# EXHIBIT 7

COST ALLOCATION

# TABLE OF CONTENTS

# LIST OF TABLES

# EXHIBIT 7: COST ALLOCATION

## 7.1 COST ALLOCATION STUDY REQUIREMENTS

In this application, PUC Distribution Inc. ("PUC") has used the 2023 version of the cost allocation model released by the OEB on May 27, 2022. The model has been loaded with 2023 Test year costs, customer numbers and demand values. The 2023 demand values were based on the 2023 weather normalized load forecast used to design rates. The various weighting factors used in the 2023 study have been updated and explained below.

### 7.1.1 Weighting Factors

PUC has reviewed its weighting factors from its 2018 COS Application and discussed with staff to determine that there have been no changes. Labour, materials, and outside costs required to perform the specific tasks below were estimated to determine each rate class factor. PUC assigned a weighting factor of 1 to the Residential rate class and further calculated the associated weighting factors for the remaining rate classes.

### 7.1.2 Services (Account 1855)

**Table 7-1: Service Weighting Factors**

| Rate Class | Factor |
|---|---|
| Residential | 1.0 |
| General Service < 50 kW | 0.7 |
| General Service ≥ 50 kW | 0.4 |
| Sentinel Lighting | 0.1 |
| Street Lights | 0.1 |
| Unmetered Scattered Load | 0.1 |

## 7.1.3 Billing and Collection (Accounts 5315 – 5340, except 5335)

**Table 7-2: Billing Weighting Factors**

| Rate Class | Factor |
|---|---|
| Residential | 1.0 |
| General Service < 50 kW | 1.1 |
| General Service ≥ 50 kW | 4.0 |
| Sentinel Lighting | 0.8 |
| Street Lights | 0.8 |
| Unmetered Scattered Load | 0.8 |

## 7.1.4 Meter Capital (Sheet I7.1)

**Table 7-3: Meter Capital Installation Costs**

| Meter Type | Installation Cost per Meter |
|---|---|
| Smart Meter - Residential | $538 |
| Smart Meter - General Service < 50 kW | $502 |
| Smart Meter - General Service ≥ 50 kW | $993 |

## 7.1.5 Meter Reading (Sheet I7.2)

**Table 7-4: Meter Reading Weighting Factor**

| Meter Type | Factor |
|---|---|
| Smart Meter - Residential | 1.0 |
| Smart Meter - General Service < 50 kW | 0.9 |
| Smart Meter - General Service ≥ 50 kW | 1.9 |

### 7.1.6 Summary of Results and Proposed Changes

The data used in the updated cost allocation study is consistent with PUC's cost data that supports the proposed 2023 revenue requirement outlined in this application. PUC's assets were broken out into primary and secondary distribution functions using breakout percentages used in PUC's 2013 and 2018 cost of service rate application (EB-2012-0162/EB-2017-0071). The breakout of assets, capital contributions, depreciation, accumulated depreciation, customer data and load data by primary, line transformer and secondary categories were developed from the best data available to PUC, its engineering records, and its customer and financial information systems. An Excel version of the updated cost allocation study has been included with the filed application material. In addition, Appendix A - outlines Input Sheets I-6 & I-8 and Output Sheets O-1 & O-2 (first page only).

Capital contributions, depreciation, and accumulated depreciation by USoA are consistent with the information provided in the 2023 continuity statement shown in Exhibit 2. The rate class customer data used in the updated cost allocation study is consistent with the 2023 customer forecast outlined in Exhibit 3.

### 7.1.7 Load Profiles and Demand Allocators

PUC used 2021 actual data as the basis of updating its demand profile in the cost allocation model for the 2023 Test year. PUC realizes that 2021 consumption was affected by COVID, however this was the only year PUC was able to compile enough hourly smart meter data to update the demand profiles. PUC compared the results using the load forecast with 2020 and 2021 actual data, the load forecast with 2020 and 2021 normalized data and the 2018 Cost Allocation methodology which used a weighting factor from previous COS applications. Table 7-5 summarizes these results.

**Table 7-5: 2023 Cost Allocation Model Results Using Different Demand Profile Updates**

| 2023 Cost Allocation Model Results | | | | | | | |
|---|---|---|---|---|---|---|---|
| Method | Data Used | Residential | GS<50 | GS>50 | Street Light | Sentinel Light | USL |
| 1 | 2020 and 2021 Actual Consumption Data to produce Load Forecast | $ 17,117,204 | $ 3,616,755 | $ 6,463,068 | $ 363,504 | $ 51,852 | $ 53,105 |
| 2 | 2020 and 2021 COVID Normalized Consumption Data to produce load forecast | $ 17,128,169 | $ 3,501,771 | $ 6,667,329 | $ 349,542 | $ 52,120 | $ 53,269 |
| 3 | 2018 COS Methodology Allocation Factor (2020 and 2021 Actual COVID Normalized) | $ 17,661,682 | $ 3,510,521 | $ 6,016,424 | $ 372,677 | $ 52,205 | $ 51,979 |

Using Method 3, which is the methodology from PUC's 2018 application, is now outdated and allocates $600,000 more to the residential class. PUC has seen a shift in the contribution to its peak load between the rate classes. Additionally, PUC has winter peaks as compared to Southern Ontario which has summer peaks. This changes the dynamic of what rate classes contribute to PUC's peak load as compared to using the Hydro One report.

