

EXTERNAL



Smart Metering Entity (SME)

MDM/R Report

3rd Quarter 2017

July to September

Issue 17.0 - October 31, 2017

REPORT

Table of Contents

1. Introduction.....	2
1.1 Purpose and Contents	2
2. MDM/R Operation and Processing Performance	3
2.1 MDM/R Performance	3
2.2 LDC Performance	3
2.3 MDM/R Service Levels	3
2.4 3 rd Quarter Key SME Activities	5
3. LDC Compliance with OEB Order EB 2015-0297	7
4. Additional Risks and Issues	9
5. Other Opportunities and Next Steps.....	9

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 Performance
- LDC Performance
- MDM/R Service Levels
- Third Quarter Key SME Activities
- LDC Compliance with OEB Order EB 2015-0297
- Additional Risks and Issues, and
- Other 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 4.9 million meters for 67 LDCs¹ on a daily basis. The SME continues to respond to and address LDC support, service requests and issues in a timely manner.



67
LDCs¹



4,931,819
Smart Meters

In the third quarter of 2017, 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. During the third quarter, LDC meter data submissions improved with the amount of estimation dropping to nearly half a percent. Reduction of estimated data directly correlates to increased billing accuracy. 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.

¹ This number now reflects the Merger of Newmarket Hydro and Tay Hydro, as well as the enrolment of Toronto Hydro.

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.

Critical Service Level Summary		Jul-2017	Aug-2017	Sep-2017	3rd Quarter
Automatic Meter Read Processing	Intervals Loaded	3,222,678,903	3,243,567,437	3,146,404,703	9,612,651,043
	Intervals Loaded on Time	3,222,678,903	3,243,567,437	3,146,404,703	9,612,651,043
	% 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	6,838,900	4,747,798	4,519,511	16,106,209
	BQ Requests Fulfilled on Time	6,838,900	4,747,798	4,519,511	16,106,209
	% 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	3,258,255	2,582,271	9,202,699	15,043,225
	Data Elements Loaded on Time	3,258,255	2,581,407	9,202,699	15,042,361
	% Data Elements Loaded on Time	100.00%	99.97%	100.00%	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%	99.77%	100.00%	99.92%
	Number of incidents resulting in MDM/R Graphical User Interface availability outside of agreed Service Level target ²	0	1	0	1
Meter Read Retrieval Web Services	Availability	100.00%	99.73%	100.00%	99.91%
	Number of incidents resulting in Meter Read Retrieval Web Services availability outside of agreed Service Level target	0	1	0	1
Reporting	Percentage completed on time	100.00%	100.00%	100.00%	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

Non-Critical Service Level Summary		Jul-2017	Aug-2017	Sep-2017	3rd Quarter
Meter Read Retrieval Web Services	Response Time	99.97%	99.98%	99.98%	99.98%
	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	99.63%	99.73%	100.00%	99.79%
	Number of incidents resulting in MDM/R Availability outside of agreed Service Level target	1	1	0	2
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

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

2.4 3rd Quarter Key SME Activities

SME Steering Committee

The SME Steering Committee held a meeting on September 14th 2017 which was hosted by Entegrus. During this meeting LDCs were given the opportunity to provide feedback and suggestions to the SME during a pre-scheduled meeting open call. LDCs can also communicate feedback and suggestions through email and online live via the webinar presentation. The next meeting and call is scheduled for November 21st 2017 and it is being hosted at the Veridian office.

EIP 8.X Update

The SME is in the early stages of planning the next major upgrade of the EnergyIP platform. The upgrade to version 8.5 will refresh the hardware, simplify the architecture and improve performance. Over the next 3 months, the SME will be working with Siemens and IBM to conduct an impact assessment of the eIP 8.5 upgrade. This impact assessment will help the SME to develop an upgrade plan and migration strategy. The goal is to have no impact to LDCs by minimizing changes to the application interfaces. The upgrade is expected take up to 2 years.

LDC Training

No general trainings were required to be conducted by the SME during the 3rd quarter; however, the SME delivered a second customized Advanced GUI Training course at Toronto Hydro on October 17th. The SME will revisit the content, structure and frequency of LDC training in the near future, as communicated during the SSC open call.

