EXTERNAL

REPORT

Power to Ontario.
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Smart Metering Entity (SME)
Time-of-Use Mandate Progress Report
Through January 31, 2011

Issue 6.0 - February 20, 2011

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1. Introduction

1.1 Purpose

The purpose of this report is to provide a monthly update to the Ontario Energy Board on the Smart Metering Entity's readiness and performance and the progress in respect to distributor integration with the Meter Data Management and Repository (MDM/R). This report includes information and status updates on:

- The Smart Metering Entity (SME) and the MDM/R Readiness - Any issues relevant to the ability of the SME and the MDM/R to support MDM/R enrolment and TOU implementation, such as resourcing, software operation, and processing performance.
- Distributor (LDC[1]) Readiness – Integrating with the MDM/R is a prerequisite to enable LDCs to execute their individual TOU rollout strategies and contribute to Ontario's provincial targets for total customers on time-of-use (TOU) rates. This report includes information regarding LDC progress against their project plans, testing activities and MDM/R enrolment activities both achieved and projected.

1.2 How to Use this Document

This report presents information and status updates on SME and MDM/R readiness (in Section 2) and distributor readiness and MDM/R enrolment progress (in Section 3). More information about the provincial Smart Metering Initiative, the MDM/R and the implementation of Time-of-Use rates is available on the websites of the Ministry of Energy (http://www.mei.gov.on.ca/), the Ontario Energy Board (http://www.oeb.gov.on.ca/OEB/Industry) and the IESO/SME (http://www.smi-ieso.ca/).

SME and MDM/R readiness will include updates on implementation and testing for new MDM/R software, processing performance, status of resourcing and training programs, and any other issues that may affect the implementation of mandatory TOU.

Distributor readiness and MDM/R enrolment progress will be communicated using a series of tables, some summarizing aggregate results and others detailing by individual LDC. The tables provided in the report are:

- MDM/R Cutover Targets Outlook
- MDM/R Enrolled Meter Counts by Distributor
- Distributor Testing Activities with the MDM/R (Three Month Outlook)
- MDM/R Enrolment Wave Calendar (2010 – 2011)

Each table is accompanied by a description of its contents and how to interpret it. The information contained in three of the tables is interrelated and these relationships are described below.

[1] LDCs in Ontario (meaning each Local Distribution Company or "distributor" as defined in the Ontario Energy Board Act, 1998)

- The MDM/R Enrolment Wave Calendar contains detailed schedules for the planned enrolment testing and cutover to production that each LDC has provided to the SME. The Wave Calendar includes updates received from LDCs verbally and through project plan submissions. If an LDC's self-certification for enrolment testing has been accepted by the SME, this is also indicated on the MDM/R Enrolment Wave Calendar. Verbally provided milestone information, while shown in the calendar, is not included in any of the other tables. The information in this table can be further refined based on the SME's assessment of an organisation's readiness. The basis for such refinements can include our interactions with the LDC's project team, along with observed levels of testing activity in the MDM/R testing environments.
- MDM/R Cutover Targets uses the actual number of LDCs enrolled in the MDM/R production environment and the number of meters that they have each enrolled at the end of each month. It projects forward the number of LDCs that will be enrolled in subsequent time periods based on the MDM/R Enrolment Wave Calendar.
- The Distributor Testing Activities with the MDM/R (Three Month Outlook) projects those LDCs that will be in System Integration Testing, Qualification Testing and Cutover activities over the next three months from the MDM/R Enrolment Wave Calendar.

2. SME and MDM/R Readiness – Relevant Issues

2.1 MDM/R Operation and Software Testing

The MDM/R production environment experienced several significant service disruptions and lesser incidents in January. All these disruptions and incidents were successfully recovered from, diagnosed and, through the application of a variety of corrective measures, the system is again operating reliably. Some of the corrective measures included tuning system configuration settings and adding additional memory for key processes. Despite these operational difficulties, the accuracy of energy quantities supplied by the MDM/R for billing purposes remained unaffected and, with very few exceptions, was delivered in time for the normal billing cycles.

Although some service disruptions represent the normal growing pains of a new state-of-the-art system like the MDM/R, the SME is committed to achieving the stable and reliable operation of the MDM/R at increasing volumes. Throughout the challenges of the past month, the SME and its vendors have demonstrated this commitment and dedication. Equally important, in the face of these challenges, distributors have worked with the SME to minimize the impact to their operations.

With the actions already taken, additional plans in motion, and with the support of the distributors, we are confident that the MDM/R will continue to adequately support distributor enrolment and the implementation of TOU billing under the Board's TOU mandate.

The deployment of EnergyIP R7.0 to the production system was delayed until early March due to the discovery of a critical defect related to verification and editing. A fix was received, tested by the SME and IBM, and made available to distributors in the test environment on February 3rd. Distributor regression testing is progressing well.

The initial portions of the next release of EnergyIP (R7.2) were delivered at the end of January, per the latest schedule and are being deployed on an internal system for initial IESO testing.

2.2 Processing Performance

During normal operation, the MDM/R continues to process meter read data at rates that support the current volume of smart meters reporting daily data to production. Contracted service levels were not, however, met during five service disruptions noted above.

