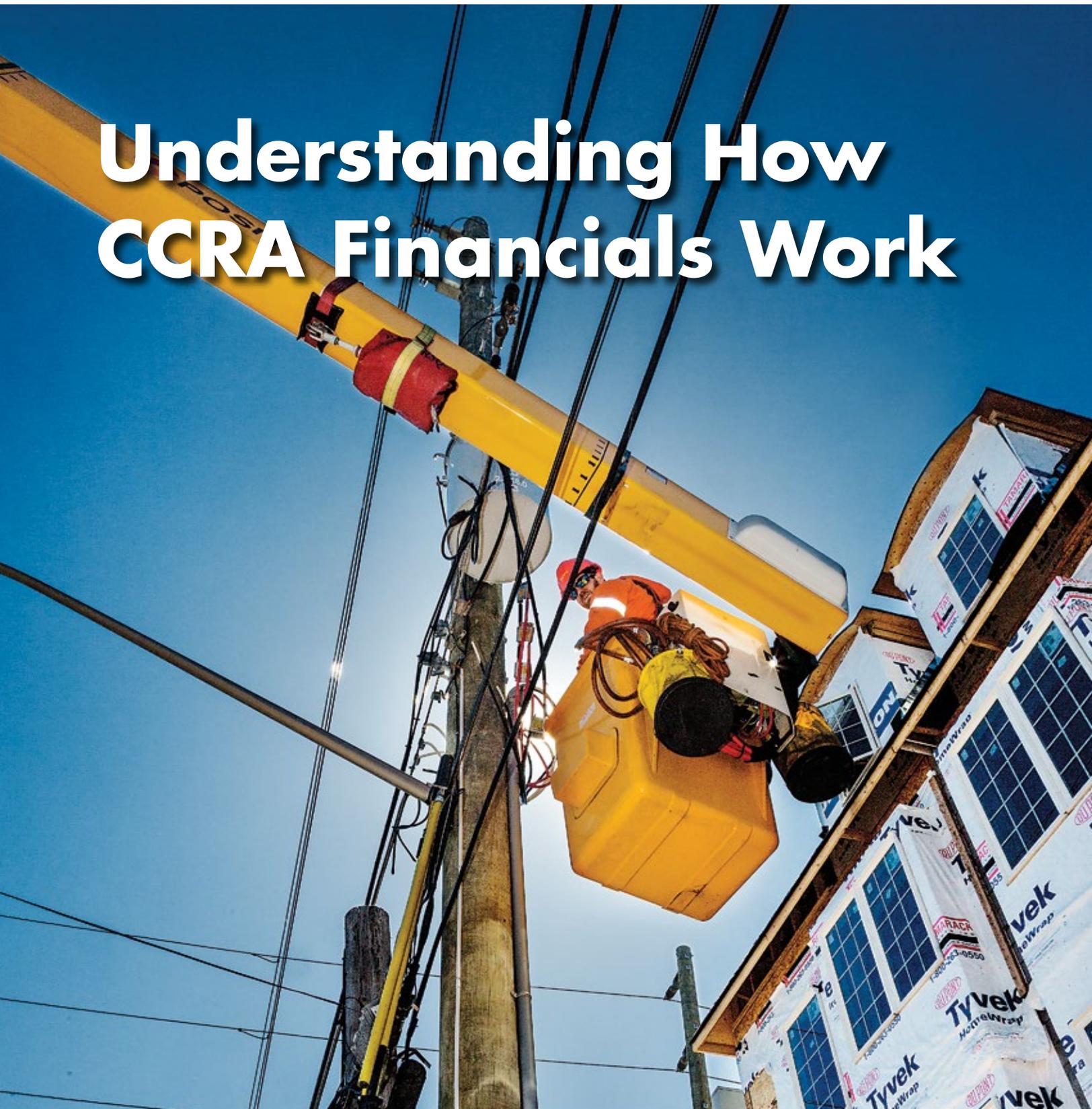


# Understanding How CCRA Financials Work



# Having trouble understanding the financial process in a Capital Cost Recovery Agreement or what is called a CCRA for short?

CCRAs are a standard tool in utility construction and the CCRA used by Horizon Utilities Corporation, like all other local utilities, is governed by the *Distribution System Code (DSC)* of the Ontario Energy Board (OEB).