MDM/R DataMart

The total number of LDCs enrolled into the MDM/R DataMart has reached 12. LDCs are invited to enroll voluntarily and transitions are expected to be non-disruptive from an application perspective. Once transitioned, LDCs and their agents can take advantage of the 24/7 access to data and the ability to retrieve large amounts of data efficiently.

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 and future analytics through the 3rd party access initiative.

Toronto Hydro MDM/R Enrolment

During the third quarter Toronto Hydro (THESL) successfully completed MDM/R System Integration and Qualification Testing in the MDM/R Sandbox and QA environments. On September 11th THESL completed Phase 1 of their enrolment by sending their first synchronization to the MDM/R production environment. On October 23rd THESL reached steady state operations with current synchronizations and meter read data flowing to the MDM/R on a daily basis. Phase 2 enrolment (Billing through the MDM/R) is expected to begin in Q1 2017.

Third Party Access Implementation Plan

The IESO's Data Strategy Advisory Council (DSAC) is a committee of representatives within Ontario's electricity sector and other sectors as applicable, appointed by the IESO, to provide input in the review and development of processes for the implementation of Third Party Access to the data within the Province's Meter Data Management/Repository (MDM/R), in a de-identified manner, as per OEB Orders (EB-2015-0297 and EB-2016-0284).

The committee held two meetings during the third quarter. On August 2nd the committee reviewed and discussed the DSAC Terms of Reference, Privacy Framework, Roadmap for Third Party Access, and Test Case Submissions. On September 27th the committee expanded on previous topics and included IESO Aggregate Reports, the Engagement Model, and Project Timelines.

The next DSAC meeting is scheduled for Wednesday November 15th and a broad stakeholder engagement initiative is also planned for November 7th 2017 to ensure broad awareness and a platform for engagement on this key initiative for the province.

Phase 2 of the privacy analysis on the new data collected in the MDM/R (as per IPC's and privacy consultant's recommendations) was completed end of September, and re-affirmed the IESO's **high security** scores while providing some additional recommendations on how to ensure that the data provided to third parties in the future, remains de-identified.

The DSAC test cases phase was launched with an expected completion date by end of year. These test cases will provide valuable learnings for the broader implementation of the 3rd party access project.

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, ethics and fairness as the 3rd Party Access Implementation Plan gets developed and rolled out.

Further information regarding the Data Strategy Advisory Council and its activities can be found on our website at <http://www.ieso.ca/en/sector-participants/smart-metering-entity/data-strategy-advisory-council>

LDC Mergers

Newmarket Hydro and Tay Hydro were successfully merged in the MDM/R on July 8th, 2017. The SME is also taking steps to further automate and simplify the merge process for the LDCs. The next mergers between Enersource and Powerstream (Alectra Utilities) are scheduled for Q2 2018.

SME Rate Filing

On August 31st, 2017 the SME submitted an application for a new 5-year budget and rate filing for the period of January 1st, 2018 to December 31st, 2022. The new SME fee is proposed to be \$0.59/meter/month, which is 25% lower compared to the current fee of \$0.79/meter/month.

2017 Province wide LDC Event (“Establishing the Value of Smart Meter Data in Ontario”)

The SME is organizing a province-wide event for LDCs on **November 9th, 2017** which will be held at the International Centre in Mississauga. This event will showcase many of the key initiatives that the SME is currently engaged in and will feature presentations from influential LDCs, on utility analytics (Alex Bettencourt – Hydro One) and cybersecurity (Kevin Myers – Veridian Connections).

2017 MDM/R LDC Survey

During the third quarter, the SME released a survey to determine LDC MDM/R Satisfaction, effectiveness of SME Training and communication, and opportunities for value add services. Survey engagement was at a record high with approximately 70% of the LDCs in the province responding, and results of the survey will be presented at the province wide 2017 LDC event on November 9th. Here is a brief summary of the results:

- Overall, the LDC community is very satisfied with the service and responses they receive from the SME Service Desk, as well as the training they receive from the SME.

- Most LDCs are very aware of the MDM/R Custom Merge process.
- Nearly half of the LDCs would like the MDM/R to support net metering and one third would like to see support for Commercial and Industrial (C&I) metering.

