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May 29, 2024 **By E-mail and RESS**

Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Attention: Nancy Marconi, Registrar

Dear Ms. Marconi:

**Re: Smart Metering Entity Annual Cost and Variance Account Report for 2023 (EB-2022-0137)**

On behalf of the Independent Electricity System Operator ("**IESO**") in its capacity as the Smart Metering Entity ("**SME**"), we are providing the Ontario Energy Board (the "**Board**") with the SME's Annual Cost and Variance Account Report for the year ended December 31, 2023 (the "**Annual Report**").

The report was filed through the Board's RESS portal on May 29, 2024.

If you have any questions, please contact the undersigned at the address above.

Yours truly,

Patrick G. Duffy

PGD/sb
Enclosure
cc. All parties in EB-2022-0137 and EB-2021-0292

# Smart Metering Entity
# 2023 Cost and Variance Account Report

This 2023 Cost and Variance Report (the "2023 Report") provides an overview of the financial status of the Smart Metering Entity ("SME") as of December 31, 2023. This is the first year of the 2023 – 2027 revenue requirement and Smart Metering Charge ("SMC") as approved in the Ontario Energy Board's ("OEB's") September 8, 2022 Decision and Order on the 2023-2027 SMC Application (OEB file #EB-2022-0137).

In 2022, the SME received OEB approval to expand third party access ("TPA") to de-identified smart meter data beyond the OEB and the Independent Electricity System Operator (the "IESO"), to Canadian Governmental Entities. This OEB Decision and Order also required the SME to undertake an assessment of expanding TPA beyond currently approved parties (OEB file #EB-2021-0292). An update on the status of the SME's assessment is provided at Appendix A.

## 1. Operational Background

As set out in the *Electricity Act, 1998* – O.Reg. 393/07 the IESO is designated as the SME. The SME maintains and operates Ontario's centralized meter data management and repository ("MDM/R") and is licenced by the OEB.

The MDM/R is the province's central platform for smart meter data and processes all electricity consumption data that is used for residential and general service (<50kW) customers billing by Ontario's local distribution companies ("LDCs"). This central model avoids the need for the 56 LDCs served by the MDM/R to invest in duplicative, non-uniform infrastructure and ensures consistent, rigorous data processing regardless of the different metering technologies used by LDCs.

The MDM/R was built following the foundational principles of *Privacy by Design,* as established by the Information and Privacy Commissioner of Ontario, so that the data collected, stored and managed in the MDM/R complies with stringent industry protocols that ensure encrypted data transmitted over smart metering infrastructure is secure. The MDM/R also has a disaster recovery facility at a geographically separate location that will resume all MDM/R functions should a business interruption occur at the primary site.

The MDM/R has grown over time into one of the largest shared service and transactional systems in the world, reliably supporting LDCs' monthly billing of approximately 5.3 million smart meters. The MDM/R stores over 200 billion centralized records and adds 125 million records every day.

The services provided by the MDM/R are delivered by an operational service provider, a competitively procured vendor (IBM) who is responsible for the day-to-day operations and service level obligations to the LDCs (the "Operational Service Provider").

Other key services provided by the Operational Service Provider include:

- providing support and maintenance for the environment and licences required by the SME to operate software which supports the MDM/R,
- providing software licences, maintenance and support services for the IT service management platform used by the SME to serve LDCs, and
- providing support for the database technology platform on which the MDM/R DataMart, is built on.

The activities of the SME are funded through the revenue it collects through the SMC.[1]

More information about the provincial Smart Metering Initiative and the MDM/R is available on the IESO's SME website (http://www.ieso.ca/sector-participants/smart-metering-entity), the OEB website (https://www.oeb.ca), and the Ministry of Energy website (https://www.ontario.ca ).

## 2. 2023 Financials

### a) Financial Results Overview:

As of December 31, 2023, the SME achieved an operating surplus of $3.7 million, compared to a budgeted deficit of $0.6 million. As shown in Table 1 below, the $4.3 million variance is a result of lower than budgeted expenses, as further described in latter sections of this 2023 Report.

The 2023 operating surplus will be rebated to smart meter customers in accordance with the OEB's 2023-2027 SMC Decision and Order[2].

