stations used for commercial EV fleets and charging installations for multi-unit residential or commercial buildings, where the EV chargers are owned or operated by the building owner or a third-party charging provider. The primary purpose of the new or expanded connection must be specific to EVSE.

The EVCCP **is NOT applicable** to EV chargers installed by individual residential customers or unit owners/tenants of a multi-unit residential building. For residential EVSE installations, customers are advised to contact their distributor for more information.

A majority of processes and requirements outlined in the EVCCP, such as the Offer to Connect (OTC) and project development, are only applicable to EVSE installations that require modifications or additions to a distributor's distribution system. Customers should contact their distributor to understand if their proposed connection may require a distribution system modification or addition before proceeding with an EVSE installation. Customer-side system modifications such as service panel upgrades and disconnect switch installations may also be required before a connection can be completed.

The provisions of the EVCCP are given force by requirements of Chapter 6 of the OEB's Distribution System Code (DSC). In case of any conflict between the EVCCP and the DSC, the provisions of the DSC shall govern.

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<sup>1</sup> Level 2 chargers require a 240-volt electrical supply, equivalent to what is needed for a clothes dryer. Level 3 chargers require an electrical source of 480-volt or higher, which is equivalent to what is needed for industrial motors and heating systems.

In addition to this EVCCP document, distributors may have additional information available on their individual websites intended to facilitate the connection of EVSE within their service areas. Distributors are required to maintain Conditions of Service (CoS) that describe their operating practices and connection policies. This includes any additional connection policies related to EVSE.

Under Section 6.1.6 of the DSC, a distributor is required to provide a separate appendix in its CoS setting out any additional requirements related to the connection of EVSE not specified in the DSC or EVCCP. Appendix 1 of the EVCCP provides a template for the minimum information a distributor shall include in its CoS appendix.

Prior to commencing the EVSE connection process, customers are advised to review the EVCCP, any relevant information related to customer connections available on the distributor's website, as well as the information provided in the distributor's CoS.

Customers are also reminded that the installation of EVSE is subject to requirements of the Ontario Electrical Safety Code (OESC)<sup>2</sup>, including but not limited to the use of approved electrical equipment and requirements to file a notice of work with the Electrical Safety Authority (ESA).

## 2 DEFINITIONS

All definitions in Section 1.2 of the DSC are adopted and apply in the EVCCP. A glossary, including the most relevant terms from the DSC in the context of the EVCCP, is provided in Appendix 4.

## 3 ELECTRIC VEHICLE CHARGING CONNECTION PROCEDURES OVERVIEW

This section provides an overview of the EVCCP. A high-level process flow for EVSE connections is provided in Figure 1 below. Detailed explanations of each step, including process flowcharts, information requirements and customer-distributor interactions at each stage are set out in Sections 4 through 8. Under each section, there are specific subsections that identify the

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<sup>2</sup> See Ontario Regulation 164/99: <https://www.ontario.ca/laws/regulation/990164>

requirements that a distributor must comply with in relation to the corresponding Step of the connection procedure.

A customer intending to connect EVSE to a distribution system is responsible for initiating communication with the distributor, either by requesting a preliminary consultation (Step 1) or by submitting a connection request (Step 2). This allows the distributor to assess whether the existing main distribution system and its connection assets are sufficient and capable of serving the additional electrical demand from the new EVSE. Additional EVSE electrical demand may require modifications or upgrades to the distributor’s distribution system including, for example, installation of larger conductors and upgrading of meters and/or transformers.

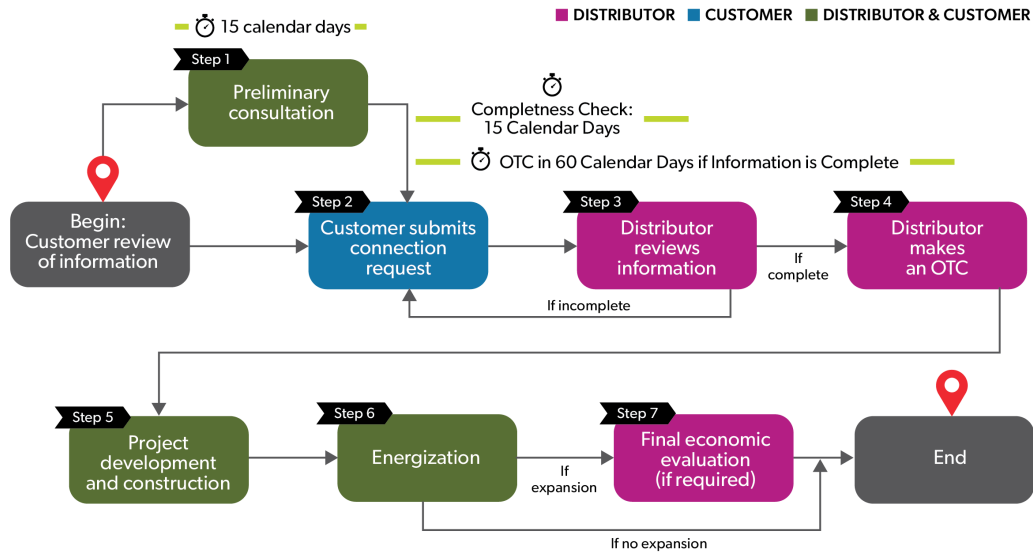


Figure 1: High-level process flow for an EVSE connection.

## 4 PRELIMINARY CONSULTATION (STEP 1)

The customer may choose to request a preliminary consultation by completing an EV Preliminary Consultation Information Request (EVPCIR) form and submitting it to the distributor. A preliminary consultation is an optional step for customers, who may instead choose to proceed directly to a connection request. An overview of the preliminary consultation process flow is provided in Figure 2 below.