Method 1 uses the load forecast prior to PUC normalizing 2020 and 2021 actual data. This results in a very similar demand profile to Method 2, but PUC felt that it was not capturing the demand profile of the rate classes for future years.

PUC opted to use Method 2 to update its demand profile within the cost allocation model. This Method normalizes 2020 and 2021 COVID consumption data within the load forecast to better reflect the demand each rate class will contribute in future years. The following paragraphs will explain the steps involved to produce the demand profile which produced the demand allocators provide in Table 7-6. These demand allocators used the 2023 Load Forecast with regression analysis – filed in live excel format with this application.

### *7.1.7.1 Demand Profile Methodology*

PUC used 2021 smart meter data as the basis of its demand profile update. Using the load forecast regression model filed in live format with this exhibit PUC compared the predicted purchases for 2021 with Heating Degree Days ("HDD") and Cooling Degree Days ("CDD") and compared that to predicted purchases in both absence of HDD and CDD. The results are shown in Table 7-6 and 7-7 below.

**Table 7-6: HDD Predicted Purchases (in kWh)**

| | Predicted Purchases **with HDD** | Predicted Purchases **without HDD** | % Var |
|---|---|---|---|
| Jan-21 | 66,744,959 | 40,842,460 | 39% |
| Feb-21 | 63,702,938 | 35,631,368 | 44% |
| Mar-21 | 58,934,630 | 37,889,727 | 36% |
| Apr-21 | 49,897,946 | 36,108,726 | 28% |
| May-21 | 47,970,685 | 38,631,044 | 19% |
| Jun-21 | 44,385,446 | 41,896,981 | 6% |
| Jul-21 | 45,048,626 | 43,841,247 | 3% |
| Aug-21 | 49,109,188 | 48,817,873 | 1% |
| Sep-21 | 40,250,874 | 36,123,321 | 10% |
| Oct-21 | 45,136,066 | 37,809,309 | 16% |
| Nov-21 | 53,210,197 | 35,647,039 | 33% |
| Dec-21 | 62,902,728 | 40,116,953 | 36% |
| **Total** | **627,294,284** | **473,356,048** | |

**Table 7-7: CDD Predicted Purchases (in kWh)**

| | Predicted Purchases **with CDD** | Predicted Purchases **without CDD** | % Var |
|---|---|---|---|
| Jan-21 | 66,744,959 | 66,744,959 | 0% |
| Feb-21 | 63,702,938 | 63,702,938 | 0% |
| Mar-21 | 58,934,630 | 58,934,630 | 0% |
| Apr-21 | 49,897,946 | 49,897,946 | 0% |
| May-21 | 47,970,685 | 47,097,457 | 2% |
| Jun-21 | 44,385,446 | 41,286,103 | 7% |
| Jul-21 | 45,048,626 | 41,654,108 | 8% |
| Aug-21 | 49,109,188 | 40,672,089 | 17% |
| Sep-21 | 40,250,874 | 39,906,503 | 1% |
| Oct-21 | 45,136,066 | 44,754,797 | 1% |
| Nov-21 | 53,210,197 | 53,210,197 | 0% |
| Dec-21 | 62,902,728 | 62,902,728 | 0% |
| **Total** | **627,294,284** | **610,764,456** | |

The "% Var" column is used to weather normalize the hourly data for the residential, GS<50 and GS>50 rate classes which is explained further below.

The next step taken was to aggregate all the weather data from the last 10 years to create a 10-year average of HDD and CDD by day for each month. If any data was missing from the weather station, the previous and next day was averaged to get the missing data. The daily results for each month were sorted from most HDD to least and compared yearly to one another to get the 10-year average. For example, if the coldest day in January 2012 was on the 15$^{th}$ and the coldest day in January 2013 was on the 29$^{th}$, those two days would form part of the 10-year average for comparison purposes for that particular month.

Once this average was obtained it could be used to help weather normalize the hourly data. On January 1, 2021 at 1:00 a.m. PUC's actual residential demand was 38,446 kWh.

**Table 7-8: 2021 Residential Demand**

| Year | Month | Day | Hour | Residential Demand |
|---|---|---|---|---|
| | | | | (A) |
| 2021 | 1 | 1 | 1 | 38,446 |

To weather normalize this, first the 39% from Table 7-6 above indicates that 39% of the consumption in January is dependent on HDD. This means that 14,920 kWh is the portion of consumption affected by HDD shown below.