**Table 1: 2023 Revenues and Expenses Compared to 2023 Budget**

| **($ millions)** | **YTD December 2023** | | |
|---|---|---|---|
| | **Actual** | **Budget** | **Favourable/ (Unfavourable) Variance** |
| Total SME Revenue | 26.7 | 26.7 | - |
| Total SME Expenses | 23.0 | 27.3 | 4.3 |
| **Total SME Operating Surplus/(Deficit)** | **3.7** | **(0.6)** | **4.3** |

[1] The IESO has allocated OEB costs to the SME as recommended by the consultancy BDR in its report which was filed with the OEB as part of a prior IESO Revenue Requirement application: EB-2018-0143, Exhibit C-3-1, Attachment 1

[2] The 2003-2027 SMC Decision and Order approved returning to ratepayers any year-end balance in the ORBA exceeding $2 million, which results in a rebate to smart meter customers of $0.05 per meter or greater three months after the May 1 filing of the SME's annual report with the OEB.

## b) Total SME Revenue

In its 2023-2027 SMC Decision and Order, the OEB approved an SMC of $0.42 per meter per month for the period January 1, 2023 to December 31, 2027.[3] SME revenues collected in 2023 based on the approved charge were $26.7 million, which is aligned with the budgeted amount that was approved in the 2023-2027 SMC Decision and Order.

## c) Total SME Expenses

Table 2 details the SME's 2023 expenses and variances against its 2023 budget.

**Table 2: 2023 Expenses Compared to 2023 Budget**

| | | YTD December 2023 | | | |
|---|---|---|---|---|---|
| | **($ millions)** | **Actual** | **Budget** | **Favourable/ (Unfavourable) Variance** | **% Variance** |
| 1 | Compensation & Benefits | 4.2 | 4.8 | 0.6 | 12% |
| 2 | Professional & Consulting | 0.9 | 2.0 | 1.1 | 58% |
| 3 | Operating & Administration | 18.3 | 20.5 | 2.2 | 10% |
| 4 | Amortization | 0.0 | 0.0 | 0.0 | - |
| 5 | Net Interest | (0.4) | - | 0.4 | 100% |
| | **Total SME Operating Expenses** | 23.0 | 27.3 | 4.3 | **16%** |

Total SME expenses were $23.0 million in 2023, which is $4.3 million lower than budgeted. The following is a summary of the variance drivers:

1. Compensation & Benefits expenses were $4.2 million for the year, which represents a savings of $0.6 million compared to the budget. The primarily drivers of these savings are as follows:
    a. Savings of $0.3 million from a hiring delay of 1 FTE throughout the year and lower costs associated with staffing mix (i.e., regular vs temporary); partially offset by the impact from salary and benefit increases awarded through arbitration to the IESO's Society of United Professionals members.
    b. Lower than planned allocation of IESO support functions resulted in $0.2 million savings. The support functions represent resources leveraged by the SME from the IESO's mainstream business as required, primarily in the areas of finance, settlements, legal, regulatory, information technology, and human resources. This support work is resourced on a time and material basis and the costs of IESO resources utilized by the SME are charged to the SME.

[3] The 2023 – 2027 SMC Decision and Order was issued September 8, 2022, OEB file #EB-2022-0137.

c. The capital allocation of SME staff to the Net Metering Project resulted in $0.1 million savings in operating labour cost.

2. Professional & Consulting expenses were $0.9 million for the year, which represents a savings of $1.1 million compared to the budget. The primary drivers of these savings are as follows:
    a. Deferred start on certain MDM/R change requests and other projects leading to $0.8 million savings in contractor costs.
    b. Savings of $0.3 million primarily due to audit, external legal services and stakeholder engagement costs not being required for this specific period.

3. Operating & Administration expenses were $18.3 million for the year, which represents a savings of $2.2 million compared to the budget. The primary drivers of these savings are as follows:
    a. Spending was lower by $1.4 million as a result of a combination of deferred planned projects and upgrade change requests that were no longer in scope.
    b. Lower Oracle support and maintenance costs than budget by $0.4 million.
    c. Savings of $0.1 million attained through actual costs being lower than the amounts budgeted for the MDM/R DataMart operating costs.
    d. Other savings of $0.3 million due to reduced operating costs.

4. Amortization was overall aligned to budget.

5. Net Interest was $0.4 million in 2023, the result of investment income associated with the 2022 operating reserve balance.

## 3. SME Capital Expenses

Table 3 outlines the SME's 2023 capital expenses and variances against its 2023 budget.