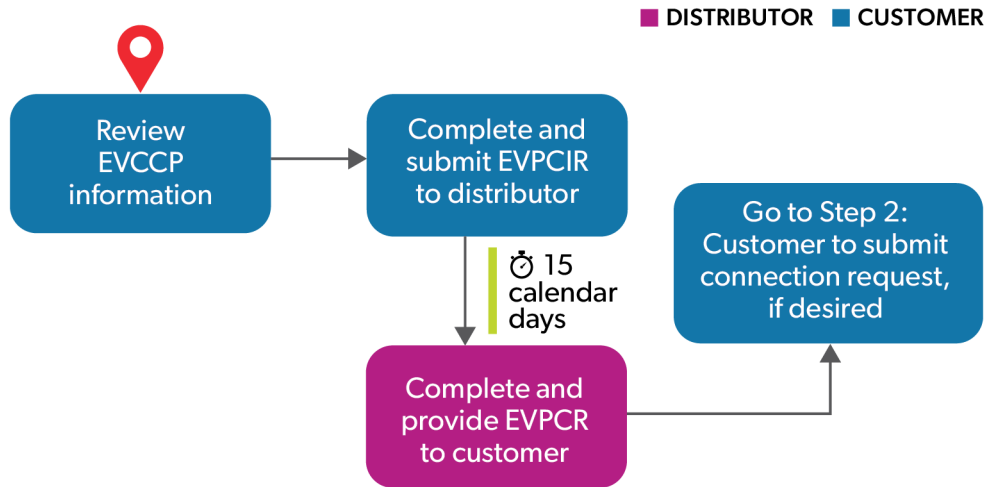


Figure 2: Process flow for preliminary consultation.

The purpose of the preliminary consultation is to provide high-level connection feasibility information to a customer who has uncertainties regarding site selection for the EVSE, or those who are unsure about committing to EVSE installations. If a customer has already decided on a specific location for the EVSE, the preliminary consultation may provide limited benefits and requesting a preliminary consultation may extend the overall connection process.

**4.1** A distributor shall make available an EVPCIR form, in the form specified in Appendix 3, to a customer who is considering requesting the connection of EVSE to the distributor’s distribution system. The EVPCIR form shall be made available electronically on the distributor’s website and in hard copy at the distributor’s address.

(a) Where the distributor needs to amend or add to the EVPCIR template form, in response to any unique characteristics of its system, the distributor will advise the OEB of all changes.

(b) A distributor may establish a web-based interface for the purpose of collecting this information, provided the web-based interface is consistent with Appendix 3 or is amended in accordance with section 4.1 (a).

The standardized EVPCIR form is not intended for the purpose of gathering complex design details of the proposed EVSE connection. Instead, the

EVPCIR collects standard information for the distributor to provide a high-level assessment of connection requirements and complexities.

**4.2** The distributor must respond within 15 calendar days of receipt of a complete EVPCIR, using the Electric Vehicle Preliminary Consultation Report (EVPCR) form specified in Appendix 3.

- (a) A distributor shall provide an EVPCR to a customer at no cost.
- (b) A distributor shall meet with a customer who requests a meeting coincident with the issuance of an EVPCR or after the customer has received an EVPCR, at no cost, to discuss the information provided in the EVPCR.

The EVPCR, supplied by the distributor to the customer, conveys the distributor's preliminary understanding of the available capacity and complexities associated with the proposed point of connection. The EVPCR will identify:

- Whether an expansion is expected to be required to provide the requested connection capacity.
- The estimated capacity at the connection point.
- An assessment of the expected complexity of the connection of the EVSE.
- Any additional information that the distributor may have, offering potential benefits to the customer, such as guidance on estimated costs and the possibility that a smaller EVSE size than specified in the EVPCIR could potentially decrease both the costs and complexity of the connection.

**Important information for customers:** Please be advised that the EVPCR is a snapshot in time based on the information in the EVPCIR. It neither replaces the connection assessment process nor reserves capacity for an EVSE connection.

## 5 CONNECTION REQUEST AND COMPLETION CHECK (STEPS 2 TO 3)

A connection request is initiated by a customer who wants to connect EVSE to a distribution system. A connection request is the formal written application (pursuant to DSC Section 6.1.1) for a customer connection, submitted to the distributor by the customer.

**5.1** A distributor shall make available on its website a connection request form that sets out information required to perform a connection assessment and create an OTC for the customer. The form, at a minimum, shall contain customer contact information, the location for the EVSE installation, any existing and proposed new electrical service, and the requested timing for the connection.

**5.2** Once the distributor has received the written connection request, it shall perform a completeness check on information received from the customer.

**5.3** A distributor shall respond to a customer's written connection request within 15 calendar days, confirming if the connection request is deemed complete or, if additional information is required, with the description of the deficiencies. The customer must resubmit the connection request with the additional information and the distributor shall respond to the updated connection request within 15 calendar days. If the EVSE installation does not require any modification or addition to the distributor's distribution system, the distributor shall communicate this to the customer so the customer can proceed with the EVSE installation.

## **6 OFFER TO CONNECT (STEP 4)**

Once Step 3 of the process is complete and it has been determined by the distributor that an EVSE installation necessitates modification or addition to the distributor's distribution system, the distributor shall provide an OTC to the customer within 60 calendar days of receipt of a customer's written connection request (Section 6.1.1 of the DSC).

For greater clarity, if the distributor responds to the customer's connection request on the 15th calendar day and confirms the request is complete, the distributor will have 45 calendar days to make an OTC. The detailed process that occurs after a customer submits a connection request is described in Figure 3 below.



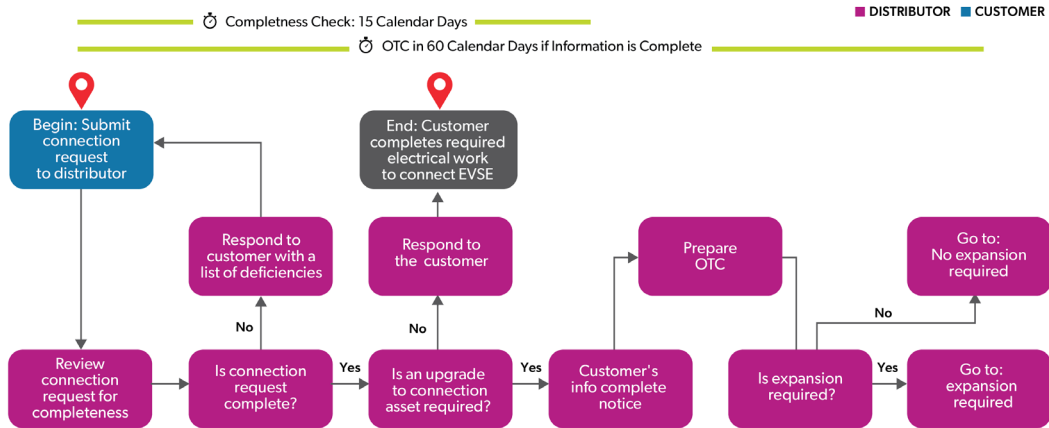


Figure 3: Process flow once a customer submits a connection request.

The content of the distributor’s initial OTC may vary depending on whether an expansion is required and whether the customer is required to pay a capital contribution. Three connection scenarios are listed below, which are further described in the subsequent subsections.

