ECONOMIC EVALUATIONS

For construction of new facilities or expansion of existing facilities for distribution systems

Dated April 30, 2017

InnPower
7521 Yonge Street / Innisfil, ON / L9S 3W7
Website: www.innpower.ca
If you are planning on building a **Subdivision**, the process of connecting to the Local Distribution Infrastructure will require coordination with InnPower. Contact with InnPower should occur in conjunction with your **initial submission** to the Municipality.

As part of the connection process, an **Economic Evaluation** is conducted by InnPower for all Expansion projects.

The following package provides details on the **Economic Evaluation** model, the **Distribution Connection** process, as well as the related **resources** and **forms**.
Table of Contents

**Economic Evaluation**
Definitions ................................................................................................................................. 4-7
Economic Evaluation Overview ................................................................................................. 8-11
Developer Financial Responsibilities ....................................................................................... 12-18
Distribution Connection Steps ............................................................................................... 19-23
Distribution Connection Flow Chart ....................................................................................... 24-25
Contact Information .................................................................................................................. 26

**Forms and Resources**
Economic Evaluation Summary Sheet – Sample ........................................................................ 28
Request for Connection Application Form ............................................................................... 29
Developer Summary Form Option A ......................................................................................... 30
Developer Summary Form Option B ......................................................................................... 31

**Distribution System Code**
Distribution System Code: *Section 3.2 Expansions* ................................................................. 33-50
Distribution System Code: *Appendix B* ............................................................................... 51-58
Distribution System Code: FAQ ............................................................................................. 59-62
Definitions

The definitions provided below describe concepts outlined in Section 3.2 & Appendix B of the “Distribution System Code” and InnPower’s Offer to Connect Agreement, which relate to the Economic Evaluation Process.

The definitions provided will assist in understanding terms used in the Economic Evaluation package provided.

Under the “Distribution System Code” guidelines, an Economic Evaluation is required for all developments that meet the requirements of an “Expansion”.

“Distribution System” means a system for distributing electricity, and includes any structures, equipment or other things used for that purpose. A distribution system is comprised of the main system capable of distributing electricity to many customers and the connection assets used to connect a customer to the main distribution system; (OEB, 2015)

“Distribution System Code” means the code, approved by the Board, and in effect at the relevant time, which, among other things, establishes the obligations of a distributor with respect to the services and terms of service to be offered to customers and retailers and provides minimum technical operating standards of distribution systems; (OEB, 2015)

Customer

“Customer” means a person that has contracted for or intends to contract for connection of a building or an embedded generation facility. This includes developers of residential or commercial sub-divisions; *(OEB, 2015)*

The terms “Customer” and “Developer” will be used interchangeably.

Distributor

“Distributor” means a person who owns or operates a distribution system; *(OEB, 2015)*

Capital Contribution

“Capital Contribution” The maximum capital contribution that a distributor may charge a customer to construct an Expansion is the difference between the present value of projected capital costs and on-going maintenance for the facilities and the present value of the projected revenue for the distribution services provided by those facilities. *(IPC OTCA, 2017)*

Transfer Price

“Transfer Price” The transfer price is the capital costs and non-contestable costs incurred by the developer in the Expansion project. *(IPC OTCA, 2017)*
**Enhancement**

“Enhancement” means a modification to the main distribution system that is made to improve system operating characteristics such as reliability or power quality or to relieve system capacity constraints resulting, for example, from general load growth, but does not include a renewable enabling improvement; *(OEB, 2015)*

**Expansion**

“Expansion” means 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 but in respect of a renewable energy generation facility excludes a renewable enabling improvement; *(OEB, 2015)*

**Option A**

“Option A” means the Developer’s decision to have IPC complete any Contestable Work. For clarity, IPC will also complete the Non-Contestable Work. *(IPC OTCA, 2017)*

**Option B**

“Option B” means the Developer’s decision to complete the Contestable Work itself using a Qualified Contractor in accordance with IPC’s requirements, standards and specifications. *(IPC OTCA, 2017)*
<table>
<thead>
<tr>
<th><strong>Connection Horizon</strong></th>
<th><strong>Electrical Distribution System</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“Connection Horizon”  The Connection Horizon for the Expansion specified by IPC in writing, failing which it shall be a five (5) year period, starting from the energization date of the Expansion. (IPC OTCA, 2017)</td>
<td>“Electrical Distribution System or EDS” means IPC’s system for Distributing electricity, and includes any structures, equipment or other things used for that purpose. (IPC OTCA, 2017)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Expansion Deposit</strong></th>
<th><strong>Non-Contestable Costs</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“Expansion Deposit”  The deposit the Developer is required to pay to IPC in respect of the Expansion, as determined by IPC in accordance with the terms of the DSC. (IPC OTCA, 2017)</td>
<td>“Non-Contestable Costs” The costs that are not eligible for alternative bid as the work is required to be completed by the LDC. Costs such as inspection, termination, basic and system connection, legal, surveying and engineering charges are included. (IPC OTCA, 2017)</td>
</tr>
</tbody>
</table>
Economic Evaluation Overview

An outline for the **purpose, methodology** and **details** of the Economic Evaluation process are provided below.

The concepts outlined provide reference to **Section 3.2 & Appendix B** of the “**Distribution System Code**” (DSC), as well as InnPower’s **Offer to Connect Agreement**, which relate to the Economic Evaluation Process.

---

**DSC - Section 3.2.1**

**Expansion:**

“If a distributor must construct new facilities to its main distribution system or increase the capacity of existing distribution system facilities in order to be able to connect a specific customer or group of customers, the distributor shall perform an Economic Evaluation.” (OEB, 2015)

---

**DSC - Section 3.2.1**

An Economic Evaluation is a **financial model** based on “estimated / actual costs and forecasted revenues, as described in Appendix B, of the Expansion project to determine if the future revenue from the customer(s) will pay for the capital cost and on-going maintenance costs of the Expansion project.” (OEB, 2015)
Initial Economic Evaluation

An initial Economic Evaluation (based on estimated costs and forecasted revenues) is drafted in conjunction with the preliminary Subdivision Agreement.

Subsequent Economic Evaluation

Upon energization, an updated Economic Evaluation is performed, with determination of transfer price, contribution and amount payable/receivable to the customer using actual costs and number of forecasted connections within the 5 year connection horizon. Payment due to/from Developer will be made.

- Following energization, an annual review will be conducted over the five year Connection Horizon. The Expansion Deposit will be returned based on the proportion of actual Connections over the five (5) year Connection Horizon (i.e. 20% of actual connections in the first year results in 20% of the Expansion less the Warranty Deposit being released).

The Economic Evaluation model considers several common elements of an Expansion, related to the Revenue Forecast, Expense Forecast and Capital Costs. The elements described in Appendix B are inputs used in the Economic Evaluation model to calculate the difference between the Future Revenue (due to customer) and the Capital / Maintenance Costs (shortfall due to InnPower).
What happens when there is a difference in the Capital Contribution amount in the Initial, Subsequent and Final Economic Evaluation?