**Table 3: 2023 Capital Expenses Compared to 2023 Budget**

| **($ millions)** | **YTD December 2023** | | | |
|---|---|---|---|---|
| | **Actual** | **Budget** | **Favourable/ (unfavourable) Variance** | **% Variance** |
| Meter Data Management and Repository (MDM/R) | 0.2 | 1.0 | 0.8 | **85%** |
| **Total SME Capital Expenses** | **0.2** | **1.0** | **0.8** | **85%** |

The 2023 SME capital expenses were $0.2 million, which is $0.8 million lower than budgeted, and was primarily driven by savings from utilizing internal resources for the Net Metering capital project, which added

the functionality to allow the LDCs to bill "net metered" customers on the basis of "Time of Use" (TOU), "Ultra Low Overnight" and "Tiered" rates through the MDM/R.

## 4. Service Level Credit Balance

The Service Level Credit balance was $0 at December 31, 2023, as there were no MDM/R operational incidents requiring payment by the Operating Service Provider.

## 5. Third Party Access Requests

Access to smart meter data by Canadian Governmental Entities ("CGEs") was officially launched by the SME on October 13, 2022, in response to the OEB's March 24, 2022 Decision and Order approving TPA[4]. To-date, market interest in SME data has been strong even with the narrow eligibility requirements and limited offer visibility (TPA is only advertised on the IESO's website). Since launch, 17 third party data requests for SME data have been received, six of which were fulfilled through either a custom report or with public data. An additional two requests from 2023 will be fulfilled provided the respective requestors execute the required data use agreement. Descriptions of each data request, and their status, are provided in Table 4.

**Table 4: SME Data Requests**

| | Requested By | TPA Request Summary | Eligible CGE's | Request Granted? | Resolution |
|---|---|---|---|---|---|
| **Fulfilled Data Requests (Custom)** | | | | | |
| 1 | Ivey Business School | Hourly Consumption data at 6-digit postal code level for all Residential, Small General Service (SGS) <50 kW and TOU, Tiered, Retailer categories. Intended Use: Retail Rate Design in a Decarbonizing Economy. This project intends to assess the equity and efficiency implications of the current approach to recovering the Global Adjustment (GA) from rate-regulated customers and to consider the implications of alternative rate recovery mechanisms on economic efficiency, equity and the incentives for households and small commercial businesses to invest in the electrification of various | Yes | Yes | Completed TPA Request with Cost Recovery. |

[4] Decision and Order on EB-2021-0292

| | | | | | |
|---|---|---|---|---|---|
| | | energy uses (i.e., space heating, electric vehicles, etc.). | | | |
| **Fulfilled Data Requests (Public Data)** | | | | | |
| 2 | CanmetENERGY Research Centre/ Natural Resources Canada | Needs data to help forecast load in residential buildings and needs the household hourly electricity load in Ontario for 2017-2019. | Yes | Yes | Fulfilled with Public Data from the IESO website. |
| 3 | Ivery Business School | Monthly Consumption data for Residential customers for 2000 | Yes | Yes | Fulfilled with Public Data from the IESO website |
| 4 | Staples Energy Distributed Resources | Forward Sortation Area ("FSA") level, Hourly Consumption data for all Residential, SGS<50 kW and TOU, Tiered, Retailer categories. | No | Yes | Fulfilled with Public Data from the IESO website |
| 5 | Teranet | FSA Hourly Consumption data for all Residential, SGS<50 kW and TOU, Tiered, Retailer category | No | Yes | Fulfilled with Public Data from the IESO website |
| 6 | University of Toronto | Consumption and premise count by postal code and DRC | Yes | Yes | Fulfilled with Public Data from the IESO website. |
| **Pending Data Requests** | | | | | |
| 7 | CanmetENERGY Research Centre/ Natural Resources Canada | Daily consumption (later revised to hourly) data for federally-owned residential housing units rented to military staff. | Yes | Pending | Request is still in progress. |
| 8 | McGill University | Various smart meter data to develop a smart residential charging system for electric vehicles via reinforcement learning. | Yes | Pending | Request is still in progress. |

