

EXTERNAL

REPORT



Smart Metering Entity (SME)

MDM/R Report

1st Quarter 2016

January to March

Issue 11.0 - April 29, 2016

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1. Introduction

1.1 Purpose

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). This report includes the following updates:

- MDM/R Operation and Processing Performance
- MDM/R Service Levels for both Critical and Non-Critical Services as set out in Appendix A of the “MDM/R Terms of Service”
- Initiatives and Software Testing
- Additional Risks and Issues, and
- Roles and Responsibilities of the SME as set out in Article 2.2 of the “Smart Metering Agreement for Distributors”

1.2 How to Use this Document

This report presents information and status updates on MDM/R operation and processing performance (in Section 2), MDM/R Service Levels (in Section 3), and Initiatives and Software Testing (in Section 4). The report focuses on quarterly updates for the MDM/R including updates on the Roles and Responsibilities of the SME through the end of the indicated month. More information about the provincial Smart Metering Initiative and the MDM/R is available on the websites of the IESO/SME website (<http://www.smi-ieso.ca/>), the Ontario Energy Board (www.ontarioenergyboard.ca/OEB/Industry) and the Ministry of Energy (<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.

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 69 LDCs¹ on a daily basis. The SME continues to respond to and address LDC support, service requests and issues in a timely manner.



**69
LDCs**

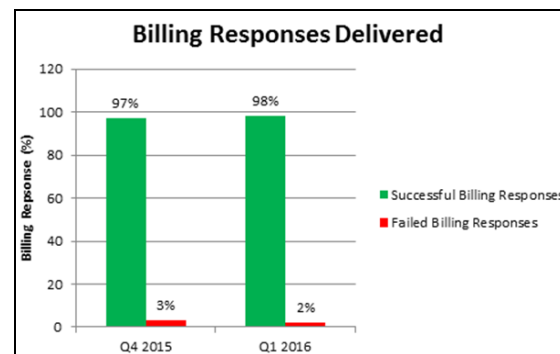
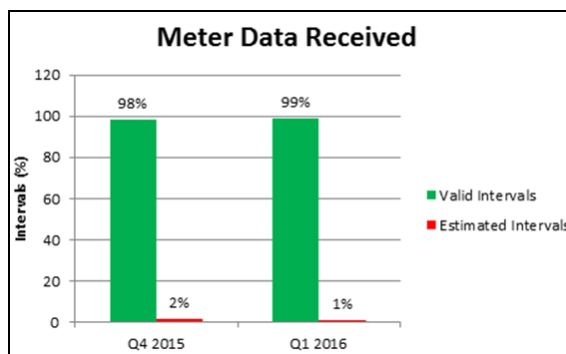


**4,145,718
Smart Meters**

In the first quarter of 2016, the MDM/R was operationally stable **meeting or exceeding** service levels for 99.86% of meter reads, 100.00% of billing quantity requests, and 100.00% of master data updates.

2.2 LDC Performance

The SME continues to publish monthly Performance Metrics reports for each LDC. On March 22nd, 2016 the SME introduced a new interactive daily performance metrics dashboard through the MDM/R Service desk tool. The Performance Metrics report and dashboard provide each LDC with information related to their organization’s meter read, synchronization, and billing performance. The graphs below provide insight into the improvement of LDC Meter Data and Billing Response data between Q4 2015 and Q1 2016. These metrics have a direct impact on the quality of data used to bill residential customers. In the first Quarter, only 1% of the Meter data received was estimated and only 2% of all billing responses failed due to underlying data issues. The SME continues to work with LDCs to improve their Master Data submissions.



¹ This number has been updated to reflect the amalgamation of Cambridge North Dumfries Hydro and Brant County Power on January 17, 2016.

2.3 LDC Training

During the first quarter, the SME delivered two webinars regarding Meter Read Data Archiving (section 2.5 below).

For the first time, on January 13th and 14th 2016, the SME delivered its MDM/R Basic and Advanced Graphic User Interface (GUI) courses virtually using web conferencing software. Virtual classrooms allow the SME to continue to offer training even during periods of low enrolment. Basic and Advanced GUI training was also offered live in Kingston on March 22nd and 23rd.

2.4 Other Activities

SME Steering Committee

SME Steering Committee meetings were held on January 19th and March 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 call is scheduled for June 21, 2016.