**DSC - Appendix B**

(a) A maximum customer Connection Horizon of five (5) years, calculated from the energization date of the facilities

(b) A maximum customer revenue horizon of twenty five (25) years, calculated from the in service date of the new customers

(c) A discount rate equal to the incremental after-tax cost of capital, based on the prospective capital mix, debt and preference share cost rates, and the latest approved rate of return on common equity

(d) Discounting to reflect the true timing of expenditures. Up-front capital expenditures will be discounted at the beginning of the project year and capital expended throughout the year will be mid-year discounted. The same approach to discounting will be used for revenues and operating and maintenance expenditures (OEB, 2009)

What parameters are used in the Economic Evaluation model?

**DSC - Section 3.2.7**

If the capital contribution amount resulting from the initial economic evaluations differs from the capital contribution amount resulting from the subsequent or final economic evaluation calculations, InnPower shall obtain from the customer, or credit the customer for, any difference between the two calculations (OEB, 2015)

InnPower will settle the balance once the five year connection horizon is complete. A final economic evaluation will be conducted to determine if the forecasted connections used in the initial Economic Evaluation have been energized within the five year connection horizon. As a result, any difference in the Capital Contribution amount will be settled using the balance of the Expansion Deposit.
IPC Offer to Connect Agreement - Definitions and Interpretation

“Option A” means the Developer’s decision to have IPC complete any Contestable Work.

“Option B” means the Developer’s decision to complete the Contestable Work itself using a Qualified Contractor in accordance with IPC’s requirements, standards and specifications.

The Economic Evaluation model considers the capital outlays of each party, under both options.

In Option “A”, the amount due to/from the Developer is calculated based on the difference between IPC’s expenditures for Contestable Work and the Capital Contribution.

In Option “B”, the amount due to/from the Developer is calculated based on the difference between the Transfer Price (Contestable Work installed at Developer’s expense) and the Capital Contribution.

For both options, the amount due to the Developer represents revenue exceeding cost of capital over the 25 year horizon. The amount due from the Developer will represents a shortfall of revenue to cover capital costs over the 25 year horizon.

DSC - Section 3.2.12

“The distributor shall provide the customer with the calculation used to determine the final capital contribution amount including all of the assumptions and inputs used to produce the final economic evaluation as provided for in sections 3.2.2 and 3.2.3. The distributor shall provide the final economic evaluation and final capital contribution amount to the customer at no cost to the customer”. (OEB, 2015)
Developer Financial Responsibilities

An outline of the financial responsibilities of the developer are provided below. These relate to the overall distribution connection process, as well as the Economic Evaluation.

The concepts outlined provide reference to Section 3.2 & Appendix B of the “Distribution System Code” (DSC), as well as InnPower’s Offer to Connect Agreement.

IPC Offer to Connect Agreement – Section 13 & 14

(e) The developer shall be responsible for the following if Option A is selected:
   a. Damage Deposit
   b. Capital Contribution (Economic Evaluation)
   c. Expansion Deposit
   d. A Design Review Deposit

(d) The developer shall be responsible for the following if Option B is selected:
   a. Damage Deposit
   b. Capital Contribution for ancillary cost (Non-Contestable Work)
   c. Expansion Deposit
   d. Warranty Deposit
   e. Costs associated with the performing Contestable Work
What are the requirements of the Damage Deposit?

IPC Offer to Connect Agreement – Section 13

(e) (iii) Developer is required to provide an irrevocable letter of credit in the event of damage to IPC EDS.

The Damage Deposit letter of credit shall be 10% of the total cost of the EDS system installation or a minimum of $10,000.00, whichever is greater.

The Developer shall be responsible for all costs associated with the replacement of the EDS that have suffered damages during construction identified as a deficiency prior to energization and all equipment damaged after energization.

The Damage Deposit letter of credit will not be returned to the Developer until:

- The last service is connected; or
- At the end of the Connection Horizon, whichever occurs first.

For further details, please refer to IPC Offer to Connect Agreement: Section 13(e)(iii).

What are the requirements of the Capital Contribution?

IPC Offer to Connect Agreement – Section 13

As stated in the previous sections, the Capital Contribution is an amount calculated within the Economic Evaluation model. It would represent an amount payable to IPC due to a shortfall of revenue to cover capital costs over the 25 year horizon (if applicable).

Under Option A:

(e) (i) The Capital Contribution is the difference between the present value of the revenue of the Expansion less the cost of the Supply and Installation of the EDS, both Contestable Works and Non-Contestable Works, administration, operation and maintenance costs including capital cost allowance (CCA) and applicable taxes.

What do the Ancillary Costs include?

IPC Offer to Connect Agreement – Section 14

Under Option B:
   (e) (i) The Developer’s responsibility, in addition to paying the Qualified Contractor for the installation of the EDS under Option B, shall also include, but not limited to, payment of each of the following:

   (1) Other connection charges that are not otherwise included in the Economic Evaluation.
   (2) Non-Contestable costs for IPC’s inspection, approval and extra administration and project management of the work performed.
   (3) Developer’s own costs and IPC’s costs, not contemplated in the agreement.
   (4) Legal and surveying costs incurred by IPC.
   (5) Costs associated with the repair of the EDS during the term of the agreement.

For further details, please refer to IPC Offer to Agreement: Section 14(e)(i)

What are the requirements of the Expansion Deposit?

IPC Offer to Connect Agreement – Definitions and Interpretation

The developer is required to pay IPC a security deposit in respect of the Expansion, as determined by IPC in accordance with the terms of the DSC. It is due to IPC prior to commencement of construction.

DSC - Section 3.2.20

“For Expansions that 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 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.” (OEB, 2015)
IPC Offer to Connect Agreement – Section 15

(a) Provide financial security to mitigate IPC exposure to any forecast and asset risk in accordance with the terms of the DSC (Section 3.2.21); and

(b) Ensure that forecasted Connections for the Connection Horizon are realized along with associated revenue.

IPC Offer to Connect Agreement – Section 16

(c) If the Developer proceeds with Option B (Developer installed), IPC shall be allowed to retain and use the Expansion Deposit to cover IPC’s costs if IPC must complete, repair or bring up to standard the facilities, to ensure that the Expansion is completed to the proper design and technical standards and specifications, and that the facilities operate properly when energized.

(d) If Option B was chosen, IPC may retain up to ten (10) percent of the Expansion Deposit for a Warranty of up to two (2) years.

This two (2) year Warranty Period begins:

(i) When the last forecasted Connection in the Expansion materializes (for residential developments) or the last forecasted demand materializes (for commercial and industrial developments); or

(ii) At the end of the Connection Horizon, whichever is first.

IPC shall return any remaining portion of the Warranty Deposit at the end of the two (2) year warranty period.

What are the requirements of the Warranty Deposit?

What is the purpose of the Expansion and Warranty Deposit?
What form of security is the Developer required to provide?

IPC Offer to Connect Agreement – Section 16

(a) The Expansion Deposit shall be in the form of cash, letter of credit from a bank as defined in the Bank Act, S.C. 1991, c.46 or surety bonds.

Section 3.2.26

Where any expansion deposit is in the form of cash, the distributor shall return the expansion deposit to the customer together with interest in accordance with the following conditions:

(a) interest shall accrue monthly on the expansion deposit commencing on receipt of the total deposit required by the distributor; and
(b) the interest rate shall be at the Prime Business Rate set by the Bank of Canada less 2 percent.

Will IPC draw funds from the Expansion Deposit?

