

EXTERNAL



Smart Metering Entity (SME)

MDM/R Report

4th Quarter 2016

October to December

Issue 14.0 - January 31, 2017

REPORT

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1. Introduction

1.1 Purpose and Contents

The purpose of this report is to provide a quarterly update to the Ontario Energy Board on the ongoing operations of the Meter Data Management and Repository (MDM/R).

More information about the provincial Smart Metering Initiative and the MDM/R is available on the IESO/SME website (<http://www.smi-ieso.ca/>), the Ontario Energy Board website (www.ontarioenergyboard.ca/OEB/Industry), and the Ministry of Energy website (<http://www.mei.gov.on.ca/>).

Each section of this report provides updates as required by the Ontario Energy Board in connection with MDM/R operations and performance, service level attainment, initiatives and software testing, as well as risks and issues.

This report includes the following updates:

- MDM/R Operation and Processing Performance
- MDM/R Service Levels
- Key SME Activities
- Additional Risks and Issues, and
- Opportunities and Next Steps

2. MDM/R Operation and Processing Performance

2.1 MDM/R Performance

The MDM/R production environment remains stable and reliable, processing reads from over 4 million meters for 67 LDCs on a daily basis. The SME continues to respond to and address LDC support, service requests and issues in a timely manner.



67
LDCs



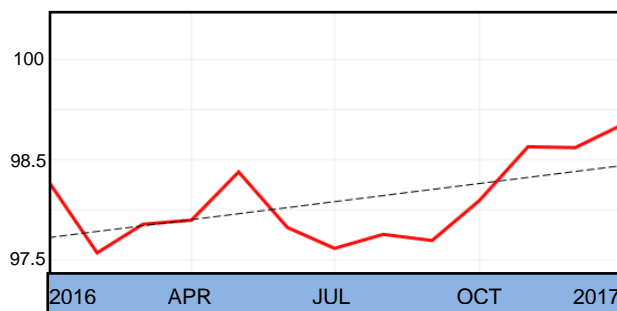
4,170,007
Smart Meters

In the fourth quarter of 2016, the MDM/R was operationally stable by **exceeding** service levels for 100% of meter reads, 100% of billing quantity requests, and 99.99% of master data updates.

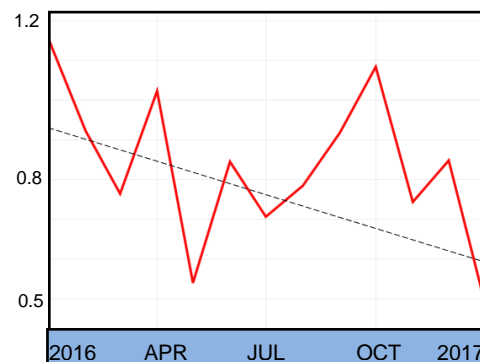
2.2 LDC Performance

The SME continues to produce monthly performance metrics reports and daily summarized operational data for each LDC through the MDM/R Service Desk tool. In the fourth quarter this dashboard was updated to include LDC specific enrolment compliance metrics for the additional data elements required by OEB order EB-2015-0297. An automated notification process was also developed to provide LDCs with a list of non-compliant Service Delivery Points during the first week of each month. The SME continues to encourage feedback and development suggestions from LDCs to provide more operational value and support for LDC business operations.

There was no significant change in the quality of LDC meter data during the fourth quarter. The number of successful billing responses increased slightly; however, the number of estimated intervals also increased in December. Overall in 2016, as per the graphs below, billing success has improved and the number of intervals estimated has dropped which would contribute to more accurate bills. The SME continues to monitor the MDM/R and work with LDC community to improve the quality of their data submissions.



Billing Success Rate (%)



Intervals Estimated (%)

2.3 4th Quarter Key SME Activities

SME Steering Committee

An SME Steering Committee meeting was held on November 22nd, 2016. LDCs are given the opportunity to provide feedback and suggestions to the SME during pre-scheduled SME Steering Committee meeting open calls. LDCs can also communicate feedback and suggestions through email. The next meeting and call is scheduled for January 27th, 2017.

LDC Training

On December 8th and 9th, 2016 the SME held two webinar sessions with LDCs to review the new Graphic User Interface (GUI) design changes that will be coming with the upgrade to Energy IP 7.7. These graphic improvements are expected to enhance the user experience with the MDM/R GUI.

Smart Metering Entity Licence

On November 24th, 2016 the OEB extended the Smart Metering Licence to December 31st, 2021.

MDM/R Data Mart Project

The SME has architected and developed the MDM/R Data Mart to improve the resiliency of the MDM/R and to address the growing volumes of Web Services Requests. At this point, the Data Mart will have no restrictions to the amount of data requested and will be available for 24/7 access.

Results from penetration testing revealed no critical issues with the DataMart solution; however, the SME did make a few software updates based on the feedback received. On December 13th, 2016 the SME held a webinar with LDCs to review the features and process for switching to the DataMart. LDCs are expected to enroll voluntarily, using a phased-in transition approach, to the new Data Mart Web Services Facility beginning in January 2017. The transition is expected to be non-disruptive from an application perspective.