| Unfulfilled Data Requests | | | | | |
|---|---|---|---|---|---|
| 9 | City of Ottawa | To support benchmarking program for large buildings >20,000sqft, identify areas of grid constraint, buildings/ neighbourhoods with higher electricity use that might be candidates for deep energy retrofits and/or district energy nodes, support the city's decarbonization goals, which often involves fuel switching. Hourly and monthly aggregated data also requested. | Yes | No | Not available Commercial & Industrial (C&I) data and suite meter and feeder information. |
| 10 | City of Windsor | Monthly Consumption data at 6 digits postal code in 'N'(Windsor Region) for Residential, SGS<50 kW and TOU, Tiered categories; Consumption data will be used to calculate Green House Gas ("GHG") emissions by sector (residential and small commercial) by postal code. Data will also be used for trending purposes. | Yes | No | Not available C&I data. |
| 11 | Corporation of the City of Temiskaming Shores | Full Environment and Social Governance study that includes C&I data. | Yes | No | Not available C&I data. |
| 12 | County of Wellington | Annual aggregations for Residential, SGS <50 kW, General Service ("GS") 50-2,999 kW, GS 3,000-4,999 kW, Sentinel Lighting, Street Lighting, Unmetered Scattered Load (Tier1, Tier2 and Retailers). | Yes | No | Not available C&I data. |
| 13 | Legislative Library Legislative Assembly of Ontario | Electricity consumption by residential building, highest peak demand for cooling and heating. Wanted peak cooling and heating separated out. | Yes | No | Requested data not available in the MDM/R. |
| 14 | Malaviya National Institute of Technology Jaipur | Hourly consumption data of every household. | No | No | Not an eligible party. |
| 15 | The Regional Municipality of Niagara | Ability to upload data of Niagara Region owned and leased buildings into RETScreen for analysis, and to be able to | Yes | No | SME data does not meet requestor's need. |

| | | | | | |
|---|---|---|---|---|---|
| | | upload to Energy Star Portfolio Manager for O.Reg 25/23 reporting. | | | |
| 16 | Student, Complex and Sustainable Urban Networks Lab Department of Civil, Materials, and Environmental Engineering, University of Illinois Chicago | Obtain hourly anonymized electricity usage by household from the area served by IESO. | No | No | Not an eligible party. |
| 17 | Individual (Welland) | Hourly data of their home. | No | No | Not an eligible party. |

Based on the TPA requests received, the Ivey Business School request fulfilled did not require an ethics review and the other requests fulfilled were done so involving data publicly available on IESO's website.

There have been no complaints received by the SME, from customers, LDCs or any other audiences in relation to the TPA program.

## 6. Third Party Access Variance Account

TPA revenues and expenses in 2023 were each $3,698, as shown in Table 5 below. These revenues were collected based on the fulfillment of the TPA request from Ivey Business School (as described in row 1 of Table 4).

**Table 5: Third Party Access Variance Account**

| **($)** | **Dec 31, 2023** |
|---|---|
| **Opening Balance (as of Jan 1)** | - |
| Third-Party Access Revenues | 3,698 |
| Third-Party Access Expenses | (3,698) |
| **Closing Balance (as of Dec 31)** | - |

## 7. SME Operating Reserve Balancing Account (ORBA)

As agreed to in settlement and approved in the 2023-2027 SMC Decision, the Balance Variance Account (BVA) has been replaced by the ORBA effective January 1, 2023. The closing balance in the BVA has been transferred to the ORBA and any 2023 year-end balance in the ORBA will be rebated to smart meter customers where the

balance exceeds the operating reserve of $2.0 million and would result in a rebate of $0.05 per meter or greater three months after the May 1 filing of the SME's annual cost and variance report with the OEB.

Table 6 below represents the ORBA balance as of December 31, 2023. Since the opening balance of the ORBA was $2.5 million, which was the balance of the BVA as of December 31st, 2022, a $0.5 million rebate to smart meter customers is required to maintain an ORBA ending balance at the $2 million approved level. This rebate is in addition to $3.7 million rebate of the 2023 operating surplus. In total, the expected rebate to smart meter customers is $4.2 million.

The resulting rebate to each smart meter customer is approximately $0.78 and calculated by dividing the rebate amount of $4.2 million by the 5,352,347 residential and small commercial customers listed in the OEB's 2022 yearbook of electricity distributors. This calculation methodology is consistent with that approved through the OEB's decision on the 2023-2027 SMC application.