SME Licence Order Working Group

The Smart Metering Entity (SME) Licence Order Working Group was initiated to respond to the Ontario Energy Board's (OEB) January 26, 2016 Order (File Number EB-2015-0297 – Licence Renewal and LDC Agreement – FINAL Order). The Order extended the SME's licence and the SME/LDC Agreement to December 31, 2016 and requires the SME to file a plan to implement the following details with its next licence renewal application:

“Effective January 1, 2017, the SME shall collect the following information associated with each meter (modified where necessary to sufficiently render it non-personal information): a. The postal code; b. The distributor rate class; c. The commodity rate class; d. Occupant change data. The next SME licence application (Fall 2016) will also be required to address the Implementation Plan with respect to third party access to this enhanced SME data, including an assessment of the cost implications.”

The Working Group consists of 13 Local Distribution Companies and Observers (including Ontario Energy Board, Ministry of Energy, Electricity Distributors Association, Enbridge and Union Gas), with the Information and Privacy Commissioner (IPC) also closely involved in the project in a consultative capacity.

The SME Licence Order Working Group has had three 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>

At the advice of the IPC, the IESO has retained a privacy consultant to provide support with risk analysis for re-identification of individuals within the smart metering data being collected. This analysis will be used as a basis for the collection of the data in a manner that renders it non-personal. The initial phase of this work will help the IESO with the development of a conceptual re-identification risk determination, which will result in a report expected by end of May. Additional work may be required, to validate the first phase results using actual data sets.

LDC Mergers

The SME successfully merged Brant County Power into Cambridge North Dumfries Hydro on January 17th, 2016. The SME continues to provide full support to Hydro One and their two mergers planned with Haldimand County Hydro Inc. and Woodstock Hydro Services Inc. planned for implementation by September 1st, 2016.

Additional LDC Test Environments

The SME has experienced a higher demand for test environments in the last 24 months, partially driven by the Mergers & Acquisitions activities and the extended and unique test periods associated with those activities. In addition, LDCs who upgrade their Customer Information Systems (CIS), also require extended periods of testing in an MDM/R test environment. Furthermore, the SME requires its test environments to support future major system upgrades and for testing the functionality of new releases of software. The SME will invest in building new test environments for the use of LDCs and the SME to support the growing needs for test environments.

MDM/R Reports

The SME continues to enhance the ongoing operational MDM/R reports based on feedback received from the LDC community. LDCs are encouraged to propose and submit opportunities for other changes or improvements which can be done through their Service Desk agent and the MDM/R Change Management process. Examples of recent improvements include:

- The consolidation of two Data Collection reports into one to simplify processing for LDCs.
- The enhancement of two billing reports to reduce the number of redundant records returned in the detail and summary reports.

2.5 Q1 Key Accomplishments

The SME had a successful and productive first quarter through Technical Enhancements, LDC Mergers, LDC Self-Serve and Reporting 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 will be performed every 6 months establishing an enduring data retention period of 27 months (minimum) to 33 months (maximum). LDCs that require access to data older than this time period can make a request through the MDM/R Service Desk tool.

MDM/R Service Desk tool Enhancements

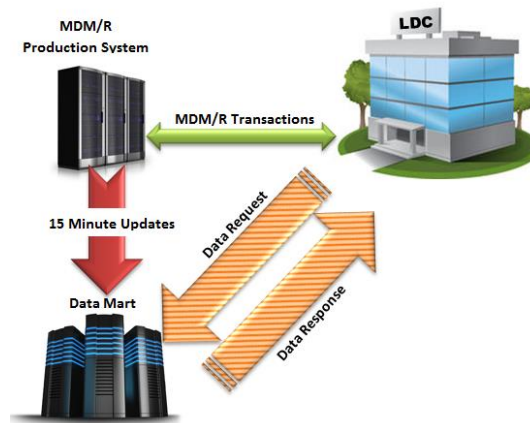
Deployment of a performance metrics dashboard allowing LDCs to view the overall health and quality of their daily data submissions, as well as other operational interactions with the MDM/R.

LDC Mergers

The SME successfully merged Brant County Power into Cambridge North Dumfries Hydro on January 17th, 2016. The merge carried through as planned, without any issues for the MDM/R or the LDCs.

Data Mart

In the first quarter the SME launched its pilot of the MDM/R Data Mart with a select number of LDCs. The MDM/R Data Mart allows LDCs to make large volume data access requests through existing access methods without impacting the operation of the MDM/R Production system. More information on this initiative can be found in Section 4 below.



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 summary².

² Percentages are rounded to the second decimal place for each metric.