1. **New or modification to connection asset only:** expansion is not required; the EVSE connection only requires installation of new connection assets or modification to the distributor’s existing connection asset (refer to Figure 4 and Subsection 6.1 below)
2. **Expansion without capital contribution:** the EVSE connection requires expansion of the distribution system; a capital contribution for the expansion work is not required from the customer (refer to Figure 5 and Subsection 6.2 below)
3. **Expansion with capital contribution:** the EVSE connection requires expansion of the distribution system; a capital contribution for the expansion work is required from the customer (refer to Figure 5 and Subsection 6.3 below)

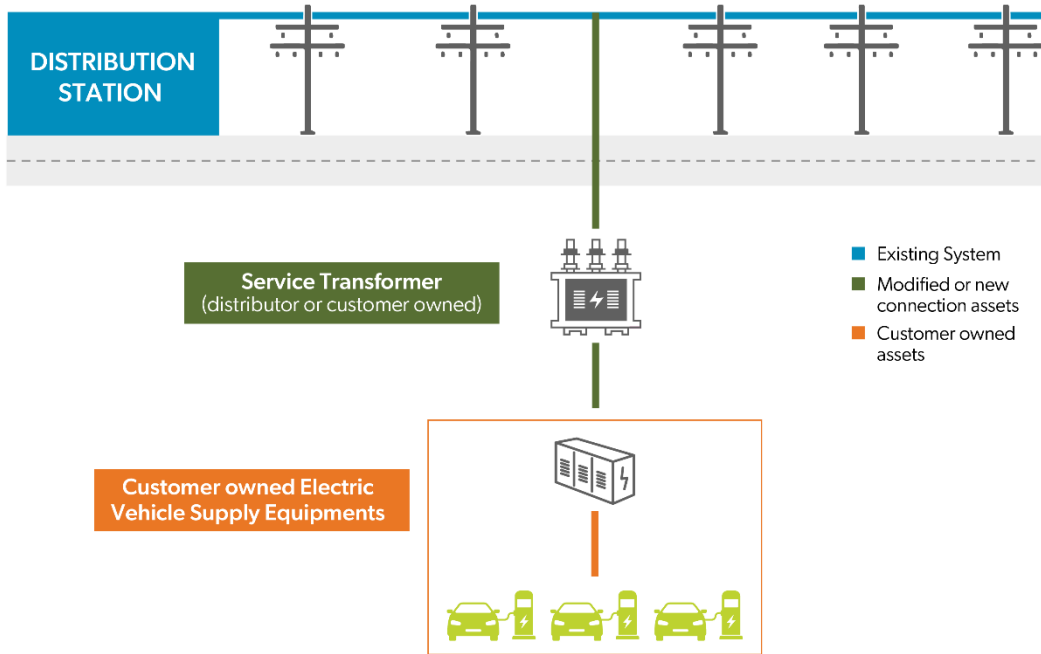


Figure 4: Addition or Modification to Connection Asset Only.

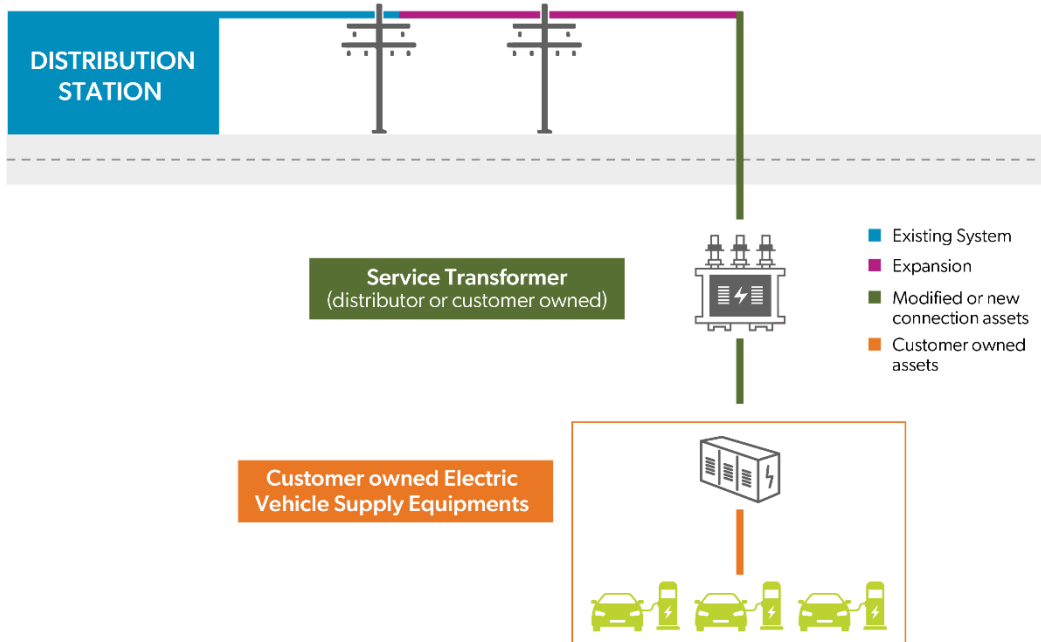


Figure 5: Expansion with/without Capital Contribution.

### 6.1 New or Modification to Connection Asset Only

While some new EVSE connections will be in areas where there is sufficient capacity on the distributor’s main distribution system for new electrical load, the distributor’s service transformer and conductors supplying the customer, which are considered connection assets, may need to be modified. For a stand-alone EVSE connection (i.e., not an addition to the customer’s existing load), installation of connection assets will be required. The process flow for EVSE connections requiring new or modified connection assets is provided in Figure 6 below.

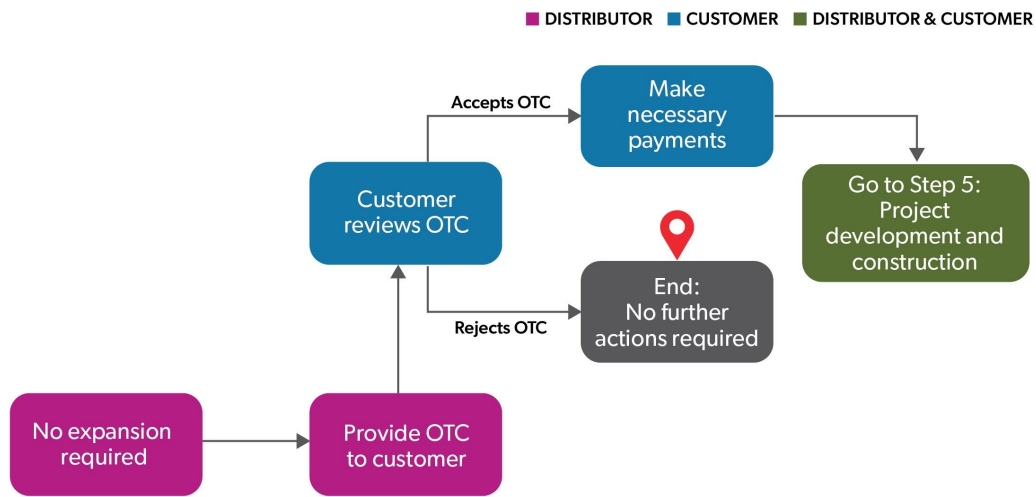


Figure 6: Process flow for connection requests where expansion is not required.