**Table 7-9: HDD Weather Related Data**

| HDD Adj | HDD Weather Related Hourly Data | *Lookup-Ref* | HDD Weather Normal Hourly Data |
|---|---|---|---|
| (B) | (E) = (A) x (B) | (D) | (F) = (E) x (10yr Av/2021 yr) |
| 39% | 14,920 | 1.10 | 16,418 |

Then to weather normalize that amount for 10-year average, a ratio of 1.10 was applied to get the HDD weather normal hourly data affected by weather. This results in an increase of 1,497.94 kWh adjustment for HDD. PUC also repeated the same process for cooling degree days. Since January is very cold in Sault Ste. Marie, there is no cooling degree day adjustment.

**Table 7-10: CDD Weather Related Data**

| CDD Adj | CDD Weather Related Hourly Data | *Lookup-Ref* | |
|---|---|---|---|
| (B) | (E) = (A) x (B) | (D) | (F) = (E) x (10yr Av/2021 |
| 0% | 0.00 | 0.00 | 0.00 |

Once this is all summarized it results in an hourly data adjusted for HDD and CDD weather of 39,944 kWh.

**Table 7-11: Hourly Data Adjusted for HDD & CDD Weather**

| Hourly Data Adjusted For HDD & CDD Weather | |
|---|---|
| (G) = (A) - (E) + (F) for HDD & CDD | *Change* |
| 39,944 | *1,498* |

This process is repeated for every hour of every day for all rate classes effected by weather.

PUC has three rate classes not affected by weather which include Street Lights, Sentinel Lights and Unmetered Scattered Load. The hourly load profiles of these rate classes have been calculated using internal billing data.

Once the hourly data for each rate class is compiled, it is all aggregated by day into one sheet. A snapshot is provided in Table 7-12.

## Table 7-12: Demand Snapshot

| Year | Month | Day | Hour | Residential | General Service <50kW | General Service 50-999kW | General Service 1000-4999kW | StreetLights | Sentinel Lights | USL | | Total LDC Demand |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 | 1 | 1 | 1 | 38,446 | 9,588 | 22,660 | 0 | 600 | 36 | 106 | | 71,436 |
| 2021 | 1 | 1 | 2 | 36,020 | 9,528 | 22,162 | 0 | 600 | 36 | 106 | | 68,452 |
| 2021 | 1 | 1 | 3 | 34,531 | 9,450 | 22,274 | 0 | 600 | 36 | 106 | | 66,997 |
| 2021 | 1 | 1 | 4 | 33,472 | 9,455 | 22,070 | 0 | 600 | 36 | 106 | | 65,739 |
| 2021 | 1 | 1 | 5 | 33,225 | 9,432 | 22,234 | 0 | 600 | 36 | 106 | | 65,633 |
| 2021 | 1 | 1 | 6 | 33,540 | 9,483 | 21,998 | 0 | 600 | 36 | 106 | | 65,763 |

Table 7-12 is based on 2021 actual data. Next, the 2023 load forecast to ratio that data for what PUC predicts to occur in 2023 which is shown in Table 7-13.

## Table 7-13: 2023 Load Forecast

| Input: Test Year Load Forecast: | | | | | | | |
|---|---|---|---|---|---|---|---|
| 274,738,681 | 79,051,528 | 221,450,388 | 2,459,994 | 193,841 | 878,528 | | 578,772,961 |
| | | | | | | | |
| **Residential** | **General Service <50kW** | **General Service 50-999kW** | **StreetLights** | **Sentinel Lights** | **USL** | | **Total LDC Demand** |
| 36,410 | 8,816 | 24,987 | 600 | 34 | 106 | | 70,952 |
| 34,112 | 8,761 | 24,438 | 600 | 34 | 106 | | 68,051 |
| 32,702 | 8,689 | 24,561 | 600 | 34 | 106 | | 66,692 |
| 31,699 | 8,693 | 24,337 | 600 | 34 | 106 | | 65,469 |
| 31,465 | 8,673 | 24,517 | 600 | 34 | 106 | | 65,395 |
| 31,763 | 8,720 | 24,257 | 600 | 34 | 106 | | 65,480 |

The final step is to obtain the Non-Co-incident Peak and Co-Incident peak. Table 7-14 summarizes the Non-Co-incident Peaks used and input into Tab I8 of the 2023 Cost Allocation Model. Table 7-15 summarizes the Co-incident Peaks and the demand allocators input into Tab I8 of the 2023 Cost Allocation Model.