In reading this document, you will find answers to frequently asked questions and develop an understanding of the financial terms used in CCRA calculations for typical customer connection scenarios.

What you will also learn is that Horizon Utilities' cost for connecting a new customer is paid through a combination of tools. These include (1) the revenue from the new connection, (2) a deposit to support that revenue until it materializes and, if necessary, (3) an upfront financial payment from the customer (known as a Capital Contribution) if the revenue from the new connection is not sufficient to offset the Total Costs and ongoing Operation, Maintenance and Administration Costs.

## Standard CCRA Financial Terms and Definitions

### Connection Costs

- This is the work completed by Horizon Utilities to connect a new or upgraded service to Horizon Utilities' existing distribution system.
- The OEB's DSC sets out what is included in these costs.

### Expansion Costs

- This is the work completed to upgrade or extend Horizon Utilities' existing distribution system in order to connect the requested service.
- The OEB's DSC sets out what is included in these costs.

### Work Estimate of Total Costs

- This is the sum of the expected work completed by Horizon Utilities for both the Connection Costs and the Expansion Costs.

### Expected Distribution Revenue – Residential and Small Commercial GS < 50kW customers

- For the Residential and Small Commercial (General Service less than 50kW) rate classes, the Expected Distribution Revenue from a connection request will be considered met if the number of accounts indicated on the *Customer Information Form* matches the actual activated accounts.
- The *Customer Information Form* is provided to Horizon Utilities by the customer or its representative as the basis to calculate the revenue and costs.
- Horizon Utilities reviews the number of active accounts annually against the data submitted in the *Customer Information Form*.

### Expected Distribution Revenue – (GS > 50kW), Large User 1 (LU1), and Large User 2 (LU2) customers

- For commercial customers (General Service greater than 50kW), Large User and Large User 2 rate classes, the Expected Distribution Revenue is based on the new or upgraded customer's estimated electrical load for the first five (5) years of the new or upgraded service.
- The average monthly peak electrical load is provided by the customer or its representatives to Horizon Utilities and is expressed in kilowatts (kW).

- The Expected Distribution Revenue is calculated using the electrical load based on Horizon Utilities' electricity rates as approved by the OEB.

### Operation, Maintenance and Administration Costs

- These are costs associated with Horizon Utilities' ongoing requirements to provide an efficient, safe and reliable power distribution system to the public.
- These costs are made up of ongoing maintenance and operational improvements and the cost of administration.

### Net Present Value

- This is a financial calculation to express the difference between the present value of cash inflows (Expected Future Distribution Revenues) and the present value of cash outflows (Total Costs and ongoing Operations, Maintenance and Administration Costs).

### CCRA Financial Model (Calculation)

- This is a net present value calculation that determines the actual connection cost of the project for the customer.
- This calculation takes into account:
  - Work Estimate of Total Cost
  - Ongoing Operating, Maintenance and Administration costs
  - Expected Future Distribution Revenue earned from the connection over 25 years
- The Total Costs and the ongoing Operating, Maintenance and Administration Costs of the new connection are assessed against the Expected Distribution Revenue.

### Number of Customers/Connections

- This is the total number of customer/connections by class.
- The classes are Residential, Small Commercial < 50kW, Commercial > 50kW, Large User 1, Large User 2.
- The number of customers in the class is a factor in the CCRA model since the costs for one customer are the total costs for the class divided by the number of customers.

- Each class has its own rates and service charges because the costs of serving each class of customer are different.

### Capital Contribution

- This is the financial contribution the customer is required to make to Horizon Utilities when the Total Costs and ongoing Operating, Maintenance and Administration Costs are not covered by the Expected Distribution Revenue from the new connection.
- This Capital Contribution is not a deposit and therefore is not refundable.

### Expansion Deposit

- This is the financial deposit that the customer provides to Horizon Utilities.
- It is calculated by subtracting the Capital Contribution from the Total Costs and ongoing Operating, Maintenance and Administration Costs.
- The value of the deposit is determined by Horizon Utilities' CCRA Financial Model.
- If the Expected Distribution Revenue is equal to or greater than the combination of Total Costs and ongoing Operating, Maintenance and Administration Costs, the CCRA Financial Model will only generate a requirement for an Expansion Deposit (and not a Capital Contribution).
- If the Expected Distribution Revenue is less than the combination of Total Costs and ongoing Operating, Maintenance and Administration Costs, the CCRA Financial Model will generate a need for both an Expansion Deposit and a Capital Contribution from the customer.
- The Expansion Deposit is returned to the customer if the Expected Distribution Revenues materialize.
- If the Expected Distribution Revenue does not materialize as projected from the load provided by the customer, a portion of the Expansion Deposit will be kept by Horizon to make up for this shortfall.

