

REPORT



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Smart Metering Entity (SME) MDM/R Report 1st Quarter 2017

January to March

Issue 15.0 - April 28, 2017

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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.ieso.ca/sector-participants/smart-metering-entity>), 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
- LDC Compliance with OEB Order EB 2015-0297
- Additional Risks and Issues, and
- Opportunities and Next Steps

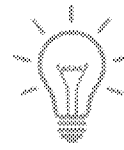
Each section of this report provides updates as required by the Ontario Energy Board in connection with MDM/R operations and performance, service level attainment, initiatives and software testing, as well as risks and issues.

NEW: This quarterly report includes a new topic, as requested by the OEB, on LDC compliance with the OEB Order EB 2015-0297 (shown in section 4). Moving forward, this new section will be updated on a quarterly basis.

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



4,177,765
Smart Meters

In the first quarter of 2017, the MDM/R was operationally stable by **exceeding** service levels for 98.97% of meter reads, 100% of billing quantity requests, and 100% 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 first quarter the dashboard was updated to provide more information on LDC missing data and meter activities. The SME continues to encourage feedback and development suggestions from LDCs to provide more operational value and support for LDC business operations.

LDC meter data submissions improved during the first quarter with the amount of duplicate data dropping by over 4%. Duplicate data received by LDCs increases unnecessary processing load on the MDM/R. Even though re-submission of data is considered a part of daily operations, the SME expects that LDCs will re-submit data for less than 2% of their total meter population. The SME continues to monitor the MDM/R and work with the LDC community to improve the quality of their data submissions.

2.3 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		Jan-2017	Feb-2017	Mar-2017	1st Quarter
Automatic Meter Read Processing	Intervals Loaded	3,216,816,607	2,907,931,121	3,216,074,895	9,340,822,623
	Intervals Loaded on Time	3,216,816,607	2,907,931,121	3,119,809,551	9,244,557,279
	% Intervals Loaded on Time	100.00%	100.00%	97.01%	98.97%
	Number of incidents resulting in accumulated delay >240 minutes ²	0	0	0	0
Automatic Billing Quantity Processing	BQ Requests	6,384,864	4,537,929	4,818,256	15,741,049
	BQ Requests Fulfilled on Time	6,384,864	4,537,929	4,818,256	15,741,049
	% 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	3,679,824	3,702,957	2,166,768	9,549,549
	Data Elements Loaded on Time	3,679,824	3,702,957	2,166,768	9,549,549
	% 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	0
MDM/R Graphical User Interface	Availability	99.98%	99.99%	99.98%	99.98%
	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	99.63%	100.00%	100.00%	99.88%
	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

Non-Critical Service Level Summary		Jan-2017	Feb-2017	Mar-2017	1st Quarter
Meter Read Retrieval Web Services	Response Time	99.98%	99.97%	99.97%	99.97%
	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	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	0

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

2.4 1st Quarter Key SME Activities

SME Steering Committee

Two SME Steering Committee meetings were held during the first quarter; the first on January 27th, and the second on March 28th. 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 June 20th, 2017.

LDC Training

The SME provided several webinars and training sessions throughout the first quarter. On January 11th and January 12th the SME presented webinar training on the upgraded Energy IP 7.7 GUI. Two more webinars were held to describe the updated Crossed Meter Data Correction procedure on February 7th and 9th. Basic MDM/R GUI Training was provided on March 29th and Advanced MDM/R GUI workshops were held on-site for Toronto Hydro (as mentioned below).

MDM/R EnergyIP 7.7 upgrade

On March 19th the SME successfully upgraded the MDM/R to eMeter's EnergyIP software version 7.7. This upgrade extends software support and ensures MDM/R operational stability. The upgrade had minimal impact on the LDC community. The SME is now working to develop a project plan for the next MDM/R major software upgrade.

MDM/R DataMart

In the first quarter, 10 LDCs have enrolled into the MDM/R DataMart to take advantage of the 24/7 access to data. LDCs are expected to enroll voluntarily throughout the year, and transitions are 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 with no restrictions on the amount of data being requested.

This facility continues to support new and evolving value-added data services including the delivery of several custom aggregated reports to assist LDCs with business operations.