**Table 7-14: Non-Co-Incident Peak Demand Allocators**

| | Residential | General Service <50kW | General Service 50-999kW | StreetLights | Sentinel Lights | USL | | LDC Monthly Max Demand |
|---|---|---|---|---|---|---|---|---|
| Jan | 59,195 | 13,365 | 35,450 | 600 | 34 | 106 | | 101,018 |
| Feb | 61,091 | 14,407 | 37,114 | 600 | 40 | 106 | | 103,944 |
| Mar | 53,727 | 13,924 | 35,952 | 600 | 40 | 106 | | 97,949 |
| Apr | 43,761 | 12,844 | 33,331 | 600 | 48 | 106 | | 84,548 |
| May | 40,637 | 10,942 | 30,301 | 600 | 52 | 106 | | 73,410 |
| Jun | 48,595 | 12,278 | 34,244 | 600 | 63 | 106 | | 91,101 |
| Jul | 45,609 | 13,494 | 33,058 | 600 | 60 | 106 | | 84,297 |
| Aug | 47,568 | 14,288 | 33,654 | 600 | 53 | 106 | | 88,591 |
| Sep | 34,647 | 12,205 | 31,125 | 600 | 49 | 106 | | 69,891 |
| Oct | 39,680 | 18,427 | 31,894 | 600 | 42 | 106 | | 74,669 |
| Nov | 51,538 | 14,435 | 30,839 | 600 | 38 | 106 | | 91,666 |
| Dec | 57,681 | 15,216 | 33,020 | 600 | 35 | 106 | | 99,770 |
| | | | | | | | | |
| **1NCP** | **61,091** | **18,427** | **37,114** | **600** | **63** | **106** | | |
| **4NCP** | **231,694** | **62,486** | **142,759** | **2,401** | **228** | **423** | | |
| **12NCP** | **583,727** | **165,825** | **399,980** | **7,202** | **554** | **1,268** | | |

**Table 7-15: Co-Incident Peak Demand Allocators**

| | Residential | General Service <50kW | GS 50 - 999kW | Street Lighting | Sentinel Lighting | USL | | LDC Monthly Coincident Peak Demand |
|---|---|---|---|---|---|---|---|---|
| Jan | 55,229 | 11,831 | 33,218 | 600 | 34 | 106 | | 101,018 |
| Feb | 57,694 | 12,145 | 33,359 | 600 | 40 | 106 | | 103,944 |
| Mar | 53,727 | 11,365 | 32,112 | 600 | 40 | 106 | | 97,949 |
| Apr | 40,874 | 11,370 | 32,209 | 0 | 0 | 95 | | 84,548 |
| May | 40,637 | 8,315 | 24,364 | 0 | 0 | 95 | | 73,410 |
| Jun | 48,535 | 10,781 | 31,690 | 0 | 0 | 95 | | 91,101 |
| Jul | 40,103 | 12,579 | 31,520 | 0 | 0 | 95 | | 84,297 |
| Aug | 45,195 | 12,212 | 31,089 | 0 | 0 | 95 | | 88,591 |
| Sep | 31,294 | 9,841 | 28,660 | 0 | 0 | 95 | | 69,891 |
| Oct | 27,032 | 18,427 | 29,114 | 0 | 0 | 95 | | 74,669 |
| Nov | 51,309 | 11,969 | 28,243 | 0 | 38 | 106 | | 91,666 |
| Dec | 57,681 | 12,704 | 29,244 | 0 | 35 | 106 | | 99,770 |
| | | | | | | | | |
| **1CP** | **57,694** | **12,145** | **33,359** | **600** | **40** | **106** | | **103,944** |
| **4CP** | **224,331** | **48,044** | **127,933** | **1,800** | **149** | **423** | | **402,681** |
| **12CP** | **549,310** | **143,538** | **364,822** | **1,800** | **187** | **1,195** | | **1,060,854** |

## 7.1.8 Specific Customer Classes

### *7.1.8.1 Large General Service and Large User Classes*

PUC is aware of the transformer allowance contained within the cost allocation model.

#### *7.1.8.2 Embedded Distributor Class*

PUC does not have an embedded distributor rate class.

#### *7.1.8.3 Unmetered Loads*

PUC communicates with unmetered load customers, including Street Lighting customers, to assist them in understanding the regulatory context in which distributors operate and how it affects unmetered load customers. This communication takes place on an on-going basis and is not driven by the rate application process.

#### *7.1.8.4 microFIT Class*

PUC is not proposing to include microFIT as a separate class in the cost allocation model in 2023. PUC understands that the cost allocation model will produce a calculation of unit costs which the OEB will use to update the uniform microFIT rate at a future date.

#### *7.1.8.5 Standby Rates*

PUC does not charge Standby Rates to any of its customers as of August 31, 2022.

### 7.1.9 New Customer Classes

PUC is not proposing to include a new customer class.