**Table 6: SME ORBA Position**

| **($ millions)** | **Dec 31, 2023** | **Dec 31, 2024** | **Dec 31, 2025** | **Dec 31, 2026** | **Dec 31, 2027** |
|---|---|---|---|---|---|
| **Balance (as of Jan 1)** | **2.5** | | | | |
| SME Operating Surplus (Deficit) | 3.7 | | | | |
| Service Level Credits | - | | | | |
| Rebate to Smart Meter Customers of in-year operating surplus | (3.7) | | | | |
| Rebate to Smart Meter Customers to reduce ORBA balance to approved amount | (0.5) | | | | |
| **SME ORBA (as of Dec 31)** | **2.0** | | | | |

## 8. 2023 Financial Statements

**Table 7: SME Statement of Financial Position**

| (in $ millions) | Dec 31, 2022 | Dec 31, 2023 |
|---|---|---|
| **FINANCIAL ASSETS** | | |
| Cash | 10.4 | 5.4 |
| **TOTAL FINANCIAL ASSETS** | **10.4** | **5.4** |
| **LIABILITIES** | | |
| Accounts payable & accrued liabilities | 0.1 | 0.2 |
| Rebate to Smart Metering Customers | 7.8 | 4.2 |
| Debt | - | - |
| **TOTAL LIABILITIES** | **7.9** | **4.4** |
| **NET DEBT** | **2.5** | **1.0** |
| | | |
| **NON-FINANCIAL ASSETS** | | |
| Meter Data Management/Repository (MDM/R) | 5.5 | 2.2 |
| Short-term prepaid expenses | 0.8 | 0.8 |
| **TOTAL NON-FINANCIAL ASSETS** | **6.3** | **3.0** |
| | | |
| **TOTAL ACCUMULATED SURPLUS** | **8.8** | **4.0** |

**Table 8: 2023 SME Financial Report Reconciliation to IESO Draft Financial Statements**

| SME Financial Report Reconciliation to IESO Audited Financial Statements ($ millions) | |
|---|---|
| Smart metering charge - actual revenue | 26.7 |
| Smart metering charge - annual report | 22.0 |
| Amount to reconcile | 4.7 |
| Smart metering expenses - actual expenses | 23.0 |
| Smart metering expenses - annual report | 26.9 |
| Amount to reconcile | (3.9) |
| | |
| **Total amount to reconcile** | **0.8** |
| Add: accrued rebate in annual report | 4.2 |
| Less: amortization of MDM/R asset | (3.4) |
| **Total reconciled** | **0.8** |

**Table 9: 2023 SME Pro-Forma Financials**

| | YTD December 2023 | | |
|---|---|---|---|
| **($ millions)** | **Actual** | **Budget** | **Favourable/ (unfavourable) Variance** |
| SMC Fee | 26.7 | 26.7 | 0.0 |
| Third-Party Access Revenues | 0.0 | - | 0.0 |
| **Total SME Revenues** | 26.7 | 26.7 | 0.0 |
| Compensation & Benefits | 4.2 | 4.8 | 0.6 |
| Professional & Consulting | 0.8 | 2 | 1.2 |
| Operating & Administration | 18.4 | 20.5 | 2.1 |
| **Operating Expenses before TPA, Amortization and Interest** | 23.4 | 27.3 | 3.9 |
| Third-Party Access Expenses | 0.0 | | 0.0 |
| Amortization | 0.0 | 0.0 | 0.0 |
| Net Interest | (0.4) | - | 0.4 |
| **Total SME Operating Expenses** | 23.0 | 27.3 | 4.3 |
| **Total SME Operating Surplus/(Deficit)** | 3.7 | (0.6) | 4.3 |

## 9. Terms & Definitions

**"Balance Variance Account (BVA)"** has the meaning specified in Section 7.

**"Compensation & Benefits"** means the salary and benefits paid to employees.

"**IESO**" has the meaning specified in the Recitals.

**"LDC"** has the meaning specified in Section 1.

**"MDM/R"** has the meaning specified in Section 1.

"**MDM/R DataMart**" means a replica data store of the MDM/R that supports smart metering data analytics.

"**Net Metering Project**" means a new SME project based on an OEB Bulletin issued January 17, 2023 which was followed by a Ministry of Energy proposal (ERO number 019-652).

**"OEB"** has the meaning specified in the Recitals.

"**Operational Service Provider**" has the meaning specified in Section 1.