Waterloo North Hydro CIS Cutover

The SME worked with Waterloo North Hydro to ensure a smooth transition during the cutover to their new CIS system over the March 10th weekend. The CIS transition was successfully completed without incident.

Toronto Hydro MDM/R Enrolment

On February 15, 2017 the SME met with Toronto Hydro to officially kick off Toronto Hydro's integration with the MDM/R. By February 24th the SME had successfully processed their new organization identifier and completed setup of the Toronto Hydro MDM/R sandbox environment. MDM/R Advanced GUI training was provided on-site at Toronto Hydro on March 22nd and March 23rd, and a Q&A workshop on the topics of MDM/R Synchronization and MDM/R Meter Data processing was held via WebEx on March 29th. Project plans are still being refined with an expected enrolment date of September 30th, 2017.

SME Licence Order Working Group

The SME Licence Renewal Order Implementation Working Group was initiated in March 2016 to collaborate with LDCs and other interested parties on the development of a plan to implement the collection of enhanced data in the Meter Data Management/Repository (MDM/R) in a manner compliant with applicable legislation and privacy requirements. The project was initiated in response to the Ontario

Energy Board's decision of January 26, 2016 requesting the implementation plan be completed by January 1, 2017. See OEB Order EB-2016-0284.

Workstream I: 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 to a default postal code of W8W8W8
- Distributor Rate Class
- Commodity Rate Class
- Occupancy Change date, generalized to the year

Compliance with the OEB Order is detailed in section 3 of this report, with all LDCs having sent most of the additional information to the IESO.

With the data collection phase completed, the February 24, 2017 meeting marked the closeout of the SME Licence Order Working Group. The IESO would like to take the opportunity once again to thank all members, observers and contributors to the Working Group for all the effort and accomplishments in 2016.

The IESO is now turning its attention to the development of the plan for Third Party Access to the enhanced MDM/R data.

Workstream II: Third Party Access Implementation Plan

In its role as the Smart Metering Entity (SME) for Ontario, the IESO has launched a consulting initiative to seek input from interested parties for the development of an implementation plan to provide third party access to the meter data available in the province's Meter Data Management/Repository (MDM/R) as per 2016 OEB Orders to the SME.

A Data Strategy Advisory Council will be formed as a committee of representatives within Ontario's electricity sector and other sectors as applicable. Representatives will be appointed by the IESO to provide input into the review and development of products and processes for the implementation of third party access to the data with the province's Meter Data Management/Repository (MDM/R).

The draft Terms of Reference and a call for nominations by May 15th 2017 is now available on the IESO website at: <http://ieso.ca/sector-participants/smart-metering-entity/data-strategy-advisory-council>

Questions regarding the Data Strategy Advisory Council or its membership can be directed to engagement@ieso.ca.

Furthermore, the IESO will launch a Stakeholder Engagement initiative to broaden the input received by the IESO on the development of Third Party Access to the MDM/R enhanced data. Details will be posted soon, and the IESO encourages all parties in Ontario's electricity sector and other sectors with an interest to participate in this engagement.

The IESO will continue to work closely with the Office of Information and Privacy Commissioner of Ontario (IPC) and the privacy consultant (Privacy Analytics Inc.) to ensure privacy compliance as the Third Party Access Implementation Plan gets developed and rolled out.

The upcoming schedule of activities for the Data Strategy Advisory Council is below:

Date	Activities
April 20, 2017	Call for Nomination for Membership • Communication • Data Strategy Advisory Council - Draft Terms of Reference for review and comment
May 15, 2017	Deadline for: • Call for Nominations • Comments on draft Terms of Reference
May / June 2017	IESO to announce the Advisory Council membership
June 2017	First meeting of Advisory Council

3. LDC Compliance with OEB Order EB 2015-0297

Compliance with OEB Order EB 2015-0297 is very high. At the time of this report, all LDCs have completed the processes for submission of the additional data to the MDM/R with only a small percentage of the additional data fields outstanding.

Overall, the percentage of Service Delivery Points (SDPs) with a Commodity Rate Class is at 99.49%, Distributor Rate Class is at 99.52%, and the number of SDPs with a valid Postal Code is at 99.71%.