The OTC in this case would include the connection charge above and beyond any applicable basic connection allowance (pursuant to DSC Section 3.1.6). More information regarding a distributor’s basic connection allowance can be found in the distributor’s CoS.

The distributor shall take into consideration DSC Section 3.1.7 and Section 3.1.7A, regarding replacement of existing assets that are at end of life, when determining the customer contribution for the modified or upgraded connection asset.

**6.1.1** The distributor shall include, at a minimum, the information set out below in the initial OTC for a customer's connection request that solely requires installation of new connection assets or modification to the distributor's existing connection assets.

**Information Included in OTC (See Appendix 2 for detailed description of each item)**

- Description of the Connection
- Contact Information and Communication Protocol
- Distributor Work (connection asset)
- Customer Work
- Service Conditions for Energization
- Cost Summary
- Payment Method and Payment Schedule
- Other Terms and Conditions
- Contract Acceptance
- APPENDIX:
  - Single-line Diagram if available

**6.1.2** In the case of an OTC for a customer's connection request that requires solely the installation of new or modified connection assets, the distributor shall include, at a minimum, the cost information set out in the table below.

Cost Summary Component	Description
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Offer Type	Confirm if the OTC is an estimated or firm offer.
Capital Contribution for Connection Assets	Description of the distributor's connection assets that are required to be modified and/or upgraded, for each asset the distributor shall specify: <ul style="list-style-type: none"> <li>• Basic connection allowance (if applicable).</li> <li>• Connection charge or variable connection charge above and beyond the basic connection.</li> <li>• The age of the asset and confirm if the asset age has been factored in determining the customer contribution in accordance with DSC Section 3.1.7 or Section 3.1.7A.</li> </ul>

## 6.2 Expansion without Capital Contribution

Where the distributor's main distribution system does not have sufficient capacity to accommodate a customer's proposed EVSE, expansion of the distribution system will be required to accommodate the EVSE installation. This expansion is in addition to any necessary installation or modification of connection assets as described in Subsection 6.1 above. The process flow for EVSE connections requiring expansions, without customer capital contribution, is provided in Figure 7 below.

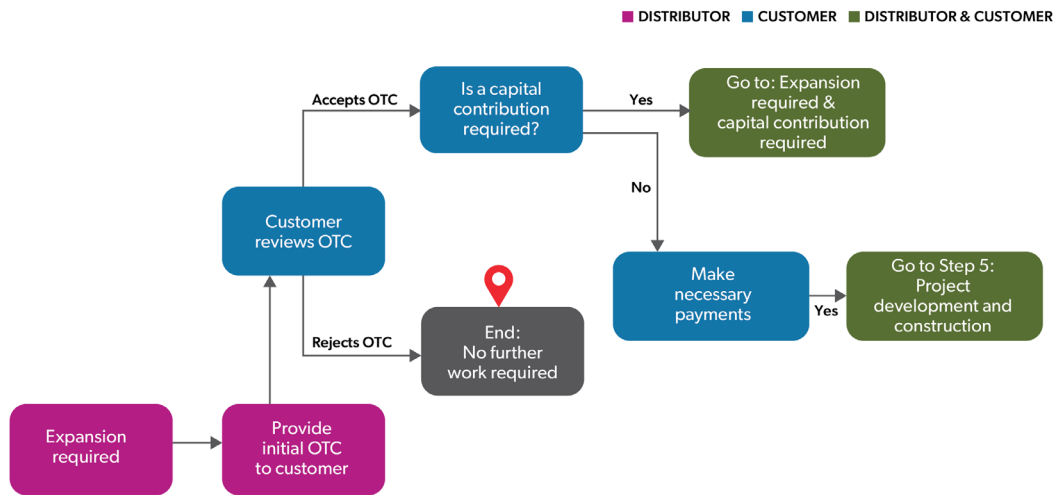


Figure 7: Process flow chart for EVSE connections requiring expansion without capital contribution.

An economic evaluation, following the requirements of Section 3.2.1 of the DSC and Appendix B to the DSC, shall be performed by the distributor to determine if future revenues from the customer will pay for the capital cost and on-going maintenance costs of the expansion project. If future revenues from the EVSE will pay for the capital cost and on-going maintenance costs of the expansion project, in accordance with DSC Section 3.2.1, no capital contribution is required from the customer for expansion work.

A distributor may provide an initial OTC to the customer and build the expansion on either a firm or estimated basis. An estimated offer is an offer where costs are subject to revision following the facility’s energization, at which point the distributor must carry out a final economic evaluation that considers, among other things, the actual costs incurred for the expansion. Following a final economic evaluation, the distributor shall obtain from the customer, or credit the customer for, any difference between the capital contribution amount set out in the initial offer and that resulting from the final economic evaluation.

As required by Section 3.2.8 of the DSC, if an expansion is needed to connect the customer, a distributor’s initial OTC shall include, **at no cost to the customer:**

- (a) a statement as to whether the offer is a firm offer or is an estimate of the costs that would be revised in the future to reflect actual costs incurred;
- (b) a reference to the distributor's CoS and information on how the customer requesting the connection may obtain a copy of them;
- (c) a statement as to whether a capital contribution will be required from the customer;
- (d) a statement as to whether an expansion deposit will be required from the customer and, if the distributor will require an expansion deposit from the customer, the amount of the expansion deposit that the customer will have to provide; and
- (e) a statement as to whether the connection charges will be charged separately from the capital contribution and a description of, and if known, the amount for those connection charges.

**6.2.1** The distributor shall include, at a minimum, the information set out below in the initial OTC for a customer's connection request that requires expansion to the distributor's main distribution system, where a capital contribution is not required from the customer.