# Examples of the Financials in a Horizon Utilities CCRA

## EXAMPLE 1

This example is a CCRA project for a new 347/600V, 800A service connection with one meter where a Capital Contribution and an Expansion Deposit were required, but the electrical load and corresponding Expected Distribution Revenue did not materialize.

### Estimated Total Costs

- Connection = \$50,000
- Expansion = \$16,800
- Estimated Maximum Electrical Load = 200kW

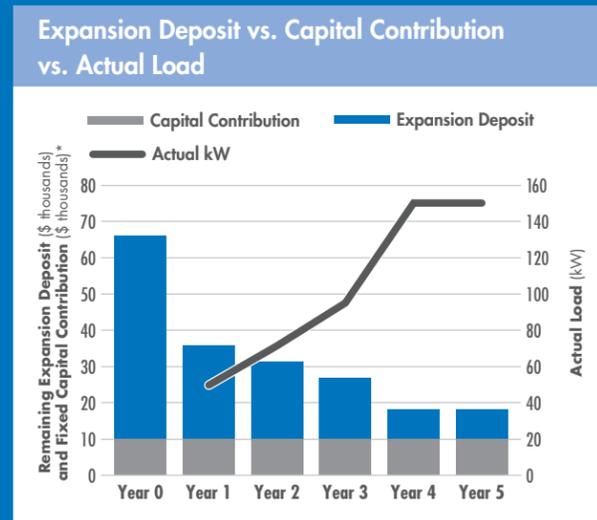
### Example Output of CCRA yields the following Expansion Deposit and Capital Contribution

- Expansion Deposit = \$56,775.70
- Capital Contribution = \$10,024.30

In each of the first five years of the service, Horizon Utilities reviews each CCRA by looking at the average monthly peak kW used and compares it against estimated electrical load provided by the customer or its representatives. This is done to determine how much of the Expansion Deposit is returned to the customer. The CCRA file is closed at the end of the five years. Using the data (see graph to the left), the first five years of Expansion Deposit return in this example will be:

Year	Deposit Held	Deposit Returned	Deposit Balance
1	\$56,775.70	\$30,516.55	\$26,259.15
2	\$26,259.15	\$4,481.52	\$21,777.63
3	\$21,777.63	\$4,481.52	\$17,296.11
4	\$17,296.11	\$8,963.09	\$8,333.02
5	\$8,333.02	\$0.00	\$8,333.02

Since the service, by only reaching 150kW in Year 4 and Year 5, never did reach the estimated electrical load provided by the customer of 200kW, the remaining Expansion Deposit of \$8,333.02 is converted into additional Capital Contribution at the end of five years. The additional Capital Contribution is retained by Horizon Utilities to cover the loss of Expected Distribution Revenue resulting from lower than estimated load. The CCRA file is closed at the end of the five years. HST is also applied to the remaining Expansion Deposit that is converted to Capital Contribution. The customer will be asked to pay the HST on the \$8,333.02 upon the expiry of the five-year period.



\* Year 0 illustrates the Expansion Deposit and the Capital Contribution before any actual distribution revenues are realized at the new/upgraded service.

## EXAMPLE 2

This example is a CCRA project for a new 347/600V, 800A service connection with one meter where no Capital Contribution was required, but the electrical load and corresponding Expected Distribution Revenue did not materialize.