The SME continues to work with the LDCs to ensure completeness of the new data fields added into the MDM/R (currently addressing the small number of LDCs with a high percentage of SDPs assigned with the default W8W8W8² postal code). The SME will continue to support LDCs as they approach full compliance status with the OEB Order.

² W8W8W8 denotes a generic postal code classification that includes unassigned postal codes (upcoming new home divisions) and unique dwelling postal codes flagged by LDCs.

MDM/R Data Compliance by each LDC with OEB Order for Required Field As of 2017-04-15					SDP's Compliant with OEB Order < 70%	
					SDP's Compliant with OEB Order >= 70% and < 95 %	
					SDP's Compliant with OEB Order >= 95%	
LDC NAME	ACTIVE SDP COUNT	% of SDP's with Distributor Rate Class	% of SDP's with Commodity Rate Class	% of SDP's with Valid Postal Code	% of SDP's with Default Postal Code (W8W8W8)	% of SDP's with Occupant Change Recorded
Hydro One	1,174,517	100.00%	100.00%	100.00%	2.08%	2.09%
Powerstream	343,399	99.96%	99.97%	100.00%	0.14%	2.67%
Hydro Ottawa	325,876	100.00%	99.98%	100.00%	0.03%	3.12%
Horizon Utilities Corporation	244,841	95.61%	95.41%	95.86%	3.17%	3.48%
Energysource	202,038	99.70%	99.51%	99.99%	0.27%	2.22%
Hydro One Brampton	156,589	99.98%	99.98%	100.00%	0.86%	2.05%
London Hydro	154,275	99.99%	99.99%	99.99%	0.02%	3.17%
Veridian Connections	118,680	99.86%	99.86%	99.86%	0.37%	2.00%
Kitchener-Wilmot Hydro	94,085	99.77%	99.77%	100.00%	0.00%	2.88%
Enwin Utilities	88,467	100.00%	100.00%	100.00%	0.01%	3.15%
Oakville Hydro Electricity Distribution Inc.	69,513	100.00%	100.00%	100.00%	0.16%	3.26%
Burlington Hydro Electric Inc.	65,804	100.00%	100.00%	100.00%	0.51%	2.46%
Energy+ Inc.	64,054	100.00%	100.00%	100.00%	0.00%	2.31%
Oshawa Power and Utilities Corporation	56,708	99.93%	99.93%	99.93%	0.16%	2.93%
Waterloo North Hydro	56,635	98.29%	98.30%	100.00%	0.04%	2.82%
Guelph Hydro Electric Systems Inc.	54,269	100.00%	100.00%	100.00%	1.14%	3.38%
Niagara Peninsula Energy Inc.	53,587	100.00%	100.00%	100.00%	0.01%	3.01%
Thunder Bay Hydro Electricity Distribution	50,512	90.11%	90.10%	99.41%	26.41%	2.53%
Greater Sudbury Hydro Inc.	47,514	100.00%	100.00%	100.00%	0.05%	2.58%
Whitby Hydro Electric Commission	42,066	100.00%	100.00%	100.00%	0.44%	1.79%
Entegris Power Lines	40,711	100.00%	100.00%	100.00%	0.01%	2.50%
Canadian Niagara Power	40,407	99.96%	99.96%	99.96%	0.33%	2.37%
Brantford Power Inc.	39,161	99.54%	99.55%	99.80%	0.00%	3.42%
Peterborough Utilities	36,471	99.84%	99.45%	99.85%	0.00%	2.70%
Bluewater Power Distribution Corporation	36,239	100.00%	100.00%	100.00%	0.34%	2.91%
Milton Hydro Distribution	35,286	99.86%	99.86%	99.87%	0.24%	2.48%
PUC Distribution	33,744	100.00%	100.00%	100.00%	0.60%	2.06%
Newmarket Hydro	31,118	100.00%	100.00%	100.00%	2.09%	2.21%
Essex Power	29,305	99.89%	99.89%	99.89%	0.08%	2.00%
Utilities Kingston	27,489	100.00%	100.00%	100.00%	0.52%	1.88%
North Bay Hydro	23,711	99.37%	99.03%	99.44%	0.00%	3.10%