**Information Included in OTC (See Appendix 2 for detailed description of each item)**

- Description of the Connection
- Contact Information and Communication Protocol
- Distributor Work (connection asset and expansion)
- Customer Work
- Service Conditions for Energization
- Cost Summary
- Payment Method and Payment Schedule
- Other Terms and Conditions
- Contract Acceptance
- APPENDIX:
  - Additional information on cost summary, such as economic evaluation model and cost breakdown
  - Single-line Diagram if available

**6.2.2** In the case of an OTC where the customer's connection request requires an expansion to the distributor's main distribution system and the customer is not required to pay a capital contribution, the distributor shall include, at a minimum, the cost information set out in the table below.

<b>Cost Summary Component</b>	<b>Description</b>
Offer Type	Confirm if the OTC is an estimated or firm offer.
Capital Contribution for Connection Assets	Description of the distributor's connection assets that are required to be modified and/or upgraded, for each asset the distributor shall specify: <ul style="list-style-type: none"> <li>• Basic connection allowance (if applicable).</li> <li>• Connection charge or variable connection charge above and beyond the basic connection.</li> <li>• The age of the asset and confirm if the asset age has been factored in determining the customer contribution in accordance with DSC Section 3.1.7 or Section 3.1.7A.</li> </ul>
Expansion Deposit (if applicable)	Distributor shall specify: <ul style="list-style-type: none"> <li>• The amount of expansion deposit.</li> <li>• The methodology used to determine the expansion deposit amount.</li> <li>• Conditions and timelines that the expansion deposit will be returned to the customer.</li> </ul>

### 6.3 Expansion with Capital Contribution

In addition to the requirements set out in Subsection 6.2 above, if there is a shortfall between the present value of the projected costs and revenues as determined by the economic evaluation, the distributor may propose to collect all or a portion of that amount from the customer in the form of a capital contribution, in accordance with the distributor's documented policy on capital contributions by customer class (as provided for in DSC Section 3.2.6). The



process flow for EVSE connections requiring expansions and customer capital contribution is provided in Figure 8 below.

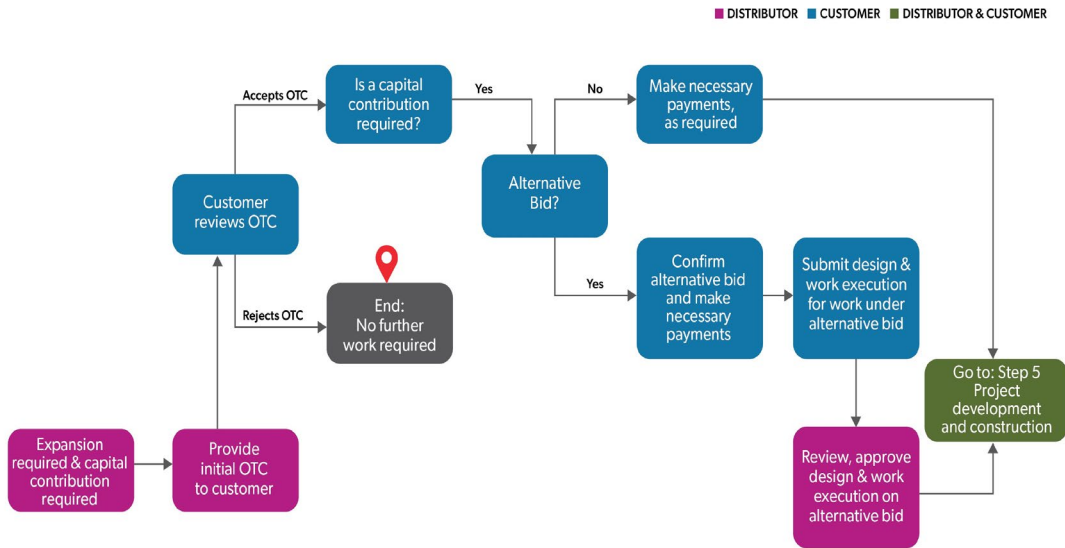


Figure 8: Process flow chart for EVSE connections requiring expansion and capital contribution.

In accordance with Section 3.2.9 of the DSC, if the distributor requires a customer to pay a capital contribution, the distributor must, in addition to complying with Section 3.2.8 of the DSC, also include in its initial OTC, **at no cost to the customer:**

- (a) the amount of the capital contribution that the customer will have to pay for the expansion;
- (b) the calculation used to determine the amount of the capital contribution to be paid by the customer including all the assumptions and inputs used to produce the economic evaluation;
- (c) a statement as to whether the offer includes work for which the customer may obtain an alternative bid and, if so, the process by which the customer may obtain the alternative bid;
- (d) a description of, and costs for, the work that is eligible for an alternative bid and the work that is not eligible for an alternative bid associated with the expansion broken down into the following categories:
  - i. labour (including design, engineering, and construction);
  - ii. materials;
  - iii. equipment; and
  - iv. overhead (including administration);

- (e) an amount for any additional costs that will occur as a result of the alternative bid option being chosen; including, but not limited to, inspection costs;
- (f) if the distributor has chosen to recover the non-residential basic connection charge as part of its revenue requirement, a description of, and the amount for, the connection charges that have been factored into the economic evaluation.

**6.3.1** The distributor shall include, at a minimum, the information set out in below in the initial OTC for a customer's connection request that requires expansion to the distributor's main distribution system, where a capital contribution is required from the customer.

**Information Included in OTC (See Appendix 2 for detailed description of each item)**

- Description of the Connection
- Contact Information and Communication Protocol
- Distributor Work (connection asset and expansion)
- Customer Work
- Service Conditions for Energization
- Cost Summary
- Alternative Bid Option (if applicable)
- Payment Method and Payment Schedule
- Other Terms and Conditions
- Contract Acceptance
- APPENDIX:
  - Additional information on cost summary, such as economic evaluation model, alternative bid option, and cost breakdown.
  - Single-line Diagram if available

**6.3.2** In the case of an OTC where the customer’s connection request requires an expansion to the distributor’s main distribution system and the customer is required to pay a capital contribution, the distributor shall include, at a minimum, the cost information set out in the table below.