IPC Offer to Connect Agreement – Section 17

(a) IPC will not draw upon the Security to do any of the Expansion work contemplated by the Plans and Specification of this Agreement until it has given fourteen (14) days’ notice to the Developer that it intends to do so and the purpose or purposes for which it intends to do so and the Developer has failed to take steps that IPC deems are reasonable to rectify the problem or problems that have given rise to the giving of such notice.

For further details, please refer to IPC – Offer to Connect Agreement: Section 17(a).
When will the Expansion Deposit be released?

IPC Offer to Connect Agreement – Section 18

(a) Once the facilities are energized and subject to Sections 7(c)(iv) (regarding the collection of Expansion Deposit) and 16(c) (regarding the collection of Warranty Deposit), IPC shall:

- Return the percentage of the Expansion Deposit (less the Warranty Deposit) in proportion to the actual Connections (for residential developments) or actual demand (for commercial and industrial developments) that materialized in that year.
  - For instance, if twenty (20%) percent of the forecasted Connections or demand materialized in that year, then IPC shall return to the Developer twenty (20%) percent of the available Expansion Deposit.
- This annual calculation shall only be done for the duration of the Connection Horizon.
- If at the end of Connection Horizon the forecasted Connections (for residential developments) or forecasted demand (for commercial and industrial developments) have not materialized, IPC shall be allowed to retain the remaining portion of the Expansion Deposit.

For further details, please refer to IPC Offer to Connect: Section 18(a).

What are the requirements of the Design Deposit?

IPC Offer to Connect Agreement – Section 13

(e) (iv) A Design Review deposit will be required in an amount determined by IPC. At the completion of the Expansion, the Developer shall be invoiced for the actual IPC costs for the review and approval of the EDS design drawings and associated administration costs.
How is the Transfer Price determined and paid to Developer?

IPC Offer to Connect Agreement – Section 19

(a) Upon completion and energization of the EDS under Option B and the commencement of the Warranty Period, the Developer shall submit a statement capitalizing the cost of the contestable portion of the EDS (less the street lighting) by the Qualified Contractor.

Such statement capitalizing the cost of the contestable portion of the EDS shall be certified by an officer of the Developer’s electrical consulting engineer and shall be provided within sixty (60) calendar days of energization of the EDS.

If the final costs are not received from the Developer within the sixty (60) calendar days of energization of the EDS, the initial estimate will be used to confirm the Developer’s Capital Contribution amount.

The statement capitalizing the cost of the contestable portion of the EDS shall be supported with copies of all invoices, payment certificates and a copy of a statutory declaration of payment from the Developer.

(c) Upon Energization of the EDS and receipt of the final costs from the Developer’s consultant, IPC will use the lesser of the Developer’s cost under Option B or the cost provided by IPC under Option A (the “Transfer Price”). The lesser of the cost shall be used to determine the transfer price and final Capital Contribution of the Expansion used in the Economic Evaluation model.

(d) Payment by IPC to the Developer shall only occur upon submission by all Parties involved in the design, supply and installation of the Expansion, providing IPC satisfactory proof that all invoices related to the Expansion have been paid and all holdbacks have been released.
Economic Evaluation: Distribution Connection Steps

Distribution Connection Steps

The steps provided below are designed to facilitate the connection process, as well as outline the respective obligations for both the Customer and InnPower.

The process begins with the first point of contact with InnPower and follows through to completion of the Expansion project and the Final Economic Evaluation. Please note, Steps 5 and 12 which relate directly to the Economic Evaluation process.

STEP 1
Initial Meeting

Customer and InnPower meet to review proposed new development and connection requirements

- Initial meeting will provide both parties with an opportunity:
  - To gain a better understanding of the proposed development
  - To identify any issues related to the timing and connection to the Distribution System

- Based on the information provided by the Customer prior to the meeting, InnPower will be able to provide at a high level:
  - An estimate of the type of work that may be required to facilitate a connection
  - An understanding of what works are the responsibility of the Customer
  - An understanding of what works must be managed by the LDC
  - An understanding of what works could be contracted by the Customer
  - An estimated timeline required to provide connection facilities
  - A package outlining the Economic Evaluation Process

STEP 2
Request for Connection

Customer fills out a “Request for Connection Form” to InnPower

- In conjunction with the initial meeting, the customer fills out the request for connection form
- Initial request should at a minimum include the following information:
  - Contact information for development
  - Location of proposed development
  - Proposed construction date
  - General description of development (type and number of connections)

Note: The steps outlined below must be followed in the order provided. However, steps may be combined to accelerate the connection process.
**STEP 3**
Customer Decision-Making

- Customer **decision-making** process
  - Based on the results of the initial meeting, the Customer decides on whether to **proceed** with the process or **withdraw** their Request for Connection

**STEP 4**
Customer Provides Information

- Customer **information gathering** process
  - If customer decides to proceed with the process for acquiring a connection, the Customer notifies InnPower and provides the relevant detailed information as noted below:
    - A statement noting if the Customer intends on managing the contestable work noted during the consultation
    - Electrically engineered and stamped site service drawings
    - Required Transformation based on estimated building loads
    - Number of Residential Connections
    - Residential – Type, number and size of units
    - Number of Commercial / Industrial Connections
    - Estimated annual facility connections over five years from date of InnPower system connection
    - Estimated capital costs of facilities which would be assumed by InnPower following energization

**STEP 5**
Preliminary Economic Evaluation

- InnPower performs **Preliminary Economic Evaluation**
  - Upon receipt of the required information from the Customer, InnPower will perform a preliminary Economic Evaluation abiding by the methods outlined in the Distribution Code
  - The Preliminary Economic Evaluation will assist InnPower in calculating the portion (if any) of the Capital Costs InnPower will invest
  - The Preliminary Economic Evaluation will be used in the preparation of the Offer to Connect Agreement
**STEP 6**
Offer to Connect Agreement

InnPower prepares an Offer to Connect Agreement

- Once the Preliminary Economic Evaluation (EE) is complete, InnPower will prepare an Offer to Connect Agreement based on the EE results, as well as information provided by the customer. The Agreement will contain the following information:
  - IPC will provide the summaries for “Option A” and “Option B”, which includes, but is not limited to:
    - An estimate of Non-Contestable costs
    - An estimate of Contestable costs
    - The required Expansion Deposit
    - Warranty Holdback (if applicable)
    - Capital Contribution required from the Developer
    - Reconciliation of amount payable to IPC upon execution of the offer to connect
    - A description of the deliverables required from the Customer before Connection
    - An estimated Connection Date

**STEP 7**
Customer Decision-Making

Customer reviews the Offer to Connect Agreement

- Customer reviews the agreement and decides if they would like to continue with the project
- Customer decides between “Option A” and “Option B”
- The Customer acts on one of the following:
  - Customer elects to drop the project, a notice of withdrawal of the Request for Connection shall be provided to InnPower
  - Customer would like to revise their Connection request, a notice informing InnPower of the requested changes shall be provided to InnPower (go back to Step 4)
  - Customer agrees with the Offer and executes

**STEP 8**
Execution and Payment

Parties execute the Offer to Connect Agreement and payment is made to InnPower

- The Customer and InnPower sign the agreement
- The Customer provides the financial deposit and / or guarantee if required
- The agreement is executed
Economic Evaluation: Distribution Connection Steps
Development & General Service Customers