Westario Power Inc.	23,073	100.00%	100.00%	100.00%	0.53%	2.79%
Welland Hydro-Electric System Corp.	22,823	100.00%	100.00%	100.00%	0.05%	2.66%
Halton Hills Hydro Inc.	21,892	100.00%	100.00%	100.00%	0.37%	2.06%
Festival Hydro Inc.	20,621	99.95%	99.98%	99.98%	4.11%	3.47%
Erie Thames Powerlines	18,706	99.99%	99.99%	99.99%	11.15%	2.41%
St. Thomas Energy Inc.	17,341	100.00%	100.00%	100.00%	0.00%	2.77%
Collus PowerStream	16,943	100.00%	100.00%	100.00%	0.00%	2.40%
InnPower Corporation	16,437	100.00%	100.00%	100.00%	0.72%	2.37%
Orillia Power Corporation	13,561	100.00%	100.00%	100.00%	1.11%	2.54%
Wasaga Distribution Inc.	13,360	99.99%	99.99%	100.00%	0.00%	1.56%
Lakeland Power Distribution	13,289	93.36%	93.36%	93.39%	0.82%	2.14%
Orangeville Hydro Limited	12,002	100.00%	100.00%	100.00%	0.04%	2.82%
E.L.K Energy Inc.	11,254	96.22%	96.22%	99.95%	0.33%	1.81%
Grimsby Power Inc.	11,129	100.00%	100.00%	100.00%	0.75%	2.39%
Ottawa River Power	10,856	100.00%	100.00%	99.99%	0.15%	2.86%
Lakefront Utilities	10,301	99.92%	99.92%	99.95%	9.25%	2.32%
Niagara-on-the-Lake Hydro	9,327	100.00%	100.00%	100.00%	0.00%	2.17%
Midland Power Utility Corporation	7,155	100.00%	100.00%	100.00%	0.00%	2.57%
Centre Wellington Hydro Ltd.	6,766	100.00%	100.00%	100.00%	0.00%	2.60%
Tillsonburg Hydro Inc.	6,733	99.99%	99.99%	99.99%	0.00%	2.93%
Northern Ontario Wires Inc.	5,979	100.00%	100.00%	99.95%	0.00%	1.91%
Rideau St. Lawrence Distribution	5,827	100.00%	100.00%	100.00%	0.09%	3.93%
Kenora Hydro	5,589	97.94%	98.00%	98.21%	98.14%	2.34%
Hawkesbury Hydro	5,458	100.00%	100.00%	100.00%	0.02%	2.33%
Renfrew Hydro Inc.	4,252	99.98%	99.98%	100.00%	0.05%	2.63%
Tay Hydro	4,210	100.00%	100.00%	100.00%	0.00%	1.45%
West Coast Huron Energy Inc.	3,811	100.00%	100.00%	100.00%	0.00%	2.18%
Fort Frances Power Corporation	3,743	97.52%	97.97%	98.21%	98.16%	1.66%
Wellington North Power Inc.	3,726	100.00%	100.00%	100.00%	0.00%	2.42%
Espanola Regional Hydro	3,319	100.00%	100.00%	100.00%	5.30%	2.05%
Sioux Lookout Hydro	2,745	97.56%	98.14%	98.29%	98.18%	2.81%
Hearst Power Distribution Co Ltd	2,671	100.00%	100.00%	100.00%	0.04%	1.80%
Cooperative Hydro Embrun Inc.	2,127	100.00%	100.00%	100.00%	0.05%	2.35%
Atikokan Hydro Inc.	1,652	97.82%	97.82%	100.00%	0.00%	1.82%
Chapleau Public Utilities Corporation	1,255	99.60%	99.60%	100.00%	0.00%	1.99%
Hydro 2000 Inc.	1,226	100.00%	100.00%	99.84%	38.66%	1.63%
ORGTOTAL	4,178,230	99.52%	99.49%	99.71%	1.64%	2.53%

4. Additional Risks and Issues

There are no additional risks or issues to report.

5. Other Opportunities and Next Steps

Net Metering

The SME remains engaged in the Net Metering/Self-Consumption Advisory Working Group by providing input into the project. Throughout the process the SME has stressed the importance of ensuring a comprehensive and holistic provincial data collection process to support appropriate performance management and business insights as the initiative develops. 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.