<b>Cost Summary Component</b>	<b>Description</b>
Offer Type	Confirm if the OTC is an estimated or firm offer.
Capital Contribution for Connection Assets	Description of the distributor’s connection assets that are required to be modified and/or upgraded, for each asset the distributor shall specify: <ul style="list-style-type: none"> <li>• Basic connection allowance (if applicable).</li> <li>• Connection charge or variable connection charge above and beyond the basic connection.</li> <li>• The age of the asset and confirm if the asset age has been factored in determining the customer contribution in accordance with DSC Section 3.1.7 or Section 3.1.7A.</li> </ul>
All the Inputs and Assumptions Used in the Economic Evaluation (other than capital cost)	Distributor shall provide the calculation used to determine the amount of the capital contribution to be paid by the customer, including all the assumptions and inputs used to produce the economic evaluation.
Capital Cost for Expansion	Listing major components and total costs categorized by following groups: <ul style="list-style-type: none"> <li>• Labour</li> <li>• Materials</li> <li>• Equipment</li> <li>• Overhead</li> <li>• Costs that are eligible for Alternative Bid</li> </ul>
Expansion Deposit (if applicable)	Distributor shall specify: <ul style="list-style-type: none"> <li>• The amount of expansion deposit.</li> <li>• The methodology used to determine the expansion deposit amount.</li> <li>• Conditions and timelines that the expansion deposit will be returned to the customer.</li> </ul>

As required by Section 3.2.10 of the DSC, once the customer has accepted the distributor's offer and if the customer requests, the distributor shall provide to the customer, at cost, an itemized list of the costs for the major items in each of the categories listed in Section 3.2.9(d) of the DSC and shall be done in the following manner:

- (a) if the customer has not chosen to pursue an alternative bid, the distributor shall provide the itemized list for all of the work; or
- (b) if the customer has chosen to pursue the alternative bid option, the distributor shall only be required to provide the itemized list for the work that is not eligible for the alternative bid.

#### 6.4 Alternative Bid

Where the distributor requires a capital contribution from the customer, the customer has the right to obtain an alternative bid for any eligible work identified by the distributor pursuant to Section 3.2.9 (c) of the DSC. The customer is required to use a qualified contractor for the eligible work and must transfer the constructed expansion facilities to the distributor upon completion.

The work completed under an alternative bid must be done in accordance with the distributor's specifications. Pursuant to Section 3.2.16(e) of the DSC, the distributor must inspect and approve, at cost, all aspects of the constructed facilities prior to connecting the facilities to the existing distribution system. Activities that are not eligible for alternative bid are listed under Section 3.2.15 of the DSC. The distributor may also charge a customer that chooses to pursue an alternative bid any costs incurred by the distributor associated with the expansion, pursuant to Section 3.2.17 of the DSC, including additional design, engineering or installation of the facility, administration costs of the contractor if the distributor is required to be involved, and any inspection and/or approval work prior to connection of the facilities.

When the customer transfers the expansion facilities that were constructed under the alternative bid option to the distributor, the distributor shall pay the customer a transfer price, which is determined in accordance with DSC Section 3.2.18. This transfer price shall be considered a cost to the distributor for the purposes of completing the final economic evaluation pursuant to Section 3.2.19 of the DSC.

## 7 PROJECT DEVELOPMENT, CONSTRUCTION, ENERGIZATION AND FINAL ECONOMIC EVALUATION (STEPS 5 TO 7)

After the customer accepts the OTC and provides any necessary payment according to the OTC, the distributor shall promptly work with the customer to complete the project and connect the EVSE. A process flow regarding these steps is described in Figure 9 below.

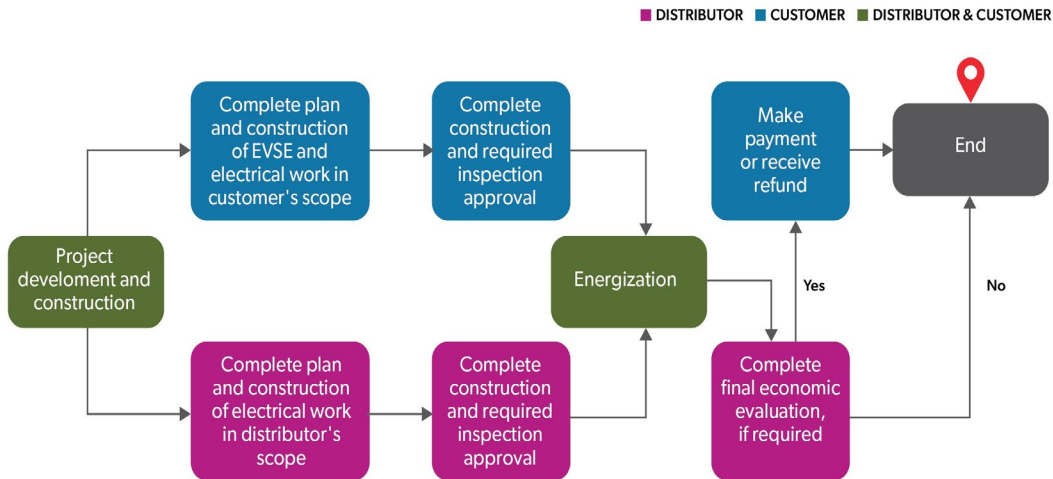


Figure 9: Process flow for project development, construction, energization and final economic evaluation stages

### 7.1 Project Development and Construction

The customer and the distributor will work together to finalize the design of the connection facility, which may include single-line diagrams, protection and control needs, and a project schedule.

The project development and construction processes described in this section is for general information purposes only. Rather than being prescriptive, it is intended to help customers understand, at a high level, the processes that follow the issuance and acceptance of an OTC. Customers are reminded to obtain all required permits and approvals (e.g., per ESA requirements, etc.) prior to commencement of electrical work within the customer's scope.

Following acceptance of the OTC and remittance of any necessary payments, distributors and customers will proceed with the agreed-upon work, including construction and commissioning of the distributor's

distribution system and the customer's EVSE facility. Construction activity will likely take place in parallel paths. Distributors are expected to maintain appropriate levels of communication with the customer throughout the project development and construction phases to facilitate the timely connection of the EVSE facility.

When the customer transfers the expansion facilities that were constructed under the alternative bid option to the distributor, and provided that the distributor has inspected and approved the constructed facilities, the distributor shall pay the customer a transfer price in accordance with the requirements of Section 3.2.18 of the DSC. The transfer price shall be the lower of the cost to the customer to construct the expansion facilities or the amount set out in the distributor's initial offer to do the work that is eligible for the alternative bid. If the customer does not provide the distributor with the customer's cost information in a timely manner, then the distributor may use the amount for the work that is eligible for the alternative bid as set out in its initial offer as the basis for the transfer price instead of the customer's cost.