Key areas for improvement:

- The DataMart has been available to LDCs since early 2017 and while transition wasn't mandatory, many LDCs have yet to utilize the DataMart.
- Service Desk ticket communications could be improved by providing more detail and tailoring the response to the customer's MDM/R experience/knowledge level.
- The survey identified a need to remind LDCs of the MDM/R CIS transition or replacement process.

3. LDC Compliance with OEB Order EB 2015-0297

Quantitative LDCs compliance with the OEB Order EB 2015-0297 is 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 Distributor Rate Class is at 99.67%, Commodity Rate Class is at 99.59% and the number of SDPs with a valid Postal Code is at 99.79%.

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 W8W8W8³ postal code). The SME will continue to support LDCs as they approach full compliance status with the OEB Order.

At the same time, the SME is looking into qualitative compliance to ensure that the quality of the data submitted is also high, which will ensure high quality analytics in the future. The SME will address any observed data anomalies, with the LDCs, on an individual basis.

³ W8W8W8 denotes a generic postal code classification that includes unassigned postal codes (upcoming new home divisions) and unique dwelling postal codes flagged by LDCs.

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
Oakville Hydro Electricity Distributi	70,232	100.00%	100.00%	100.00%	0.16%	10.94%
St. Thomas Energy Inc.	17,524	100.00%	100.00%	100.00%	0.00%	10.91%
Oshawa Power and Utilities Corpor	57,180	99.94%	99.94%	99.94%	0.35%	9.84%
Orillia Power Corporation	13,703	100.00%	100.00%	100.00%	0.00%	10.90%
Powerstream	345,926	99.97%	99.98%	100.00%	0.15%	8.16%
Enwin Utilities	88,710	100.00%	100.00%	100.00%	0.02%	11.10%
PUC Distribution	33,801	100.00%	100.00%	100.00%	0.20%	8.31%
Lakefront Utilities	10,384	99.96%	99.96%	99.96%	1.20%	9.29%
Essex Power	29,520	99.89%	99.89%	99.89%	0.09%	8.01%
Burlington Hydro Electric Inc.	65,883	100.00%	100.00%	100.00%	0.51%	7.80%
Atikokan Hydro Inc.	1,646	99.94%	99.82%	100.00%	0.00%	5.29%
Kenora Hydro	5,597	100.00%	100.00%	100.00%	99.93%	8.25%
Newmarket Hydro	35,468	100.00%	100.00%	100.00%	1.95%	7.92%
Halton Hills Hydro Inc.	21,898	100.00%	100.00%	100.00%	0.35%	6.83%
InnPower Corporation	16,968	100.00%	100.00%	100.00%	1.48%	11.02%
Wellington North Power Inc.	3,733	100.00%	100.00%	100.00%	0.05%	10.47%
Niagara Peninsula Energy Inc.	54,031	100.00%	100.00%	100.00%	0.01%	9.58%
Bluewater Power Distribution Corp	36,361	99.96%	99.96%	100.00%	0.36%	9.29%
Festival Hydro Inc.	20,721	99.95%	99.98%	99.98%	4.09%	10.08%
Chapleau Public Utilities Corporati	1,255	99.68%	99.68%	100.00%	0.00%	8.13%
Greater Sudbury Hydro Inc.	47,577	100.00%	100.00%	100.00%	0.01%	9.71%
Thunder Bay Hydro Electricity Distr	50,585	99.79%	99.81%	99.94%	27.06%	8.91%
Hearst Power Distribution Co Ltd	2,667	100.00%	100.00%	100.00%	0.00%	7.69%
Grimsby Power Inc.	11,225	100.00%	100.00%	100.00%	0.74%	7.99%
Hawkesbury Hydro	5,467	100.00%	100.00%	100.00%	0.02%	9.80%