### Estimated Total Costs

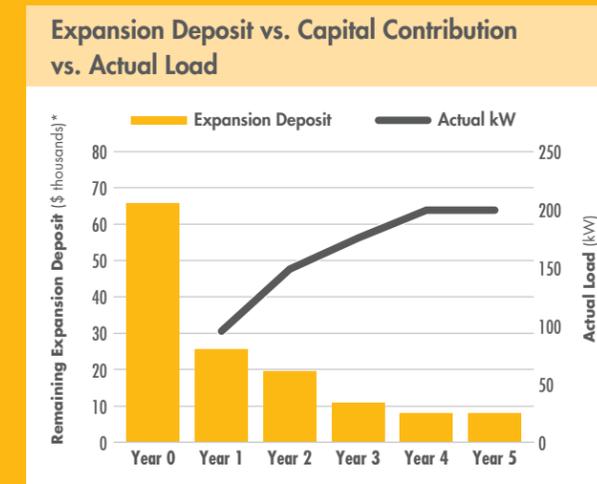
- Connection = \$50,000
- Expansion = \$16,800
- Estimated Maximum Electrical Load = 400kW

### Example Output of CCRA yields the following Expansion Deposit and Capital Contribution

- Expansion Deposit = \$66,800.00
- Capital Contribution = \$0.00

In each of the first five years of the service, Horizon Utilities reviews each CCRA by looking at the average monthly peak kW used and compares it against estimated electrical load provided by the customer or its representatives to determine how much of the Expansion Deposit is returned to the customer. Using the data (see graph to the left), the first five years of Expansion Deposit will be:

Year	Deposit Held	Deposit Returned	Deposit Balance
1	\$66,800.00	\$40,805.43	\$25,994.57
2	\$25,994.57	\$7,170.49	\$18,824.08
3	\$18,824.08	\$6,274.15	\$12,549.93
4	\$12,549.93	\$4,481.55	\$8,068.38
5	\$8,068.38	\$0.00	\$8,068.38



\* Year 0 illustrates the Expansion Deposit and the Capital Contribution before any actual distribution revenues are realized at the new/upgraded service.

Since the service, by reaching only 210kW, never did reach the estimated electrical load of 400kW, the remaining Expansion Deposit of \$8,068.38 will convert into Capital Contribution at the end of five years. The Capital Contribution is retained by Horizon Utilities to cover the loss of Expected Distribution Revenue resulting from lower than estimated load. The CCRA file is closed at the end of the five years. HST is applied any remaining Expansion Deposit. The customer will be asked to pay HST on the \$8,068.38 upon the expiry of the five years.

## Examples of the Financials in a Horizon Utilities CCRA *(continued)*

### EXAMPLE 3

This example is a CCRA project for a new 347/600V, 800A service connection with one meter where no Capital Contribution was required and the load was met.

#### Estimated Total Costs

- Connection = \$50,000
- Expansion = \$16,800
- Estimated Maximum Electrical Load = 400kW

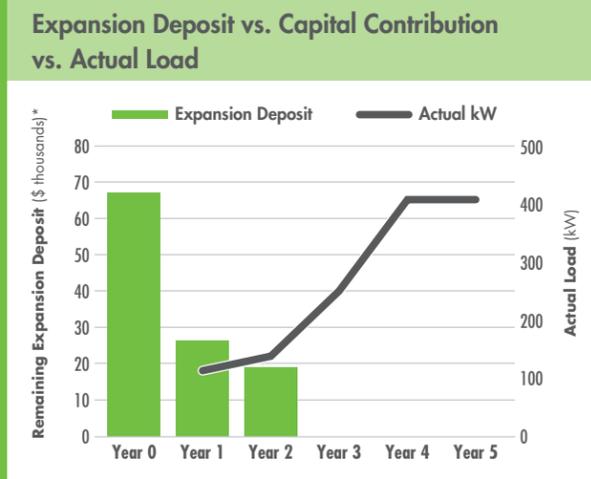
#### Example Output of CCRA yields the following Expansion Deposit and Capital Contribution

- Expansion Deposit = \$66,800.00
- Capital Contribution = \$0.00

In each of the first five years of the service, Horizon Utilities reviews each CCRA by looking at the average monthly peak kW used and compares it against estimated electrical load provided by the customer or its representatives to determine how much of the Expansion Deposit is returned to the customer. Using the data (see graph to the left), the first five years of Expansion Deposit will be:

Year	Deposit Held	Deposit Returned	Deposit Balance
1	\$66,800.00	\$40,805.43	\$25,994.57
2	\$25,994.57	\$7,170.49	\$18,824.08
3	\$18,824.08	\$18,824.08	\$0.00
4	\$0.00	\$0.00	\$0.00
5	\$0.00	\$0.00	\$0.00

Even though the Estimated Electrical Load was not met, the actual electrical load earned a full refund of the deposit. Since the service exceeded the load provided by the customer and the Expected Distribution Revenue materialized in Year 3, all of the remaining Expansion Deposit is returned to the customer at the end of Year 3.