**"Operating & Administration"** means the costs associated with any administrative expenses.

"**Operating Reserve Balancing Account (ORBA)**" is an OEB approved Operating Reserve Balance Account to fund the SME's operations in the event of revenue shortfalls or unanticipated expenditures in 2023 and going forward.

**"Professional & Consulting"** means costs of any external service provider.

"**Service Level Credit Balance"** means the penalties that are charged to the Operational Service Provider if the Operational Service Provider fails to deliver on certain services. To ensure the optimal operation of the MDM/R, the Operational Service Provider must consistently meet all service level operating requirements for the MDM/R. In the event that a service level target is missed, the Operational Service Provider applies a service level credit.

**"Smart Metering Initiative"** has the meaning given to in the *Electricity Act, 1998***.**

**"SMC"** has the meaning specified in the Recitals.

**"SME"** has the meaning specified in the Recitals.

**"2023-2027 SMC Application"** refers to the IESO's application for the SME's 2023-2027 SMC, OEB file # EB-2022-0137.

**"2023-2027 SMC Decision and Order"** refers to the OEB's September 8, 2022 decision and order on the SME's 2023-2027 SMC, OEB file # EB-2022-0137.

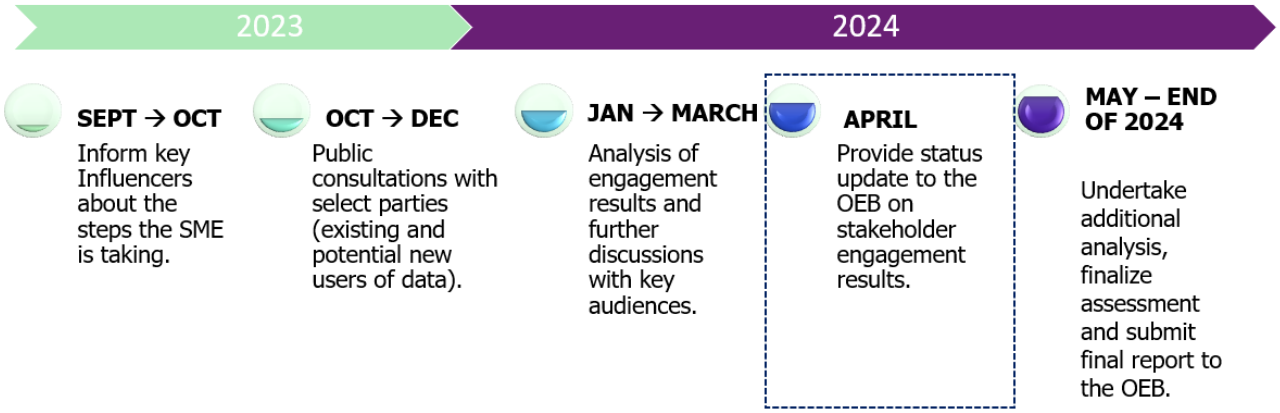
# Appendix A: Update on Status on Activities Undertaken in Support of Expanding Third Party Access

In 2022, the SME received OEB approval to expand access to de-identified smart meter data beyond the OEB and the IESO, to CGEs[5]. This OEB Decision and Order also required the SME to undertake an assessment of expanding TPA to SME data beyond currently approved parties and to report on its findings by no later than April 30, 2025 (as part of its 2024 Annual Cost Variance Report). The Decision also indicated that the SME should consider filing the results of its assessment earlier than the established deadline.

The SME has initiated its assessment in response to the OEB's decision. The SME's efforts have focused on stakeholder engagement, wherein the SME collected feedback from 125 participants during four separate stakeholder events – which included consultants, industry, Distributed Energy Resource/Demand Response/battery storage companies and generators – on the perceived value of gaining access to the SME data. Further information on the SME's engagement efforts are available on the IESO's website: IESO Third Party Access Stakeholder Engagement.

Appendix Figure 1 shows the steps in the SME's assessment workplan, and their associated timing.

**Appendix Figure 1: SME Third Party Access Assessment Workplan**




The results of the SME's engagement efforts suggest that various entities beyond CGEs have a keen interest in gaining access to SME data. Over the next several months, the SME will further test the concept of expanding third party access, using this information and the results of its stakeholder engagement to inform its report back to the OEB. The SME intends to file its report back before year-end 2024, to meet the OEB's preference that the results of its assessment be filed prior to the established deadline.

[5] Decision and Order on EB-2021-0292