**STEP 9**
**Construction Begins**

- Construction is **initiated**
  - The customer shall fulfill all requirements set out in section 3.0 of the Offer to Connect Agreement.
  - Following receipt of signed agreement and the required financial deposit and / or guarantees from the Customer, both parties shall begin ordering materials and initiating the construction process

**STEP 10**
**Exchange Updated Information**

- Customer and InnPower shall **exchange updated information**
  - The Customer and InnPower shall exchange any required updated information on the project including, but not limited to:
    - All applicable Connection Authorizations
    - All applicable Warranties relating to the two year maintenance period
    - Any new information that was provided as an estimate in Step 4. Providing actual cost of construction, broken down as prescribed by InnPower, and updated connections in horizon period

**STEP 11**
**InnPower Connection Authorization**

- InnPower **authorizes** connections
  - The customer shall fulfill all requirements pertaining to time limits, stop of work orders and defaults
  - Once construction is completed, both parties will ensure that inspections are completed and all required connection authorizations are in place

**STEP 12**
**Energization of Subdivision**

- InnPower **energizes** subdivision
  - The developer shall fulfill the requirements of the Offer to Connect Agreement pertaining to preliminary acceptance
  - InnPower will authorize and energize the facility
  - InnPower will issue certificate of preliminary acceptance.
**STEP 13**
Updated Economic Evaluation

- Preliminary Economic Evaluation **recalculated** using actual information
- As required, InnPower shall recalculate the Preliminary Economic Evaluation using actual information acquired during and following the construction process
- Developer provides copies of invoices, payment certificates and declaration of payment
- Payment due to/from Developer will be determined and executed.

---

**STEP 14**
Release of Deposits

- The balance of the **Damage Deposit** is released once:
  - The last service is connected; or
  - At the end of the Connection Horizon, whichever occurs first
- The balance of the deposit is released for the **Ancillary Costs** once:
  - No further expenditures are identified, the capital infrastructure is deemed to be complete and inspections have been conducted
- The **Expansion Deposit** will be returned based on the proportion of actual Connections over the five (5) year Connection Horizon (i.e. 20% of actual connections in the first year results in 20% of the Expansion less the Warranty Deposit being released)
- The balance of the **Warranty Deposit** will be released two (2) years following:
  - When the last forecasted Connection in the Expansion materializes; or
  - At the end of the Connection Horizon, whichever is first
DISTRIBUTION CONNECTION
COMMENCEMENT TO ENERGIZATION
Developments & General Service Customers

Flow Chart*

* To be used in conjunction with the Distribution Connection Steps
**Economic Evaluation: Distribution Connection Steps**

**Development & General Service Customers**

### DISTRIBUTION CONNECTION

**FOLLOWING ENERGIZATION**

Developments & General Service Customers

---

**Flow Chart**

1. **InnPower**
   - **11/12**: Energization

2. **CUSTOMER**
   - **11/12**: Energization

3. **YES**
   - **13**: Provide copies of invoices, payment certificates and declaration of payment

4. **NO**
   - **13**: Within 60 days?

5. **13**: Update EE with lesser of Developer’s actual costs and Option A IPC costs

6. **13**: Update EE with lesser of Developer’s initial estimate and Option A IPC costs

7. **13**: EE payment made to Developer (if applicable)

8. **13**: Annual EE Review.

9. **13**: Release eligible portion of Expansion Deposit to Developer

10. **13**: Release remainder of deposits (if applicable)

11. **14**: Warranty period begins

12. **14**: Release balance of Warranty Deposit

---

**60 DAYS**

**30-60 DAYS**

**1 – 5 YEARS**

End of 5 year horizon or last service is connected

**2 YEARS**

---

Page 25 of 62
Contact Information

InnPower
7251 Yonge Street
Innisfil, ON L9S 0J3
Website: www.innpower.ca

Engineering
Subdivision Requests / Inspections

Tony Mendicino
Engineering Technologist
(705) 431-6870 ext. 248
tonym@innpower.ca

Finance
Economic Evaluation

Glen McAllister
Interim CFO
(705) 431-6870 ext. 263
glenm@innpower.ca
Forms and Resources
Expansion - CHEC Economic Evaluation Model

Developer Summary

CHEC Detached - Example Only

**Section 1** This calculation and transaction takes place when the model is first run with estimated costs and updated at energization with actual costs.

- **Expansion Deposit (due to LDC prior to commencement of construction)** $201,467
- **Warranty Holdback (10% of Expansion Deposit for 2 years if Developer Installed)** $20,147
- **Expansion Deposit Available on Connection** $181,320

**Section 2** This transaction takes place at energization based on the actual costs of the project.

- **Transfer Price if Developer Installed (due to Developer)** $100,000
- **Capital Contribution (shortfall due to LDC)** $85,941

**Net Due to Developer upon energization** $14,059
## Development Contact Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Street</th>
<th>City</th>
<th>Postal Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requested Connection Date</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Type & Number of Connections

<table>
<thead>
<tr>
<th>Type</th>
<th>Residential</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Dwellings &lt; 3,000 SqFt</td>
<td>Semi-Detached</td>
</tr>
<tr>
<td></td>
<td>Single Dwellings &gt; 3,000 SqFt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Town Homes</td>
<td>Industrial</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average Monthly Consumption - Winter</th>
<th>Average Monthly Consumption - Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilowatts</td>
<td>Kilowatts</td>
</tr>
<tr>
<td>Kilowatts</td>
<td>Kilowatts</td>
</tr>
</tbody>
</table>

## Connection Horizon

<table>
<thead>
<tr>
<th>Year</th>
<th>Input estimated connections in 1st year</th>
<th>Input estimated connections in 2nd year</th>
<th>Input estimated connections in 3rd year</th>
<th>Input estimated connections in 4th year</th>
<th>Input estimated connections in 5th year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Capital Costs

<table>
<thead>
<tr>
<th>Distribution Infrastructure:</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>OH Primary/Secondary - Poles</td>
<td></td>
</tr>
<tr>
<td>Wires</td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td></td>
</tr>
<tr>
<td>UG Primary/Secondary - Conduit</td>
<td>$</td>
</tr>
<tr>
<td>Wires</td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td>$</td>
</tr>
<tr>
<td>Transformers</td>
<td>$</td>
</tr>
<tr>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>LDC Non-Contestable Costs</td>
<td>$</td>
</tr>
<tr>
<td>Additional costs not included above</td>
<td>$</td>
</tr>
</tbody>
</table>

**TOTAL**

| $ |

| Street Lighting | $ |

**Date Submitted**

Submitted By: ____________________________

Signature: ____________________________
## Developer Summary - Option A

<table>
<thead>
<tr>
<th>Project</th>
<th>Project #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer</td>
<td>Energization Year</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option A - LDC Installed</th>
<th>Subtotal</th>
<th>HST</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-contestible Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal, survey, engineering, inspection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection charges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution system connection charges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Contestible Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1830 Poles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1835 Conductor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1840 Conduit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1850 Transformers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1855 Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td><strong>Option A - Grand Total</strong></td>
<td><strong>$ -</strong></td>
<td><strong>$ -</strong></td>
<td><strong>$ -</strong></td>
</tr>
</tbody>
</table>