\* Year 0 illustrates the Expansion Deposit and the Capital Contribution before any actual distribution revenues are realized at the new/upgraded service.

### EXAMPLE 4

This example is a CCRA project for a new 347/600V, 800A service connection involving multiple residential suite meters and multiple commercial meters. No Capital Contribution was required based on the estimated electrical load, but the load did not materialize.

#### Estimated Total Costs

- Connection = \$171,200
- Expansion = \$30,000
- Estimated Electrical Load = 400kW

#### Estimated Number of Customers/Connections

- 50 Residential Customers
- 7 Commercial > 50kW Customers

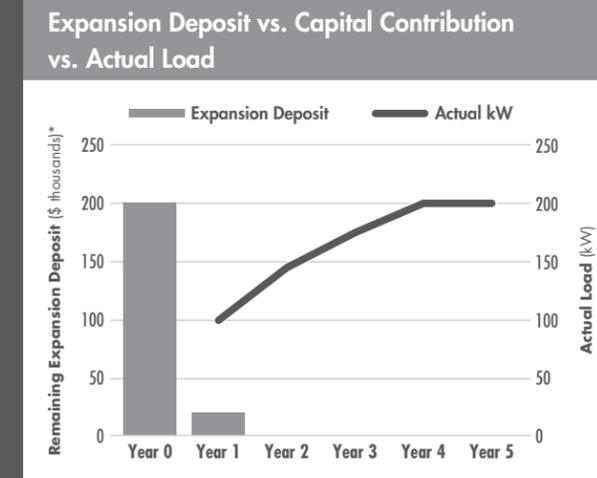
#### Example Output of CCRA yields the following Expansion Deposit and Capital Contribution

- Expansion Deposit = \$201,200
- Capital Contribution = \$0.00

In each of the first five years of the service, Horizon Utilities reviews each CCRA by looking at the average monthly peak kW used and compares it against estimated electrical load provided by the customer or its representatives to determine how much of the Expansion Deposit is returned to the customer. Using the data (see graph to the left), the first five years of Expansion Deposit will be:

Year	Deposit Held	Deposit Returned	Deposit Balance
1	\$201,200.00	\$180,043.84	\$21,156.16
2	\$21,156.16	\$21,156.16	\$0.00
3	\$0.00	\$0.00	\$0.00
4	\$0.00	\$0.00	\$0.00
5	\$0.00	\$0.00	\$0.00

Even though the Estimated Electrical Load was not met, the actual electrical load earned a full refund of the deposit.



\* Year 0 illustrates the Expansion Deposit and the Capital Contribution before any actual distribution revenues are realized at the new/upgraded service.

#### Example 4: Numbers of Residential and Commercial (GS > 50kW) Meters Used in the Model

Year	Number of Residential Meters	Number of Commercial Meters (GS > 50kW)
1	20	3
2	30	3
3	40	4
4	50	6
5	50	6

Please note that the examples noted above are typical examples for illustration purposes. They do not account for all of the possible scenarios that can occur through individual Upgrade or Non-Upgrade (New) Connection Projects.

# Frequently Asked Questions:

## **Q: When will I receive any return of my Expansion Deposit?**

A: Every year for the first five years after energization of the service, Horizon Utilities will review the Actual Load for metered accounts that are GS > 50kW, Large User 1 and Large User 2. It also will review the actual number of active metered accounts for residential and GS < 50kW accounts and compare them against the Estimated Electrical Load and estimated number of accounts provided on the *Customer Information Sheet*. This is done to determine the size of the Expansion Deposit refund.

## **Q: Who calculates or determines the Estimated Electrical Load?**

A: The customer or its representative (such as an Engineering Consultant or Electrician) will provide the estimated load to Horizon Utilities for the new or upgraded connection. Horizon Utilities will use this information to determine the Capital Contribution and Expansion Deposit for the connection. If applicable, Horizon Utilities will also determine the percentage of responsibility for the customer and itself for any Expansion Costs.

## **Q: Is it better to overestimate or underestimate the Estimated Electrical Load?**

A: If the load is overestimated, a portion of the Expansion Deposit will not be returned to the customer. If the load is underestimated, the Capital Contribution will be higher.

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