## 7.2 Energization

Section 7.2.1 of the DSC requires that a connection for a new low voltage (<750 volts) service must be completed within 5 business days from the day on which all applicable service conditions are satisfied, or at such later date as agreed to by the customer and distributor.

Section 7.2.2 of the DSC requires that a connection for a new high voltage (>750 volts) service must be completed within 10 business days from the day on which all applicable service conditions are satisfied, or at such later date as agreed to by the customer and distributor.

As indicated above in Section 6, a distributor is required to provide the customer with a list of all applicable service conditions that are required to be met for the purpose of energization in its OTC.

## 7.3 Final Economic Evaluation

If the distributor provides the customer with an estimated OTC which includes an expansion, the distributor shall carry out a final economic evaluation once the facilities are energized as required by Section 3.2.2 of the DSC. The final economic evaluation shall be based on forecast revenues, actual costs incurred (including but not limited to the costs for the work that was not eligible for an alternative bid and any transfer price paid by the distributor to the customer) and the methodology described in Appendix B of the DSC.

If the distributor provided the customer with a firm OTC and an alternative bid option was chosen, the final economic evaluation shall be based on the amounts used in the firm offer for costs and forecasted revenues, as well as any transfer price paid by the distributor to the customer, in accordance with Section 3.2.3 of the DSC.

If the capital contribution amount resulting from the final economic evaluation differs from the capital contribution amount resulting from the initial economic evaluation calculation, the distributor shall obtain from the customer, or credit the customer for, any difference between the two calculations (pursuant to DSC Section 3.2.7).

## **8 EXPANSION DEPOSIT RETURN AND EXPANSION REBATE**

A distributor shall require the customer to provide an expansion deposit if a capital contribution is required. For expansions that do not require a capital contribution, a distributor may require the customer to provide an expansion deposit for up to 100% of the present value of the projected capital costs and on-going maintenance costs of the expansion project (as per DSC Section 3.2.20). The expansion deposit, collected by the distributor, covers both the forecast risk (the risk associated with whether the projected revenue for the expansion will materialize as forecasted) and the asset risk (the risk associated with ensuring that the expansion is constructed, that it is completed to the proper design and technical standards and specifications, and that the facilities operate properly when energized) related to the expansion (as per DSC Section 3.2.21).

Sections 3.2.22 and 3.2.24 of the DSC allow a distributor to retain and use the expansion deposit for work required to repair the expansion facilities completed under the alternative bid option.

A distributor shall annually return the percentage of the expansion deposit in proportion to the actual demand that materialized in that year. If at the end of the customer connection horizon the forecasted demand has not materialized, the distributor shall be allowed to retain the remaining portion of the expansion deposit. Refer to DSC Sections 3.2.23 and 3.2.26 for more details on how the expansion deposit is returned to the customer.

A customer may be entitled to a rebate from the distributor if unforecasted customers connect to the distribution system and benefit from the earlier expansion during the customer connection horizon. Refer to DSC Section 3.2.27 for details on how the expansion rebate is determined.

## APPENDIX 1. Distributor-Specific Requirements for EVSE Connections (Template)

This template outlines distributor-specific requirements pertaining to the EVCCP, as it relates to DSC requirements. Its primary objective is to enhance clarity by addressing connection requirements, particularly in cases where variations may arise among different distributors.

The DSC requires that a distributor provide its own appendix “Distributor Specific Electric Vehicle Charging Connection Requirements” document and attach or append it to its conditions of service. This template has been prepared to assist distributors in developing their own EVCCP appendix document. The DSC sections referenced in the grey boxes below are to assist distributors in completing the template, which outlines the minimum information that distributors shall provide.

Should the necessary information in the sections below already be included within a distributor’s conditions of service, the distributor may simply reference the corresponding section number rather than duplicating the entire section.

### 1. Connection Request

In this section, the distributor shall indicate the form of connection request (i.e., written vs. online) that is available for EVSE customers.

### 2. Basic Connection for Non-Residential Customers

In this section, the distributor shall indicate whether it has a basic connection defined for non-residential EVSE. If the basic connection for EVSE is defined, a description of the basic connection will be provided in this section.

DSC Section 3.1.5 – For non-residential customers other than micro-embedded generation facility customers, a distributor may define a basic connection by rate class and recover the cost of connection either as part of its revenue requirement, or through a basic connection charge to the customer.



### 3. Offer to Connect: Estimate or Firm Offer

In this section, the distributor shall state whether an initial offer to connect will be provided as an estimate or a firm offer. If the distributor determines the type of estimate in an offer based on different conditions, the conditions shall be described in this section.

DSC Section 3.2.8 – If an expansion is needed in order for a distributor to connect a customer, the distributor shall make an initial offer to connect the customer and build the expansion. A distributor’s initial offer shall include, at no cost to the customer:

- (a) a statement as to whether the offer is a firm offer or is an estimate of the costs that would be revised in the future to reflect actual costs incurred.

### 4. Capital Contribution

In this section, the distributor shall state if it collects all or a portion of the shortfall between the present value of the projected costs and revenues from the customer in the form of a capital contribution. If there are circumstances that the distributor collects a portion of the shortfall, a description of the circumstances shall be provided in this section.

DSC Section 3.2.6 – If a shortfall between the present value of the projected costs and revenues is calculated under section 3.2.1, the distributor may propose to collect all or a portion of that amount from the customer in the form of a capital contribution, in accordance with the distributor’s documented policy on capital contributions by customer class.

### 5. Work Under the Alternative Bid Option

In this section, the distributor shall confirm if it permits the alternative bid option for any work that requires physical contact with the distributor’s existing distribution system and, if yes, a description of such work.

DSC Section 3.2.15A – Work that requires physical contact with the distributor’s existing distribution system is not eligible for alternative bid unless the distributor decides in any given case to allow such work to be eligible for alternative bid.

## 6. Expansion Deposit

In this section, the distributor shall describe its practice in determining the expansion deposit amount.

DSC Section 3.2.20 – For expansions that require a capital contribution, a distributor shall require the customer to provide an expansion deposit for up to 100% of the present value of the forecasted revenues as described in Appendix B. For expansions that do not require a capital contribution, a distributor may require the customer to provide an expansion deposit for up to 100% of the present value of the projected capital costs and on-going maintenance costs of the expansion project.

## 7. Connection Agreement or Other Agreement

In this section, the distributor shall state the conditions that will require the customer to enter into a Connection Agreement or other agreement for specific types of EVSE connections.