### Economic Evaluation Summary - Estimated

- **Expansion Deposit**
  - Expansion Deposit - due to LDC prior to commencement of construction
  - Warranty Holdback - no warranty holdback under Option A: **NIL**
  - Expansion Deposit Available on Connection - refunded annually based on actual connections: **$ -**

- **Discounted Cashflow Calculation**
  - PV of revenues
  - PV of capital, operating costs incl. CCA Tax shield
  - Developer Contribution: **$ -**

- **Amount Payable to InnPower (due upon execution of Offer to Connect)**
  - Expansion Deposit
  - Developer Contribution
  - Damage Deposit
  - Less: Design Deposit
  - HST
  - **Total Payable**: **$ -**

**Signature (InnPower Corporation)**

**Print Name**

**Title**

**Date**

**Signature (Developer)**

**Print Name**

**Title**

**Date**
# Developer Summary - Option B

## Economic Evaluation

<table>
<thead>
<tr>
<th>Project</th>
<th>Developer Installed</th>
<th>Energization Year</th>
<th>Subtotal</th>
<th>HST</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-contestable Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal, survey, engineering, inspection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection charges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution system connection charges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contestable Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1830 Poles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1835 Conductor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1840 Conduit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1850 Transformers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1855 Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Option B - Grand Total

<table>
<thead>
<tr>
<th></th>
<th>Subtotal</th>
<th>HST</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

## Economic Evaluation Summary - Estimated

- **Expansion Deposit**
- Expansion Deposit - due to LDC prior to commencement of construction
- Warranty Holdback - 10% of deposit retained for 2 year warranty period
- Expansion Deposit Available on Connection - refunded based on actual connections
  - $ -

- **Due to Developer**
- Transfer Price
- Capital Contribution (shortfall from Discounted Cashflow Calculation)
- Due to Developer - refunded at energization
  - $ -

- **Amount Payable to InnPower (due upon execution of Offer to Connect)**
  - Expansion Deposit
  - Non-contestable Costs Deposit
  - Damage Deposit
  - Less: Design Deposit
  - HST
  - Total Payable to InnPower
    - $ -

---

**Signature (InnPower Corporation)**

Print Name  
Title  
Date

---

**Signature (Developer)**

Print Name  
Title  
Date
ONTARIO ENERGY BOARD

Distribution System Code

Last revised on December 21, 2015

(Originally Issued on July 14, 2000)
Distribution System Code

3.2 Expansions

3.2.1 If a distributor must construct new facilities to its main distribution system or increase the capacity of existing distribution system facilities in order to be able to connect a specific customer or group of customers, the distributor shall perform an initial economic evaluation based on estimated costs and forecasted revenues, as described in Appendix B, of the Expansion project to determine if the future revenue from the customer(s) will pay for the capital cost and on-going maintenance costs of the Expansion project.

3.2.2 If the distributor's offer was an estimate, the distributor shall carry out a final economic evaluation once the facilities are energized. The final economic evaluation shall be based on forecasted revenues, actual costs incurred (including, but not limited to, the costs for the work that was not eligible for alternative bid, and any transfer price paid by the distributor to the customer) and the methodology described in Appendix B.

3.2.3 If the distributor's offer was a firm offer, and if the alternative bid option was chosen and the facilities are transferred to the distributor, the distributor shall carry out a final economic evaluation once the facilities are energized. The final economic evaluation shall be based on the amounts used in the firm offer for costs and forecasted revenues, any transfer price paid by the distributor to the customer, and the methodology described in Appendix B.

3.2.4 The capital contribution that a distributor may charge a customer other than a generator or distributor to construct an Expansion shall not exceed that
Distribution System Code

customer’s share of the difference between the present value of the projected capital costs and on-going maintenance costs for the facilities and the present value of the projected revenue for distribution services provided by those facilities. The methodology and inputs that a distributor shall use to calculate this amount are described in Appendix B.

3.2.5 The capital contribution that a distributor may charge a generator to construct an Expansion to connect a generation facility to the distributor’s distribution system shall not exceed the generator’s share of the present value of the projected capital costs and on-going maintenance costs for the facilities. Projected revenue and avoided costs from the generation facility shall be assumed to be zero, unless otherwise determined by rates approved by the Board. The methodology and inputs that a distributor shall use to calculate this amount are described in Appendix B.

3.2.5A Notwithstanding section 3.2.5 but subject to section 3.2.5B, a distributor shall not charge a generator to construct an Expansion to connect a renewable energy generation facility:

(a) if the Expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor’s licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or

(b) in any other case, for any costs of the Expansion that are at or below the renewable energy generation facility’s renewable energy Expansion cost cap.

For greater clarity, the distributor shall bear all costs of constructing an Expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the
Distribution System Code

Expansion that are at or below the renewable energy generation facility’s renewable energy Expansion cost cap.

3.2.5B Where an Expansion is undertaken in response to a request for the connection of more than one renewable energy generation facility, a distributor shall not charge any of the requesting generators to construct the Expansion:

(a) if the Expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor’s licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or

(b) in any other case, for any costs of the Expansion that are at or below the amount that results from adding the total name-plate rated capacity of each renewable energy generation facility referred to in section 6.2.9(a) (in MW) and then multiplying that number by $90,000.

For greater clarity, the distributor shall bear all costs of constructing an Expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the Expansion that are at or below the number that results from the calculation referred to in (b).

3.2.5C Where, in accordance with the calculation referred to in section 3.2.5B(b), a capital contribution is payable by the requesting generators, the distributor shall apportion the amount of the capital contribution among the requesting generators on a pro-rata basis based on the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW).

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
Distribution System Code

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.

3.2.7 If the capital contribution amount resulting from the final economic evaluation provided for in section 3.2.2 or 3.2.3 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.

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;

(b) a reference to the distributor's Conditions of Service 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 referred to in sections
Distribution System Code

3.1.5 and 3.1.6 will be charged separately from the capital contribution referred to in section 3.2.8(c), and a description of, and if known, the amount for, those connection charges.

3.2.9 If the distributor will require a customer to pay a capital contribution, the distributor must, in addition to complying with section 3.2.8, also include in its initial offer, 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 of the assumptions and inputs used to produce the economic evaluation as described in Appendix B;

(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 alternative bid and the work that is not eligible for alternative bid associated with the Expansion broken down into the following categories:

i) labour (including design, engineering and construction);

ii) materials;

iii) equipment; and
Distribution System Code

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 offer is for a residential customer, a description of, and the amount for, the cost of the basic connection referred to in section 3.1.4 that has been factored into the economic evaluation; and

(g) if the offer is for a non-residential customer and 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 referred to in section 3.1.5 that have been factored into the economic evaluation.

3.2.10 Once the customer has accepted the distributor's offer, and if the customer requests it, 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) 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 alternative bid.
Distribution System Code

3.2.11 If the customer submits revised plans or requires additional design work, the distributor may provide, at cost, a new offer based on the revised plans or the additional design work.

3.2.12 The distributor shall provide the customer with the calculation used to determine the final capital contribution amount including all of the assumptions and inputs used to produce the final economic evaluation as provided for in sections 3.2.2 and 3.2.3. The distributor shall provide the final economic evaluation and final capital contribution amount to the customer at no cost to the customer.