Critical Service Level Summary		Jan-2016	Feb-2016	Mar-2016	1st Quarter
Automatic Meter Read Processing	Intervals Loaded	3,199,556,810	2,985,283,186	3,192,474,060	9,377,314,056
	Intervals Loaded on Time	3,186,515,189	2,985,283,186	3,192,474,060	9,364,272,435
	% Intervals Loaded on Time	99.59%	100.00%	100.00%	99.86%
	Number of incidents resulting in accumulated delay >240 minutes ²	0	0	0	0
Automatic Billing Quantity Processing	BQ Requests	6,356,301	4,010,496	3,813,730	14,180,527
	BQ Requests Fulfilled on Time	6,356,301	4,010,496	3,813,730	14,180,527
	% 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
Automatic MMD Incremental Synchronization Processing	Data Elements Requested	2,677,055	3,219,955	1,781,046	7,678,056
	Data Elements Loaded on Time	2,677,055	3,219,955	1,781,046	7,678,056
	% Data Elements Loaded on Time	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in Data Elements loaded outside of agreed Service Level target ²	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
Meter Read Retrieval Web Services	Availability	99.99%	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
Reporting	Percentage completed on time	99.99%	100.00%	99.99%	100.00%
	Number of incidents resulting in Reporting percentage completion outside of agreed Service Level target	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
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

Non-Critical Service Level Summary		Jan-2016	Feb-2016	Mar-2016	1st Quarter
Meter Read Retrieval Web Services	Response Time	99.88%	98.98%	99.94%	99.60%
	Number of incidents resulting in Meter Read Retrieval Web Services response time outside of agreed Service Level target	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
Service Requests	Resolution Time	100.00%	100.00%	100.00%	100.00%
	Number of incidents resulting in Service Requests resolution time outside of agreed Service Level target	0	0		0

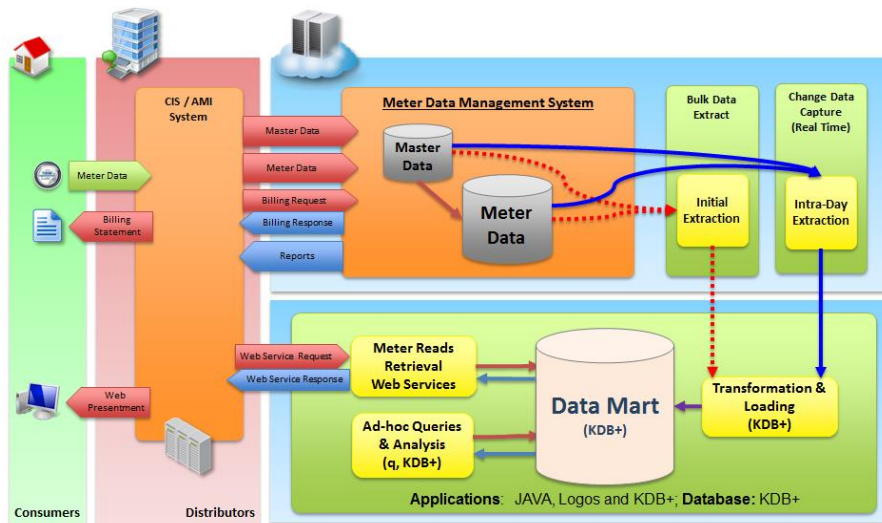
4. Initiatives and Software Testing

MDM/R Data Mart and Web Services Facility 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 and will be available for 24/7 access.

In Q1 2016, the SME initiated a pilot project with 5 LDCs to test the new facility and provide feedback to the SME. The transition of LDCs to the new Data Mart Web Services Facility is expected to be non-disruptive from an application perspective; however, it will require the setup of new IPs and DNS names as previously completed under the MDM/R Refresh Project. Following the successful completion of the pilot phase, the SME will communicate a detailed transition plan to all LDCs, including preparation for the connectivity of the remaining LDCs, in Q2 2016.

Once LDCs and their agents transition to this new Web Services Facility they will be able to access and retrieve large amounts of data in minutes and seconds rather than hours or days. This facility has also been designed to support new and evolving value-added data services.



5. Additional Risks and Issues

There are no additional risks or issues to report.

6. Opportunities and Next Steps

Key Technology Upgrades

The SME continually evaluates the Meter Data Management Repository (MDM/R) application software for operational improvements and upgrades in order to provide the most optimal solution to Local Distribution Companies (LDCs) in the province of Ontario. The SME is performing a detailed upgrade assessment to determine what options are available, as support for the current version of software is nearing end of life.

Net Metering

The Net Metering/Self-Consumption Advisory Working Group was established in July 2015 and the SME is actively participating in order to provide feedback for the following:

- Recommendations on program design and implementation considerations associated with the policy proposal.
- Guidance on the engagement plan and materials.
- SME responsibility for the work of a technical sub-committee.

The transition to this new Net Metering Program is being targeted by late 2017 or early 2018.