Once transitioned, LDCs and their agents will be able to access and retrieve large amounts of data very efficiently. This facility continues to support new and evolving value-added data services.

SME Licence Order Working Group

The SME Licence Order Working Group has had several meetings to date, and a web page has been established for the posting of meeting materials:

<http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Working-Groups/Smart-Metering-Entity-SME-Licence-Order-Working-Group.aspx>

Communications Channel	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
Working Group Meetings	✓	✓	✓	✓	✓	cancelled	✓	✓	✓	✓	Jan 19
IESO Stakeholder Engagement Website		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IESO Stakeholder Advisory Committee			✓			✓		✓			
IESO Webinars			✓	✓	✓				✓		
IESO LDC Event							Sept 9				
EDA Website / eBlast		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EDA LDC Surveys		✓				✓					
SSC Meetings and LDC Open Calls	✓			✓			✓		✓		
MDM/R Technical Panel Meetings					✓			✓			
GO LIVE Communication											

Work stream 1: Additional Data Collection

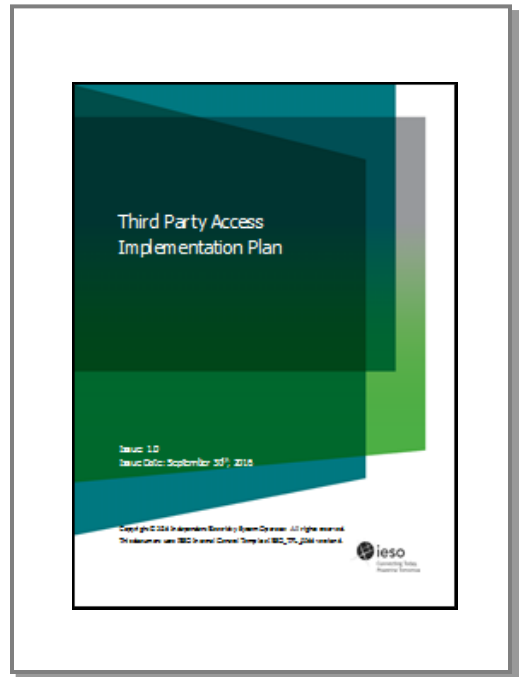
Following a privacy expert analysis, and with endorsement from the Office of the Privacy Commissioner of Ontario (IPC), the IESO implemented the following additional data collection process:

- 6 character Postal Code with any unique dwelling postal codes generalized as postal code W8W8W8
- Distributor Rate Class
- Commodity Rate Class
- Occupancy Change date, generalized to the year

On October 1st, 2016 the code to collect the additional data elements in the MDM/R was promoted to the MDM/R Production environment. LDCs began to synchronize and send the new data elements in October. By the end of 2016 more than 95% of the Active SDPs in the MDM/R were compliant with OEB order EB-2015-0297.

Work Stream 2: Third Party Access Implementation Plan

The SME developed an implementation plan for Third Party Access, with costing implications, as required in the OEB order. This document was submitted along with the SME's Licence Renewal application on September 30th, 2016. The Plan is guided by best practices in other industries, input from various stakeholders, and recommendations from the privacy consultant and the IPC who will continue to be actively engaged in the next phases of the plan development and implementation in 2017/2018 to ensure privacy compliance.



2.4 SME Achievements for 2016

The SME had a successful and productive year through Technical Enhancements, LDC Mergers, LDC Self-Serve and Service Desk Enhancements, Training and Big Data Initiatives. Specific accomplishments include:

MDM/R Data Archiving

On January 10th, 2016 the MDM/R implemented a data archiving procedure. Archiving is now performed every 6 months establishing an enduring data retention period of 27 months (minimum) to 33 months (maximum).

MDM/R Service Desk tool Enhancements

Deployment and continual service improvement of a performance metrics dashboard allowing LDCs to view the overall health and quality of their daily data submissions, as well as other operational interactions, such as OEB order EB-2015-0297 compliance, with the MDM/R.

LDC Mergers

The SME successfully performed 3 utility mergers in 2016:

- Cambridge North Dumfries Hydro with Brant County Power
- Hydro One with Haldimand County Hydro Inc., and
- Hydro One with Woodstock Hydro Services Inc.

Additional LDC Test Environments

To support the growing need for LDC Customer Information System CIS and merger activities the SME built a new test environment. The SME also utilizes these test environments to support future system upgrades and for testing the functionality of new software releases.

Province Wide LDC Event

On September 9th, 2016 the SME held an event for LDCs at the International Centre in Mississauga. This event hosted over 50 people with 22 LDCs represented. The event provided updates on current SME projects and activities, as well as future initiatives and opportunities for the MDM/R, Data Mart, and third party access.

MDM/R Annual CSAE3416 Audit

The Auditors issued the final audit report on November 15th, 2016 and the result of the audit marked the 7th consecutive year of a “no qualifications” audit.

MDM/R Data Mart Project

In Q4 2016, the SME completed the development and deployment of the MDM/R DataMart. At this point, the DataMart has no restrictions to the amount of data that can be requested and is available for 24/7 access. This facility will also be used to support new and evolving value-added data services.