3.2.13 The last sentence of section 3.2.12 does not apply to a customer who is a generator or is proposing to become a generator unless the customer’s proposed or existing generation facility is an emergency backup generation facility.

3.2.14 Where the distributor requires a capital contribution from the customer, the distributor shall allow the customer to obtain and use alternative bids for the work that is eligible for alternative bid. The distributor shall require the customer to use a qualified contractor for the work that is eligible for alternative bid provided that the customer agrees to transfer the Expansion facilities that are constructed under the alternative bid option to the distributor upon completion.

3.2.15 The following activities are not eligible for alternative bid:

(a) distribution system planning; and

(b) the development of specifications for any of the following:

i. the design of an Expansion;

ii. the engineering of an Expansion; and

iii. the layout of an Expansion.
Distribution System Code

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.

3.2.15B Despite any other provision of this Code, decisions related to the temporary de-energization of any portion of the distributor's existing distribution system are the sole responsibility of the distributor. Where the temporary de-energization is required in relation to work that is being done under alternative bid, the distributor shall apply the same protocols and procedures to the de-energization as it would if the customer had not selected the alternative bid option.

3.2.16 If a customer chooses to pursue an alternative bid and uses the services of a qualified contractor for the work that is eligible for alternative bid, the distributor shall:

(a) require the customer to complete all of the work that is eligible for alternative bid;

(b) require the customer to:
   i) select and hire the contractor;
   ii) pay the contractor’s costs for the work that is eligible for alternative bid;
       and
   iii) assume full responsibility for the construction of that aspect of the Expansion;

(c) require the customer to be responsible for administering the contract (including the acquisition of all required permissions, permits and easements) or have the customer pay the distributor to do this activity;

(d) require the customer to ensure that the work that is eligible for alternative bid is done in accordance with the distributor's distribution system planning and the distributor's specifications for any of the following:
   i) the design of the Expansion;
Distribution System Code

ii) the engineering of the Expansion; and

iii) the layout of the Expansion

(d.1) require the customer to obtain the distributor’s review and approval of plans for the design, engineering, layout, and work execution for the work that is eligible for alternative bid to ensure conformance with the distribution system planning and specifications referred to in paragraph (d) prior to commencing that work; and

(e) inspect and approve, at cost, all aspects of the constructed facilities as part of a system commissioning activity, prior to connecting the constructed facilities to the existing distribution system.

3.2.17 In addition to the capital contribution amounts in sections 3.2.4 and 3.2.5, the distributor may also charge a customer that chooses to pursue an alternative bid any costs incurred by the distributor associated with the Expansion including, but not limited to, the following:

(a) costs for additional design, engineering, or installation of facilities required to complete the project;

   (a.1) costs associated with any temporary de-energization of any portion of the existing distribution system that is required in relation to an Expansion that is constructed under the alternative bid option;
Distribution System Code

(a.2) costs associated with the review and approval referred to in section 3.2.16(d.1);

(b) costs for administering the contract between the customer and the contractor hired by the customer if the distributor is asked to do so by the customer and the distributor agrees to do it; and

(c) costs for inspection or approval of the work performed by the contractor hired by the customer.

When the customer transfers the Expansion facilities to the distributor in accordance with section 3.2.18 and 3.2.19, the charges referred to above shall be included as part of the customer's costs for the purposes of determining the transfer price.

3.2.18 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. 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 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 alternative bid as set out in its initial offer for the transfer price instead of the customer's cost.

3.2.19 Where a distributor is required to pay a transfer price under section 3.2.18, the transfer price shall be considered a cost to the distributor for the purposes of completing the final economic evaluation.

3.2.20 For Expansions that require a capital contribution, a distributor may require the customer to provide an Expansion deposit for up to 100% of the present
Distribution System Code

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.

3.2.21 If an Expansion deposit is collected under section 3.2.20, the Expansion deposit shall cover 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.

3.2.22 If the alternative bid option was chosen, a distributor shall be allowed to retain and use the Expansion deposit to cover the distributor’s costs if the distributor must complete, repair, or bring up to standard the facilities. Complete, repair, or bring up to standard includes costs the distributor incurs to ensure that the Expansion is completed to the proper design and technical standards and specifications, and that the facilities operate properly when energized.

3.2.23 Once the facilities are energized and subject to sections 3.2.22 and 3.2.24, the distributor shall annually return the percentage of the Expansion deposit in proportion to the actual connections (for residential developments) or actual demand (for commercial and industrial developments) that materialized in that year (i.e., if twenty percent of the forecasted connections or demand materialized in that year, then the distributor shall return to the customer twenty percent of the Expansion deposit). This annual calculation shall only be done for the duration of the customer Connection Horizon as defined in Appendix B. If at the end of the customer Connection Horizon the forecasted connections
Distribution System Code

for residential developments) or forecasted demand (for commercial and industrial developments) have not materialized, the distributor shall be allowed to retain the remaining portion of the Expansion deposit.

3.2.24 If the alternative bid option was chosen, the distributor may retain up to ten percent of the Expansion deposit for a warranty period of up to two years. This portion of the Expansion deposit can be applied to any work required to repair the Expansion facilities within the two year warranty period. The two year warranty period begins:

(a) when the last forecasted connection in the Expansion project materializes (for residential developments) or the last forecasted demand materializes (for commercial and industrial developments); or

(b) at the end of the customer Connection Horizon as defined in Appendix B, whichever is first. The distributor shall return any remaining portion of this part of the Expansion deposit at the end of the two year warranty period.

3.2.25 Any Expansion deposit required under section 3.2.20 shall be in the form of cash, letter of credit from a bank as defined in the Bank Act, or surety bond. The distributor shall allow the customer to select the form of the Expansion deposit.

3.2.26 Where any Expansion deposit is in the form of cash, the distributor shall return the Expansion deposit to the customer together with interest in accordance with the following conditions:

(a) interest shall accrue monthly on the Expansion deposit commencing on receipt of the total deposit required by the distributor; and

(b) the interest rate shall be at the Prime Business Rate set by the Bank of Canada less 2 percent.
Distribution System Code

3.2.27 Unforecasted customers that connect to the distribution system during the customer Connection Horizon as defined in Appendix B will benefit from the earlier Expansion and should contribute their share. In such an event, the initial contributors shall be entitled to a rebate from the distributor. A distributor shall collect from the unforecasted customers an amount equal to the rebate the distributor shall pay to the initial contributors. The amount of the rebate shall be determined as follows:

(a) for a period of up to the customer Connection Horizon as defined in Appendix B, the initial contributor shall be entitled to a rebate without interest, based on apportioned benefit for the remaining period; and

(b) the apportioned benefit shall be determined by considering such factors as the relative name-plate rated capacity of the parties, the relative load level of the parties and the relative line length in proportion to the line length being shared by both parties, as applicable.