### 7.1.10 Eliminated Customer Classes

PUC is not proposing to eliminate a rate class.

## 7.2 CLASS REVENUE REQUIREMENTS

The following Table 7-16 provides information on calculated class revenue. The resulting 2023 proposed base revenue will be the amount used in Exhibit 8 to design the proposed distribution charges in this application.

**Table 7-16 Calculated Class Revenue –**
**(Consistent with RRWF, Tab 11 Cost Allocation, Calculated Class Revenues)**

| Rate Class | 2023 Base Revenue at Existing Rates | 2023 Proposed Base Revenue Allocated at Existing Rates Proportion | 2023 Proposed Base Revenue | Miscellaneous Revenue |
|---|---|---|---|---|
| Residential | $12,939,404 | $15,344,320 | $15,344,320 | $1,774,752 |
| General Service < 50 kW | $3,189,277 | $3,782,036 | $3,782,036 | $345,328 |
| General Service ≥ 50 kW | $4,653,058 | $5,517,875 | $5,517,875 | $559,803 |
| Sentinel Lighting | $36,638 | $43,448 | $43,448 | $8,575 |
| Street Lights | $222,463 | $263,810 | $263,810 | $53,728 |
| Unmetered Scattered Load | $42,539 | $50,446 | $50,446 | $8,079 |
| Total | $21,083,380 | $25,001,934 | $25,001,935 | $2,750,265 |

## 7.3 REVENUE-TO-COST RATIOS

The results of a cost allocation study are typically presented in the form of revenue-to-cost ratios. The ratio is shown by rate classification and is the percentage of distribution revenue collected by rate classification compared to the costs allocated to the classification. The percentage identifies the rate classifications that are being subsidized and those that are over-contributing. A percentage of less than 100% means the rate classification is under-contributing and is being subsidized by other classes of customers. A percentage of greater than 100% indicates the rate classification is over-contributing and is subsidizing other classes of customers.

In the OEB's Letter from June 12, 2015[1], the Board established what it considered to be the appropriate ranges of revenue to cost ratios which are summarized in Table 7-17 below. In addition, Table 7-17 provides PUC's revenue-to-cost ratios from the 2018 application and the updated 2023 cost allocation study.

**Table 7-17 Revenue-to-Cost Ratios –**
**(Consistent with RRWF, Tab 11 Cost Allocation, Proposed & Rebalancing Revenue to Cost Ratios)**

| Rate Class | 2018 Board Approved Cost Allocation Study | 2023 Cost Allocation Study | 2023 Proposed Ratios | OEB Targets Min to Max | |
|---|---|---|---|---|---|
| Residential | 92.62% | 99.95% | 99.95% | 85.0% | 115.0% |
| General Service < 50 kW | 116.08% | 117.87% | 117.87% | 80.0% | 120.0% |
| General Service ≥ 50 kW | 111.07% | 91.16% | 91.16% | 80.0% | 120.0% |
| Sentinel Lighting | 97.22% | 99.81% | 99.81% | 80.0% | 120.0% |
| Street Lights | 120.00% | 90.84% | 90.84% | 80.0% | 120.0% |
| Unmetered Scattered Load | 112.71% | 109.87% | 109.87% | 80.0% | 120.0% |

The 2023 Cost Allocation Study percentages all fall within the OEB targets, but PUC has decided to adjust them closer to each rate classes portion of revenue-to-costs. Since the demand profile was updated in this rate application, it has caused a shift in the revenue-to-cost percentages for this application compared to the 2018 application.

Three rate classes were chosen to change the revenue-to-cost percentages from the default presented in the 2023 Cost allocation model. First the General Service <50kW rate class was adjusted down to 110%. This amount was allocated to General Service >50kW and Street Light rate class in unity bringing them both up to 95.07%. PUC ran these changes through the bill impacts model and feels that the bill impacts presented in Exhibit 8 are still reasonable for all rate classes.

[1] OEB letter, June 12, 2005, Review of Cost Allocation Policy for Unmetered Loads OEB File No. EB-2012-0383, Issuance of New Cost Allocation Policy for Street Lighting Rate Class

# APPENDIX A
# 2023 Cost Allocation Model

Input Sheets I-6 & I-8

Output Sheets O-1 & O-2 (first page only).