Smart Metering Entity Licence

On November 24th, 2016 the OEB extended the Smart Metering Licence to December 31st, 2021.

LDC Training

Numerous Training courses were held along with several webinars throughout the year to keep the LDC community informed and up-to-date with current SME MDM/R, and DataMart initiatives.

3. MDM/R Service Levels

The Service Level Performance Chart presents two summary levels:

I. Critical Service Level Summary,

The Critical Service Level Summary section includes processing metrics for Automatic Meter Read Processing, Billing Quantity Response Processing, Automatic MMD Incremental Synchronization Processing, MDM/R Graphical User Interface, Meter Read Retrieval Web Services, Reporting, Vendor Service Desk Incident Response, and Vendor Service Desk Service Requests.

II. Non-Critical Service Level Summary

The Non-Critical Service Level Summary section includes processing metrics for Meter Read Retrieval Web Services, MDM/R Availability, and Service Requests. The table also includes a Service Level breakdown for each month along with a quarterly summary¹.

Critical Service Level Summary		Oct-2016	Nov-2016	Dec-2016	4th Quarter
Automatic Meter Read Processing	Intervals Loaded	3,216,425,404	3,119,099,882	3,211,686,613	9,547,211,899
	Intervals Loaded on Time	3,216,425,404	3,119,099,882	3,211,686,613	9,547,211,899
	% Intervals Loaded on Time	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in accumulated delay >240 minutes ²	0	0	0	0
Automatic Billing Quantity Processing	BQ Requests	3,862,909	5,872,828	4,235,433	13,971,170
	BQ Requests Fulfilled on Time	3,862,909	5,872,828	4,235,365	13,971,102
	% Requests Fulfilled on Time	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in accumulated delay >240 minutes ²	0	0	0	0
Automatic MMD Incremental Synchronization Processing	Data Elements Requested	2,852,518	12,284,319	9,166,732	24,303,569
	Data Elements Loaded on Time	2,852,518	12,284,319	9,164,972	24,301,809
	% Data Elements Loaded on Time	100.00%	100.00%	99.98%	99.99%
	Number of incidents resulting in Data Elements loaded outside of agreed Service Level target ²	0	0	0	0
MDM/R Graphical User Interface	Availability	100.00%	99.99%	99.98%	99.99%
	Number of incidents resulting in MDM/R Graphical User Interface availability outside of agreed Service Level target ²	0	0	0	0
Meter Read Retrieval Web Services	Availability	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in Meter Read Retrieval Web Services availability outside of agreed Service Level target	0	0	0	0
Reporting	Percentage completed on time	100.00%	99.99%	99.99%	100.00%
	Number of incidents resulting in Reporting percentage completion outside of agreed Service Level target	0	0	0	0
Vendor Service Desk Incident Response	Response Time	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in Vendor Service Desk Incident Response Time outside of agreed Service Level target	0	0	0	0
Vendor Service Desk Service Requests	Resolution Time	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in Vendor Service Desk Request resolution time outside of agreed Service Level target	0	0	0	0

¹ Percentages are rounded to the second decimal place for each metric.

Non-Critical Service Level Summary		Oct-2016	Nov-2016	Dec-2016	4th Quarter
Meter Read Retrieval Web Services	Response Time	99.97%	99.92%	99.97%	99.95%
	Number of incidents resulting in Meter Read Retrieval Web Services response time outside of agreed Service Level target	0	0	0	0
MDM/R Availability	Availability	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in MDM/R Availability outside of agreed Service Level target	0	0	0	0
Service Requests	Resolution Time	99.12%	100.00%	100.00%	99.71%
	Number of incidents resulting in Service Requests resolution time outside of agreed Service Level target	0	0	0	0

4. Additional Risks and Issues

There are no additional risks or issues to report.

5. Opportunities and Next Steps

Key Technology Upgrades

The SME is upgrading the MDM/R to eMeter's EnergyIP software version 7.7 to maintain software support and to ensure MDM/R operational stability. SME testing is now complete, and the new version is expected to be deployed to the Sandbox environment for LDC testing and verification. The upgrade is expected to have minimal impact on the LDC community, and is still on track to be deployed in the MDM/R Production environment by the end of Q1 2017. Once the deployment of 7.7 is complete, the SME will develop a project plan for the next MDM/R software upgrade.

Net Metering

The Net Metering/Self-Consumption Advisory Working Group was established in July 2015, and the SME remains engaged in the design and implementation consultation process. . The SME provided input into a high level cost benefit analysis, which included assumptions for using the MDM/R to collect Net Metering data for the province. The SME also reiterated the importance of ensuring a comprehensive and holistic data collection process to support appropriate performance management and business insights, as the initiative gets rolled out. According to the Ministry, this project is expected to ramp up in 2017 with program completion currently targeted for 2018.

EV Overnight Charging

The SME is continuing to support and provide input to the Ministry of Energy on the EV overnight charging program, as outlined in the Climate Change Action Plan. There are no further updates at this time on the program implementation details.