Enersource	202,180	99.97%	99.95%	99.99%	0.27%	7.56%
Renfrew Hydro Inc.	4,269	100.00%	100.00%	100.00%	0.07%	10.78%
Horizon Utilities Corporation	245,695	95.68%	95.47%	95.95%	3.33%	9.18%
Toronto Hydro	707,890	99.40%	98.95%	100.00%	0.31%	0.66%
Brantford Power Inc.	39,240	99.54%	99.55%	99.83%	0.00%	10.23%
Collus PowerStream	17,182	100.00%	100.00%	100.00%	0.01%	11.79%
Whitby Hydro Electric Commission	42,205	100.00%	100.00%	100.00%	0.51%	7.08%
Hydro Ottawa	327,614	100.00%	99.99%	100.00%	0.10%	11.86%
North Bay Hydro	23,731	99.40%	99.06%	99.47%	0.00%	10.72%
Wasaga Distribution Inc.	13,545	100.00%	100.00%	100.00%	0.00%	8.30%
E.L.K Energy Inc.	11,318	96.24%	96.24%	99.96%	0.34%	7.21%
Peterborough Utilities	36,633	99.87%	99.30%	99.88%	0.00%	9.95%
Tillsonburg Hydro Inc.	6,777	100.00%	100.00%	100.00%	0.00%	10.36%
Lakeland Power Distribution	13,356	100.00%	100.00%	100.00%	0.00%	10.01%
Rideau St. Lawrence Distribution	5,836	100.00%	100.00%	100.00%	0.17%	11.26%
Brampton Hydro	159,030	100.00%	100.00%	100.00%	0.56%	9.08%
Centre Wellington Hydro Ltd.	6,846	100.00%	100.00%	100.00%	0.00%	10.14%
Hydro 2000 Inc.	1,230	100.00%	100.00%	99.84%	0.08%	9.84%
Energy+ Inc.	64,328	100.00%	100.00%	100.00%	0.00%	9.05%
Canadian Niagara Power	40,580	99.97%	99.97%	99.97%	0.35%	6.75%
Westario Power Inc.	23,166	100.00%	100.00%	100.00%	0.59%	9.92%
Erie Thames Powerlines	18,885	99.99%	99.99%	99.99%	1.22%	9.73%
Guelph Hydro Electric Systems Inc.	54,548	100.00%	100.00%	100.00%	0.87%	11.67%
Milton Hydro Distribution	35,952	100.00%	100.00%	100.00%	0.12%	10.97%
Utilities Kingston	27,539	100.00%	100.00%	100.00%	0.56%	15.21%
Ottawa River Power	10,883	100.00%	100.00%	100.00%	0.16%	11.88%
Niagara-on-the-Lake Hydro	9,374	100.00%	100.00%	100.00%	0.01%	8.22%
Sioux Lookout Hydro	2,787	99.57%	99.53%	99.64%	99.50%	12.20%
Waterloo North Hydro	57,016	100.00%	100.00%	100.00%	0.04%	12.18%
Hydro One	1,202,722	100.00%	100.00%	100.00%	2.06%	7.35%
Cooperative Hydro Embrun Inc.	2,190	100.00%	100.00%	100.00%	0.05%	13.61%
Orangeville Hydro Limited	12,216	100.00%	100.00%	100.00%	0.07%	11.28%
Welland Hydro-Electric System Cor	22,950	100.00%	100.00%	100.00%	0.09%	9.56%
Midland Power Utility Corporation	7,179	100.00%	100.00%	100.00%	0.00%	10.59%
Fort Frances Power Corporation	3,734	99.73%	99.73%	99.76%	99.71%	8.33%
Veridian Connections	119,134	100.00%	100.00%	100.00%	0.39%	7.83%
West Coast Huron Energy Inc.	3,831	100.00%	100.00%	100.00%	0.00%	10.28%
Northern Ontario Wires Inc.	5,968	100.00%	100.00%	100.00%	0.00%	9.15%
Espanola Regional Hydro	3,319	100.00%	100.00%	100.00%	5.24%	8.71%
Entegrus Power Lines	40,852	100.00%	100.00%	100.00%	0.00%	9.23%
Kitchener-Wilmot Hydro	94,916	100.00%	100.00%	100.00%	0.00%	10.46%
London Hydro	155,111	99.99%	99.99%	99.99%	0.03%	12.13%
ORGTOTAL	4,931,819	99.67%	99.59%	99.79%	1.39%	7.80%

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. During the third quarter the SME delivered a cost and time estimate to the Ministry of Energy for delivery of a Net Metering solution utilizing the MDM/R Production environment.