

**CONDITIONS OF SERVICE**

**APPENDIX E**

**Economic Evaluation of an Expansion**

## Methodology for Calculating the Economic Evaluation of an Expansion

If Horizon Utilities is connecting a new Customer load to Horizon Utilities' distribution system facilities or upgrade a connection to an existing Customer, and an expansion of Horizon Utilities' distribution system is required, Horizon Utilities will perform an economic evaluation of the expansion project to determine if the future revenue from the Customer(s) will pay for the costs pertaining to the expansion.

Factors that are used in calculating the economic evaluation of the project include but are not limited to:

1. ongoing operating, maintenance & administration costs (either actually incurred or apportioned in the manner set forth below), also referred to as "OM&A Costs"
2. the historical average distribution system reinforcement capital cost per kW, also referred to as "Enhancement Costs" and "upstream costs"
3. the distribution system expansion capital cost, also referred to as "New Expansion Costs"
4. the basic cost of connection outlined in the Conditions of Service **Appendix I**, also referred to as "Basic Connection Costs"

(Enhancement Costs, New Expansion Costs and Basic Connection Costs, are collectively referred to as "Expansion Fees".)

Enhancement Costs are those which Horizon Utilities has incurred over the past three (3) years to increase the distribution system capacity to accommodate new Customer loading facilities on Horizon Utilities' distribution system, consistent with the Horizon Utilities' planning, design and construction standards, and include the following:

- the construction of new distribution feeders and circuits (overhead or underground, single phase or multi-phase) that are intended to serve multiple Customers; and
- the upgrading of existing conductors with higher capacity conductors; and
- conversions of existing lower voltage distribution facilities to higher voltage distribution facilities with greater supply capacity; and
- the installation of switching and protection facilities associated with the construction and/or upgrading of existing distribution feeders and circuits; and
- the construction of new and/or upgrading of distribution stations and transformation facilities associated with the additional loading; and
- capital contributions paid by the distributor for additional upstream facilities, typically owned by a transmitter.

Horizon Utilities aggregate its historical Enhancement Cost and new Customer kW loads over the past three (3) years (and updates them on an annual basis), and derives an average Enhancement Cost per kW that will apply to all expansion projects.

In addition, Horizon Utilities includes in the economic evaluation all capital expenditures associated with the installation of new distribution facilities and circuits when required to accommodate new Customer loading. The new distribution facilities and circuits shall meet all of the following criteria:

- are required to accommodate new Customer load; and
- are not intended to be serving other Customers, other than un-forecasted Customers; and
- are consistent with Horizon Utilities' planning, design and construction standards.

For the purpose of determining OM&A Costs, Horizon Utilities will use system average operating, maintenance and administrative expenditures as a proxy for incremental OM&A expenditures and apportion them as fixed costs per Customer (for Rate Class 1 and 2, Residential and small commercial) or as a function of \$/kW of demand (for Rate Class 3, 4, and 5, over 50 kW, large user, street lighting).

The Expansion Fees are in addition to any Variable Connection Fees. Refer to the Conditions of Service Appendix D for each Customer Class.

For the purpose of establishing the estimated incremental demand to be used in the economic evaluation, the Customer shall provide a valid estimate of the proposed incremental demand for evaluation and acceptance by Horizon Utilities. If the Customer and Horizon Utilities are unable to agree on a valid incremental demand for new Class 3, 4, and 5 Customers or in the absence of adequate billing history for existing Customers who are requesting a service upgrade, Horizon Utilities will set the estimated incremental demand to equal 90 per cent of the “incremental installed transformer capacity”.

Using the estimated incremental demand, Horizon Utilities shall then calculate the estimated incremental revenues of new Customers using the “fixed charge” and the “variable charge” that have been approved by the Ontario Energy Board for the Rate Class applicable to each individual new meter installed in connection with the expansion project.

In performing the economic evaluation, should the Net Present Value (NPV) of the costs and revenues associated with the expansion be less than zero, a capital contribution in the amount of the shortfall is required. Horizon Utilities will collect this shortfall from the Customer at the time the CCRA is signed in addition to any deposits and securities applicable.

The amount charged by Horizon Utilities to a generator to construct the expansion to connect a generation facility to the Horizon Utilities distribution system shall not exceed the generator’s share of the present value of the projected capital costs and ongoing OM&A maintenance costs for the project. Projected revenue and avoided costs from the generation facility shall be assumed to be zero, unless otherwise determined by rates approved by the Ontario Energy Board. The methodology and inputs that Horizon Utilities will use to calculate this amount are presented in Appendix B of the Distribution System Code.