Ontario Energy Board

# 2023 Cost Allocation Model

**EB-2022-0059**

## Sheet I6.1 Revenue Worksheet - Final

| | |
|---|---|
| **Total kWhs from Load Forecast** | 578,772,961 |

| | |
|---|---|
| **Total kWs from Load Forecast** | 555,454 |

| | |
|---|---|
| **Deficiency/sufficiency ( RRWF 8. cell F51)** | - 3,918,555 |

| | |
|---|---|
| **Miscellaneous Revenue (RRWF 5. cell F48)** | 2,750,265 |

| | | | 1 | 2 | 3 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| | **ID** | **Total** | **Residential** | **GS <50** | **GS>50-Regular** | **Street Light** | **Sentinel** | **Unmetered Scattered Load** |
| **Billing Data** | | | | | | | | |
| Forecast kWh | **CEN** | 578,772,961 | 274,738,681 | 79,051,528 | 221,450,388 | 2,459,994 | 193,841 | 878,528 |
| Forecast kW | **CDEM** | 555,454 | | | 547,687 | 7,200 | 566 | |
| Forecast kW, included in CDEM, of customers receiving line transformer allowance | | 112,000 | | | 112,000 | | | |
| Optional - Forecast kWh, included in CEN, from customers that receive a line transformation allowance on a kWh basis. In most cases this will not be applicable and will be left blank. | | - | | | | | | |
| KWh excluding KWh from Wholesale Market Participants | **CEN EWMP** | 578,772,961 | 274,738,681 | 79,051,528 | 221,450,388 | 2,459,994 | 193,841 | 878,528 |
| | | | | | | | | |
| | | | | | | | | |
| Existing Monthly Charge | | | $33.72 | $22.32 | $123.27 | $1.47 | $3.83 | $13.67 |
| Existing Distribution kWh Rate | | | | $0.0268 | | | | $0.0412 |
| Existing Distribution kW Rate | | | | | $7.2479 | $9.6161 | $35.7037 | |
| Existing TOA Rate | | | | | $0.60 | | | |
| Additional Charges | | | $662,626.00 | $160,040.00 | $241,816.00 | $11,454.00 | $1,852.00 | $2,243.00 |
| Distribution Revenue from Rates | | $21,150,579 | $12,939,404 | $3,189,277 | $4,720,258 | $222,463 | $36,638 | $42,539 |
| Transformer Ownership Allowance | | $67,200 | $0 | $0 | $67,200 | $0 | $0 | $0 |
| Net Class Revenue | **CREV** | $21,083,379 | $12,939,404 | $3,189,277 | $4,653,058 | $222,463 | $36,638 | $42,539 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Ontario Energy Board

# 2023 Cost Allocation Model

**EB-2022-0059**

## Sheet I6.2 Customer Data Worksheet - Final

| | | | 1 | 2 | 3 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| | ID | Total | Residential | GS <50 | GS>50-Regular | Street Light | Sentinel | Unmetered Scattered Load |
| **Billing Data** | | | | | | | | |
| Bad Debt 3 Year Historical Average | BDHA | $366,575 | $275,704 | $54,065 | $36,805 | $0 | $0 | $0 |
| Late Payment 3 Year Historical Average | LPHA | $257,333 | $189,877 | $36,868 | $30,588 | | | |
| Number of Bills | CNB | 409,368 | 364,080 | 40,800.00 | 4,128.00 | 48.00 | 12.00 | 300.00 |
| Number of Devices | CDEV | | | | | 8,037 | | |
| Number of Connections (Unmetered) | CCON | 8,649 | | | | 8,037 | 317 | 295 |
| Total Number of Customers | CCA | 34,114 | 30,340 | 3,400 | 344 | 4 | 1 | 25 |
| Bulk Customer Base | CCB | - | | | | | | |
| Primary Customer Base | CCP | 34,418 | 30,340 | 3,435 | 303 | 314 | 1 | 25 |
| Line Transformer Customer Base | CCLT | 34,368 | 30,340 | 3,435 | 253 | 314 | 1 | 25 |
| Secondary Customer Base | CCS | 33,341 | 30,340 | 2,840 | 135 | | 1 | 25 |
| Weighted - Services | CWCS | 32,760 | 30,340 | 1,931 | 57 | 402 | 16 | 15 |
| Weighted Meter -Capital | CWMC | 18,226,142 | 16,252,980 | 1,683,206 | 289,956 | - | - | - |
| Weighted Meter Reading | CWMR | 40,555 | 30,340 | 3,400 | 6,815 | - | - | - |
| Weighted Bills | CWNB | 426,322 | 364,080 | 45,288 | 16,677 | 37 | 9 | 231 |

## Bad Debt Data

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Historic Year:** | 2019 | 378,475 | 286,175 | 54,008 | 38,291 | | | |
| **Historic Year:** | 2020 | 354,696 | 266,022 | 53,204 | 35,470 | | | |
| **Historic Year:** | 2021 | 366,554 | 274,915 | 54,983 | 36,655 | | | |
| **Three-year average** | | **366,575** | **275,704** | **54,065** | **36,805** | **-** | **-** | **-** |