3.2.27A Notwithstanding section 3.2.27, when the unforecasted customer is a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies and the customer entitled to a rebate under section 3.2.27 is a load customer or a generation customer to which neither section 3.2.5A nor 3.2.5B applies, the initial contributors shall be entitled to a rebate from the distributor in an amount determined in accordance with section 3.2.27. The distributor shall reduce the connecting renewable energy generation facility’s renewable energy Expansion cost cap by an amount equal to the rebate. If the amount of the rebate exceeds the connecting renewable generation facility’s renewable energy Expansion cost cap, the distributor shall also collect the difference from the connecting renewable energy generation customer.
Distribution System Code

3.2.27B Notwithstanding section 3.2.27, when an unforecasted customer that is a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies (the “unforecasted renewable generator”) connects to the distribution system during the customer Connection Horizon as defined in Appendix B and benefits from an earlier Expansion made on or after October 21, 2009 to connect another renewable energy generation facility to which section 3.2.5A or 3.2.5B applies (the “initial renewable generator”), the initial renewable generator shall be entitled to a rebate if the cost of the earlier Expansion exceeded the initial renewable generator’s renewable energy Expansion cost cap. In such a case, the following rules shall apply:

(a) the distributor shall pay to the initial renewable generator a rebate in an amount determined in accordance with section 3.2.27C; and

(b) the distributor shall collect from the unforecasted renewable generator an amount determined in accordance with section 3.2.27C.

For greater certainty, no rebate shall be payable to an initial renewable generator towards the cost of an earlier Expansion if the cost of the earlier Expansion did not exceed the initial renewable generator’s energy Expansion cost cap.

3.2.27C For the purposes of section 3.2.27B:

(a) the amount of the rebate payable by the distributor to the initial renewable generator shall be the difference between the amount paid by the initial renewable generator towards the cost of the earlier Expansion and the amount that would have been paid by the initial renewable generator towards that cost, determined in accordance with the rules set out in sections 3.2.5B and 3.2.5C, had the earlier Expansion been undertaken for both the initial renewable generator and the unforecasted renewable generator. The rebate shall be without interest; and
Distribution System Code

(b) the amount to be collected from the unforecasted renewable generator shall be the amount that would have been paid by the unforecasted renewable generator towards the cost of the earlier Expansion, determined in accordance with the rules set out in sections 3.2.5B and 3.2.5C, had the earlier Expansion been undertaken for both the initial renewable generator and the unforecasted renewable generator.

3.2.27D Notwithstanding section 3.2.27, an unforecasted customer that is a load customer or a generation customer to which neither section 3.2.5A or 3.2.5B applies, that connects to the distribution system during the customer Connection Horizon as defined in Appendix B and that benefits from an earlier Expansion made on or after October 21, 2009 to connect a renewable generation facility to which section 3.2.5A or 3.2.5B applies (the “initial renewable generator”) shall contribute towards the cost of the earlier Expansion. In such a case, the following rules shall apply:

(a) where the cost of the earlier Expansion exceeded the initial renewable generator’s renewable energy Expansion cost cap, the initial renewable generator and the distributor shall be entitled to a rebate in an amount determined in accordance with sections 3.2.27 and 3.2.27E; or

(b) where the cost of the earlier Expansion was at or below the initial renewable generator’s renewable energy Expansion cost cap, the distributor shall be entitled to a rebate in an amount determined in accordance with section 3.2.27.

3.2.27E For the purposes of section 3.2.27D(a), the amount of the rebate shall be apportioned between the initial renewable generator and the distributor on a prorata basis based on their respective contributions to the cost of the earlier Expansion.
Distribution System Code

3.2.27F For greater certainty:

(a) sections 3.2.27B and 3.2.27D do not apply in respect of an Expansion referred to in section 3.2.5A(a) or 3.2.5B(a);

(b) the amount of the rebate payable to an initial renewable generator under section 3.2.27B or section 3.2.27D(a) shall not exceed the amount paid by the initial renewable generator as a capital contribution towards the cost of the earlier Expansion; and

(c) where an earlier Expansion referred to in section 3.2.27B or 3.2.27D was made to connect more than one renewable energy generation facility to which section 3.2.5B applies, the amount of the rebate payable to the renewable generators shall be apportioned between them on a pro-rata basis based on the total name-plate rated capacity of each renewable energy generation facility referred to in section 6.2.9(a) (in MW).

3.2.28 A distributor shall prepare all estimates and offers required by section 3.2 in accordance with good utility practice and industry standards.

3.2.29 The distributor shall perform all of its responsibilities and obligations under section 3.2 in a timely manner.

3.2.30 An Expansion of the main distribution system includes:

(a) building a new line to serve the connecting customer;

(b) rebuilding a single-phase line to three-phase to serve the connecting customer;
Distribution System Code

(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.
APPENDIX B Methodology and Assumptions for An Economic Evaluation

Last Revised October 21, 2009
To achieve consistent business principles for the development of the elements of an economic evaluation model, the following parameters for the approach are to be followed by all distributors.

The discounted cash flow (DCF) calculation for individual projects will be based on a set of common elements and related assumptions listed below.

**Revenue Forecasting**

The common elements for any project will be as follows:

(a) Total forecasted customer additions over the Customer Connection Horizon, by class as specified below;

(b) Customer Revenue Horizon as specified below;

(c) Estimate of average energy and demand per added customer (by project) which reflects the mix of customers to be added – for various classes of customers, this should be carried out by class;

(d) Customer additions, as reflected in the model for each year of the Customer Connection Horizon; and

(e) Rates from the approved rate schedules for the particular distributor reflecting the distribution (wires only) rates.
Capital Costs

Common elements will be as follows:

(a) An estimate of all capital costs directly associated with the Expansion to allow forecast customer additions.

(b) For Expansions to the distribution system, costs of the following elements, where applicable, should be included:
   - distribution stations;
   - distribution lines;
   - distribution transformers;
   - secondary busses;
   - services; and
   - land and land rights.

Note that the “Ownership Demarcation Point” as specified in the distributor’s Condition of Service would define the point of separation between a customers’ facilities and distributor’s facilities.

(c) Estimate of incremental overheads applicable to distribution system Expansion.

(d) A per kilowatt enhancement cost estimate – the per kilowatt enhancement cost estimate shall be set annually and shall be based on a historical three to five year rolling average of actual enhancement costs incurred in system Expansions.
APPENDIX B -

METHODOLOGY AND ASSUMPTIONS FOR AN OFFER TO CONNECT ECONOMIC

(d.1) paragraph (d) shall cease to apply to a distributor as of the date on which the distributor’s rates are set based on a cost of service application for the first time following the 2010 rate year.

(e) For residential customers, the amount the cost of the basic connection referred to in section 3.1.4 of the Code.

(f) For non-residential customers, 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 referred to in section 3.1.5 of the Code that have been factored into the economic evaluation.

Expense Forecasting

Common elements will be as follows:

(a) Attributable incremental operating and maintenance expenditures - any incremental attributable costs directly associated with the addition of new customers to the system would be included in the operating and maintenance expenditures.

(b) Income and capital taxes based on tax rates underpinning the existing rate schedules.

(c) Municipal property taxes based on projected levels.

Specific Parameters/Assumptions

Specific parameters of the common elements include the following:
APPENDIX B -
METHODOLOGY AND ASSUMPTIONS FOR AN OFFER TO CONNECT ECONOMIC

(a) A maximum customer Connection Horizon of five (5) years, calculated from the energization date of the facilities.¹

(b) A maximum customer revenue horizon of twenty five (25) years, calculated from the in service date of the new customers.²

(c) A discount rate equal to the incremental after-tax cost of capital, based on the prospective capital mix, debt and preference share cost rates, and the latest approved rate of return on common equity.