DSC Section 6.1.3 – A distributor may require a customer to enter into a Connection Agreement with the distributor if the distributor believes that the customer has characteristics that require an explicit document to describe the relationship between the distributor and the customer. Suggested information to be included in the Connection Agreement with customers is listed in Appendix D of the DSC.

## 8. Applicable Service Conditions for Connecting New Service

In this section, the distributor shall specify the criteria by which it defines the term "all applicable service conditions are satisfied," and may include any examples it considers necessary for customers' understanding.

DSC Section 7.2.1 – A connection for a new service request for a low voltage (<750 volts) service must be completed within 5 business days from the day on which all applicable service conditions are satisfied, or at such later date as agreed to by the customer and distributor.

DSC Section 7.2.2 – A connection for a new service request for a high voltage (>750 volts) service must be completed within 10 business days from the day on which all applicable service conditions are satisfied, or at such later date as agreed to by the customer and distributor.

## APPENDIX 2. Offer to Connect Components

The following descriptions are of those components expected to be included in the Offer to Connect (OTC) given to customers:

### 1. Description of Connection

The description shall identify the capacity requirement; requested in-service date of the connection and, if different from the requested date, the distributor's proposed in-service date; and the demarcation point between distributor equipment and customer equipment. A single-line diagram, if available, may be included to demonstrate the work required to accommodate the connection.

### 2. Contact Information and Communication Protocol

Primary points of contact and contact information will be provided for the distributor and the customer. A description of the communication protocols for the remainder of the connection process will be provided. The distributor will provide a reference to their Conditions of Service and how a customer can receive a copy of them.

### 3. Distributor Work

Distributor work will include the work that the distributor is expected to complete, including procurement and installation of equipment. This section also includes other information such as easements, permits and approvals that the distributor will obtain.

### 4. Customer Work

Customer work will include the work that the customer is expected to complete, including procurement and installation of equipment on the customer side of the ownership demarcation point. Other information such as easements, permits and approvals that the customer is required to obtain will be described.

### 5. Service Conditions for Energization

Pursuant to DSC Section 7.2, a connection for a new service request must be completed within 5 or 10 business days, depending on the voltage level, from the day on which all applicable service conditions are satisfied. This section shall identify all the service conditions that must be met prior to energization, including any approvals and testing. If all the service conditions cannot be identified at this stage, the distributor shall provide the estimated time or stage when the list of the service conditions will be provided to the customer.

## **6. Cost Summary**

The distributor shall provide the cost summary that covers all the information described under Section 7 of the EVCCP.

## **7. Alternative Bid Option (if applicable)**

The distributor will describe the work that is eligible for alternative bid, and the process by which the customer may obtain alternative bid. The distributor will also describe any additional costs that will be incurred if the customer pursues the alternative bid option (e.g., inspection costs).

## **8. Payment Methods and Payment Schedule**

The OTC will describe the payment methods acceptable by the distributor. Payment schedules and other relevant fund transfer information will be provided.

## **9. Other Terms and Conditions**

Other terms and conditions applicable to the connection, such as miscellaneous, timelines for customer payment, termination, warranties and liability.

## **10. Contract Acceptance**

Contract signature page. If the OTC contains alternative bid option, the OTC will ask the customer to make a selection.

## APPENDIX 3. EVPCIR/EVPCR Template Forms

*[see separate document attached]*



## APPENDIX 4. Glossary

### **Conditions of Service (CoS)**

The document developed by a distributor in accordance with Subsection 2.4 of the DSC that describes the operating practices and connection rules for the distributor.

### **Connection Assets**

The portion of the distribution system used to connect a customer to the existing main distribution system, and consists of the assets between the point of connection on a distributor's main distribution system and the ownership demarcation point with that customer.

### **Distribution System Code (DSC)**

A document published by the OEB that sets out the minimum obligations that a licensed electricity distributor must meet in carrying out its obligations to distribute electricity within its service area under its licence.

Refer to: <https://www.oeb.ca/regulatory-rules-and-documents/rules-codes-and-requirements/distribution-system-code-dsc>

### **Electric Vehicle (EV)**

A vehicle that is powered, in whole or in part, by electricity stored in rechargeable batteries.

### **Electric Vehicle Preliminary Consultation Information Request (EVPCIR)**

A form submitted by a customer to a distributor for the purpose of initiating a preliminary consultation to provide high-level connection feasibility information regarding a site selected for EVSE.

Refer to Section 4 (Preliminary Consultation (Step 1)) and Appendix 3 (EVPCIR/EVPCR Forms) of the EVCCP.

### **Electric Vehicle Preliminary Consultation Report (EVPCR)**

A form submitted by a distributor to a customer in response to an EVPCIR that conveys the distributor's preliminary understanding of the available capacity and complexities associated with the proposed point of connection.

Refer to Section 4 (Preliminary Consultation (Step 1)) and Appendix 3 (EVPCIR/EVPCR Forms) of the EVCCP.

### **Electrical Safety Authority (ESA)**

The organization that regulates and promotes electrical safety in Ontario.

Refer to: <https://esasafe.com/>

### **Electric Vehicle Supply Equipment (EVSE)**

Electrical supply equipment that is dedicated to supplying a source of electricity for the sole purpose of charging electric vehicles.

### **Expansion**

A modification or addition to the main distribution system in response to one or more requests for one or more additional customer connections that otherwise could not be made, for example, by increasing the length of the main distribution system, and includes the modifications or additions to the main distribution system identified in Section 3.2.30 of the DSC but in respect of a renewable energy generation facility excludes a renewable enabling improvement.

Section 3.2.30 of the DSC provides that an expansion of the main distribution system includes, but is not limited to:

- (a) building a new line to serve the connecting customer;
- (b) rebuilding a single-phase line to three-phase to serve the connecting customer;
- (c) rebuilding an existing line with a larger size conductor to serve the connecting customer;
- (d) rebuilding or overbuilding an existing line to provide an additional circuit to serve the connecting customer;
- (e) converting a lower voltage line to operate at higher voltage;
- (f) replacing a transformer to a larger MVA size;
- (g) upgrading a voltage regulating transformer or station to a larger MVA size; and
- (h) adding or upgrading capacitor banks to accommodate the connection of the connecting customer.

### **Offer to Connect (OTC)**

An offer by a distributor to connect a customer to its distribution system. *Refer to Section 6 (Offer to Connect (Step 4) and Appendix 2 (Offer to Connect Components) of the EVCCP.*

### **Ontario Electrical Safety Code (OESC)**

A technical document that describes in detail the standards for electrical installations, products and equipment in Ontario.

*Refer to: <https://esasafe.com/role/oesc/>*