## Street Lighting Adjustment Factors

| | |
|---|---|
| **NCP Test Results** | 4 NCP |

| | Primary Asset Data | | Line Transformer Asset Data | |
|---|---|---|---|---|
| **Class** | **Customers/ Devices** | **4 NCP** | **Customers/ Devices** | **4 NCP** |
| **Residential** | 30,340 | 231,694 | 30,340 | 231,694 |
| **Street Light** | 8,037 | 2,401 | 8,037 | 2,401 |

| Street Lighting Adjustment Factors | |
|---|---|
| Primary | 25.5668 |
| Line Transformer | 25.5668 |

Ontario Energy Board

# 2023 Cost Allocation Model

**EB-2022-0059**

## Sheet O1 Revenue to Cost Summary Worksheet - Final

**Instructions:**
Please see the first tab in this workbook for detailed instructions

**Class Revenue, Cost Analysis, and Return on Rate Base**

| Rate Base Assets | | Total | 1 Residential | 2 GS <50 | 3 GS>50-Regular | 7 Street Light | 8 Sentinel | 9 Unmetered Scattered Load |
|---|---|---|---|---|---|---|---|---|
| crev | Distribution Revenue at Existing Rates | $21,083,379 | $12,939,404 | $3,189,277 | $4,653,058 | $222,463 | $36,638 | $42,539 |
| mi | Miscellaneous Revenue (mi) | $2,750,265 | $1,774,752 | $345,328 | $559,803 | $53,728 | $8,575 | $8,079 |
| | | Miscellaneous Revenue Input equals Output | | | | | | |
| | **Total Revenue at Existing Rates** | **$23,833,644** | **$14,714,155** | **$3,534,605** | **$5,212,861** | **$276,191** | **$45,214** | **$50,618** |
| | Factor required to recover deficiency (1 + D) | 1.1859 | | | | | | |
| | Distribution Revenue at Status Quo Rates | $25,001,935 | $15,344,320 | $3,782,036 | $5,517,875 | $263,810 | $43,448 | $50,446 |
| | Miscellaneous Revenue (mi) | $2,750,265 | $1,774,752 | $345,328 | $559,803 | $53,728 | $8,575 | $8,079 |
| | **Total Revenue at Status Quo Rates** | **$27,752,200** | **$17,119,072** | **$4,127,364** | **$6,077,678** | **$317,538** | **$52,023** | **$58,525** |
| | **Expenses** | | | | | | | |
| di | Distribution Costs (di) | $6,612,535 | $3,972,990 | $850,817 | $1,674,974 | $80,612 | $16,670 | $16,473 |
| cu | Customer Related Costs (cu) | $1,958,371 | $1,570,497 | $201,427 | $126,331 | $55,561 | $2,202 | $2,353 |
| ad | General and Administration (ad) | $5,378,385 | $3,440,394 | $664,878 | $1,168,603 | $81,468 | $11,511 | $11,532 |
| dep | Depreciation and Amortization (dep) | $5,425,413 | $3,298,583 | $688,272 | $1,361,363 | $59,043 | $8,895 | $9,257 |
| INPUT | PILs (INPUT) | $574,141 | $332,095 | $75,139 | $160,099 | $4,993 | $880 | $936 |
| INT | Interest | $3,089,225 | $1,786,867 | $404,292 | $861,428 | $26,867 | $4,736 | $5,035 |
| | **Total Expenses** | **$23,038,070** | **$14,401,425** | **$2,884,825** | **$5,352,798** | **$308,543** | **$44,893** | **$45,586** |
| | **Direct Allocation** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| NI | Allocated Net Income (NI) | $4,714,129 | $2,726,744 | $616,946 | $1,314,531 | $40,998 | $7,227 | $7,683 |
| | **Revenue Requirement (includes NI)** | **$27,752,200** | $17,128,169 | $3,501,771 | $6,667,329 | $349,542 | $52,120 | $53,269 |
| | | Revenue Requirement Input equals Output | | | | | | |
| | **Rate Base Calculation** | | | | | | | |
| | **Net Assets** | | | | | | | |
| dp | Distribution Plant - Gross | $186,612,420 | $110,607,083 | $24,090,003 | $49,359,589 | $1,870,666 | $336,932 | $348,147 |
| gp | General Plant - Gross | $5,516,178 | $3,228,356 | $718,741 | $1,495,693 | $53,049 | $10,037 | $10,301 |
| accum dep | Accumulated Depreciation | ($36,460,701) | ($22,560,605) | ($4,539,970) | ($8,837,892) | ($403,804) | ($56,595) | ($61,835) |
| co | Capital Contribution | ($25,236,014) | ($15,804,439) | ($3,201,121) | ($5,675,940) | ($382,045) | ($89,334) | ($83,134) |
| | **Total Net Plant** | **$130,431,883** | **$75,470,395** | **$17,067,653** | **$36,341,450** | **$1,137,866** | **$201,040** | **$213,479** |
| | **Directly Allocated Net Fixed Assets** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| COP | Cost of Power (COP) | $61,481,413 | $29,258,624 | $8,391,185 | $23,457,434 | $260,578 | $20,533 | $93,059 |
| | OM&A Expenses | $13,949,291 | $8,983,880 | $1,717,122 | $2,969,908 | $217,640 | $30,383 | $30,358 |
| | Directly Allocated Expenses | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| | ***Subtotal*** | ***$75,430,704*** | ***$38,242,504*** | ***$10,108,307*** | ***$26,427,342*** | ***$478,218*** | ***$50,916*** | ***$123,417*** |
| | **Working Capital** | **$5,657,303** | **$2,868,188** | **$758,123** | **$1,982,051** | **$35,866** | **$3,819** | **$9,256** |
| | **Total Rate Base** | **$136,089,186** | **$78,338,583** | **$17,825,776** | **$38,323,500** | **$1,173,732** | **$204,859** | **$222,736** |
| | | Rate Base Input equals Output | | | | | | |
| | **Equity Component of Rate Base** | **$54,435,674** | **$31,335,433** | **$7,130,310** | **$15,329,400** | **$469,493** | **$81,944** | **$89,094** |
| | **Net Income on Allocated Assets** | **$4,714,129** | **$2,717,647** | **$1,242,539** | **$724,880** | **$8,995** | **$7,130** | **$12,938** |
| | **Net Income on Direct Allocation Assets** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| | **Net Income** | **$4,714,129** | **$2,717,647** | **$1,242,539** | **$724,880** | **$8,995** | **$7,130** | **$12,938** |
| | **RATIOS ANALYSIS** | | | | | | | |
| | **REVENUE TO EXPENSES STATUS QUO%** | **100.00%** | **99.95%** | **117.87%** | **91.16%** | **90.84%** | **99.81%** | **109.87%** |
| | EXISTING REVENUE MINUS ALLOCATED COSTS | ($3,918,555) | ($2,414,013) | $32,834 | ($1,454,468) | ($73,350) | ($6,907) | ($2,651) |
| | | Deficiency Input equals Output | | | | | | |
| | STATUS QUO REVENUE MINUS ALLOCATED COSTS | ($0) | ($9,097) | $625,593 | ($589,651) | ($32,003) | ($97) | $5,256 |
| | RETURN ON EQUITY COMPONENT OF RATE BASE | 8.66% | 8.67% | 17.43% | 4.73% | 1.92% | 8.70% | 14.52% |