(d) Discounting to reflect the true timing of expenditures. Up-front capital expenditures will be discounted at the beginning of the project year and capital expended throughout the year will be mid-year discounted. The same approach to discounting will be used for revenues and operating and maintenance expenditures.³

¹ For customer connection periods of greater than 5 years an explanation of the extension of the period will be provided to the Board

² For example, that the revenue horizon for customers connected in year 1, is 25 years while for those connected in year 3, the revenue horizon is 22 years.

³ For certain projects Capital Expenditures may be staged and can occur in any year of the five year Connection Horizon.
APPENDIX B -
METHODOLOGY AND ASSUMPTIONS FOR AN OFFER TO CONNECT ECONOMIC

B.2 DISCOUNTED CASH FLOW (DCF) METHODOLOGY

\[
\text{Net Present Value ("NPV") } = \text{ Present Value ("PV") of Operating Cash Flow + PV of CCA Tax Shield - PV of Capital}
\]

1. \text{PV of Operating Cash Flow } = \text{ PV of Net Operating Cash (before taxes) - PV of Taxes}
   a) \text{PV of Net Operating Cash } = \text{ PV of Net Operating Cash Discounted at the Company's discount rate for the customer revenue horizon. Mid-year discounting is applied. Incremental after tax weighted average cost of capital will be used in discounting.}

   \[
   \begin{align*}
   \text{Net (Wires) Operating Cash} & = (\text{Annual(Wires) Revenues} - \text{Annual (Wires) O&M}) \\
   \text{Annual (Wires) Revenue} & = \text{Customer Additions} \times [\text{Appropriate (Wires) Rates} \times \text{Rate Determinant}] \\
   \text{Annual (Wires) O&M} & = \text{Customer Additions} \times \text{Annual Marginal (Wires) O&M Cost/customer}
   \end{align*}
   \]

b) \text{PV of Taxes } = \text{ PV of Municipal Taxes + PV of Capital Taxes + PV of Income Taxes (before Interest tax shield)}

   \[
   \begin{align*}
   \text{Annual Municipal Tax} & = \text{Municipal Tax Rate} \times (\text{Total Capital Cost}) \\
   \text{Total Capital Cost} & = \text{Distribution Capital Investment} + \text{Customer Related Investment} + \\
   \text{Annual Capital Taxes} & = (\text{Capital Tax Rate}) \times (\text{Closing Undepreciated Capital Cost Balance}) \\
   \text{Annual Capital Tax} & = (\text{Capital Tax Rate}) \times (\text{Net Operating Cash} - \text{Annual Municipal Tax} - \text{Annual Capital Tax})
   \end{align*}
   \]

The Capital Tax Rate is a combination of the Provincial Capital Tax Rate and the Large Corporation Tax (Grossed up for income tax effect where appropriate).

\text{Note: Above is discounted, using mid-year discounting, over the customer revenue horizon.}
APPENDIX B -
METHODOLOGY AND ASSUMPTIONS FOR AN OFFER TO CONNECT ECONOMIC

2. **PV of Capital** = **P V of Total Annual Capital Expenditures**

   a) PV of Total Annual Capital Expenditures

   Total Annual Capital Expenditures over the customer's revenue horizon discounted to time zero

   \[
   \text{Total Annual Capital Expenditure} = (\text{for New Facilities and/or Reinforcement Investments + Customer Specific Capital + Overheads at the project level}). \text{This applies for implicated system elements at the utility side of the "Ownership Demarcation Line".}
   \]

   **Note:** Above is discounted to the beginning of year one over the customer addition horizon
3. **PV of CCA Tax Shield**

PV of the CCA Tax Shield on [Total Annual Capital]

The PV of the perpetual tax shield may be calculated as:

\[
\text{PV at time zero of: } \frac{\text{(Income tax Rate) \times (CCA Rate) \times Annual Total Capital}}{\text{(CCA Rate + Discount Rate)}}
\]

or,

Calculated annually and present valued in the PV of Taxes calculation.

**Note:** An adjustment is added to account for the½ year CCA rule.

4. **Discount Rate**

PV is calculated with an incremental, after-tax discount rate.
Expansions

Q. When does the capital contribution methodology of the code become effective?


Q. Appendix B of the code specifies a maximum study period of 25 years and maximum customer connection period of five years for financial evaluations. When would it be appropriate to use shorter periods?

A. The 25-year revenue and five-year Connection Horizon periods are recommended for financial evaluations unless you can clearly demonstrate that these time periods are inappropriate.

You may want to use shorter periods, for example, when a development isn't expected to last for 25 years.

Q. When dealing with a subdivision developer, can a distributor collect the calculated shortfall from the end-use customers as a special surcharge on the monthly bill over a period of time?

A. This may be appropriate, however, when a subdivision is being developed there are usually no end-use customers. As the connection agreement is with the developer you would collect the capital contribution from the developer.
Q. Large customers may dispute the distributor’s forecasted load levels in calculating capital contribution requirements. How can distributors handle disagreements in forecast revenues? Can distributors enforce a minimum load level that the customer must take or pay for?

A. Distributors are responsible for preparing load forecasts, using the best available information.

The risk associated with load forecasting could be reduced by including a load/demand guarantee in the connection agreement, or by asking the customer for periodic contributions rather than a single up-front payment.

Q. Does the board intend to develop a model (spreadsheet) for doing the financial evaluation defined in Appendix B?

A. No, distributors are expected to develop their own tools for evaluation. Distributors with similar needs may want to develop a model they can all use.
Alternative Bids

Q. Is a contractor who builds a distribution system in a new subdivision development allowed to be the distributor in that area?

A. Normally the contractor transfers ownership to the distributor after the system has been constructed. A customer who wishes to retain ownership of the assets and act as the distributor in a subdivision must apply to the board for a distribution licence.

As well as owning and maintaining the assets, distributors must also provide metering services, settlement and billing in accordance with the Retail Settlement Code, and a standard supply service in accordance with the Standard Supply Service Code. They must also adhere to the rules of the Electricity Distribution Rate Handbook and meet the requirements of the Distribution System Code.

Q. If the capital contribution requested by the distributor represents only a small portion of the total Expansion cost, does the customer have the right to seek an alternative bid on the entire Expansion?

A. Yes, clause 3.3.1 indicates that if the distributor is requesting a capital contribution, customers may seek alternative bids for the portion of the Expansion that does not involve existing circuits.

Q. Can a distributor work as a private contractor in another distributor’s service area?

A. Section 71 of the Ontario Energy Board Act, does not permit a distributor to act as a private contractor.
Q. When dealing with alternative bids, can distributors force contractors to buy material from the distributor’s stores?

A. No, distributors may not require contractors to use material from their stores.

Under alternative bid scenarios customers must use qualified contractors who are familiar with the distributor’s requirements, including material specifications.

As indicated in clause 3.3.4, the distributor has the right to approve the constructed facilities before connecting them to the system.

Q. Under the alternative bid scenario, can distributors incorporate a profit in their offer to the customer, as they are operating in a competitive environment?

A. The methodology set out in Appendix B allows for the distributor’s approved return on equity. No additional amount is permitted.