Ontario Energy Board

# 2023 Cost Allocation Model

**EB-2022-0059**

**Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - Final**

**Output sheet showing minimum and maximum level for Monthly Fixed Charge**

## Summary

| | 1 | 2 | 3 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|
| | Residential | GS <50 | GS>50-Regular | Street Light | Sentinel | Unmetered Scattered Load |
| Customer Unit Cost per month - Avoided Cost | $4.45 | $4.03 | $15.88 | $0.57 | $0.56 | $0.64 |
| Customer Unit Cost per month - Directly Related | $6.63 | $6.29 | $30.10 | $0.92 | $0.92 | $1.05 |
| Customer Unit Cost per month - Minimum System with PLCC Adjustment | $20.40 | $19.84 | $53.50 | $2.82 | $13.39 | $13.55 |
| Existing Approved Fixed Charge | $33.72 | $22.32 | $123.27 | $1.47 | $3.83 | $13.67 |

## Information to be Used to Allocate PILs, ROD, ROE and A&G

| | Total | 1 Residential | 2 GS <50 | 3 GS>50-Regular | 7 Street Light | 8 Sentinel | 9 Unmetered Scattered Load |
|---|---|---|---|---|---|---|---|
| **General Plant - Gross Assets** | $5,516,178 | $3,228,356 | $718,741 | $1,495,693 | $53,049 | $10,037 | $10,301 |
| **General Plant - Accumulated Depreciation** | ($1,701,790) | ($995,977) | ($221,738) | ($461,435) | ($16,366) | ($3,097) | ($3,178) |
| **General Plant - Net Fixed Assets** | $3,814,387 | $2,232,379 | $497,003 | $1,034,258 | $36,683 | $6,941 | $7,123 |
| **General Plant - Depreciation** | ($121,558) | ($71,142) | ($15,839) | ($32,960) | ($1,169) | ($221) | ($227) |
| **Total Net Fixed Assets Excluding General Plant** | $126,617,496 | $73,238,016 | $16,570,649 | $35,307,191 | $1,101,183 | $194,100 | $206,356 |
| **Total Administration and General Expense** | $5,378,385 | $3,440,394 | $664,878 | $1,168,603 | $81,468 | $11,511 | $11,532 |
| **Total O&M** | $8,414,934 | $5,442,607 | $1,033,095 | $1,768,525 | $133,694 | $18,528 | $18,484 |