In January 100% of the meter master data updates, were processed via the synchronization interface within the contracted service levels. Synchronization files that are submitted to enrol large numbers of new smart meters in production (typically greater than 15,000) continue to be scheduled in advance with the SME for coordination purposes. This is necessary only for the initial ramp up of large numbers of smart meters and will not be needed once full production volumes have been reached.

By the end of the month, the MDM/R was processing daily meter read data from over 1.8M meters.

2.3 Resourcing

Two new staff members were added to the SME testing team in January to support the testing and implementation of changes to the MDM//R to support LDC compliance with Measurement Canada requirements by January 2012.

2.4 Training

The SME continues to adjust our training and workshop session offerings to meet the needs of the LDCs. Training sessions on the use of the MDM/R's graphical user interface (GUI) are conducted both on-site at our facilities and at LDC facilities. Please refer to the SME website (http://www.smi-ieso.ca/training) for more details on training and the training calendar for the first half of 2011.

2.5 Additional Risks and Issues

Measurement Canada

In December, the SME contracted for the development and delivery of software to support the 2011 Measurement Canada solution requirements within the required timeframes, and for software to enable early LDC testing of the new billing interface.

The final session of the Cumulative Register Read Working Group (CRRWG) was held on January 19th to review the requirements and implementation schedule of the 2011 MC Solution. The materials for these sessions are posted on the SME website. Further work on the MC solution will be conducted through other existing forums. No technical issues were raised with the solution requirements. There was general concern that the implementation schedule is tight, leaving little room for error.

The following actions have been instituted to mitigate schedule risk:

- Close collaboration between the SME and eMeter in the development of the Measurement Canada Solution requirements and high-level design. This work has been completed.
- The SME's participation in a detailed design walkthrough with eMeter prior to the completion of the design phase of the 2011 MC Solution software development lifecycle. This work, scheduled for early February, has been successfully completed.
- The SME has committed to provide the test scenarios and the test cases to eMeter for use in their quality assurance program for the 2011 Measurement Canada Solution.
- The SME will continue to work closely with the LDCs as the solution rolls-out and they prepare their systems.

The SME agreed to provide Measurement Canada with sample meter data so they could get a better quantitative understanding of how the various AMI technologies in the province behave with respect to differences between interval data, cumulative register reads and TOU billing quantities. The gathering of this data is underway with delivery to Measurement Canada targeted for early March.

Distributor Enrolment Schedules

The Smart Metering Entity (SME) is actively engaged with the distributors to facilitate their enrolment process and to help them meet their TOU mandated dates.

At the end January there were a total of 20 LDCs in production with 2.4 M meters enrolled in the MDM/R. An additional 5 LDCs are scheduled to cutover to the MDM/R in mid February bringing the total to 25 LDCs in production on R6.3.

In December, 9 distributors adjusted their schedules to defer a significant portion of their enrolment activities in 2011 and in January another 8 reported schedule slippages of 1 to 3 weeks. These changes to the overall schedule continue to build pressure on SME Registration and Enrolment resources to manage the volume of LDCs potentially able to be involved in some stage of enrolment testing and cutover during the remainder of Q1 and Q2 2011. There are 20 distributors scheduled to be in enrolment testing and/or cutover concurrently in February, 21 in March, 24 in April, 25 in May and 14 in June 2011. Nine additional LDCs are projected to be cutover to Production by the end of Q1 2011, with a further 27 in Q2.

The SME is looking at different staffing options to be able to handle more LDCs concurrently including the temporary re-assignment of roles within the Registration and Enrolment team. If the situation occurs where the SME's enrolment capability cannot concurrently meet higher than planned LDC demand, the SME may need to defer one or more LDC's enrolment test schedules to a less congested time period. In this case the SME would work with all the affected LDCs to identify an acceptable alternate schedule that would have as little impact as possible.

There are no additional issues to report with respect to the SME and the MDM/R readiness for this month.

3. Distributor Readiness – MDM/R Integration and Meter Enrolment

3.1 January Highlights

Distributors in formal enrolment testing in January included Chapleau, Erie Thames, Espanola, Essex Power, Innisfil Hydro, Lakefront Utilities, Northern Ontario Wires, Oakville Hydro, Orillia Power, PUC Distribution, Sioux Lookout, West Coast Huron and West Perth.

Espanola, Essex Power, Oakville Hydro, PUC Distribution and West Perth successfully completed enrolment testing and cutover to Production under EnergyIP R6.3 in mid-January.

Chapleau, Northern Ontario Wires, Orillia Power, Sioux Lookout and West Coast Huron are scheduled to cutover to Production under EnergyIP R6.3 in February 2011.

3.2 MDM/R Cutover Targets

The MDM/R Cutover Targets table provides both actual and projected numbers of LDCs that have been or are to be cutover to MDM/R production operations in each calendar quarter. Monthly breakdowns are provided for the current quarter only. For information on which specific LDCs are included in the *Production LDCs* column for each time period refer to the MDM/R Enrolment Wave Calendar. The *RPP Eligible Customers* column contains the aggregate total for all the LDCs included in the *Production LDCs* column. LDC filings with the OEB include their total RPP eligible customers and these figures form the basis for the aggregated figures reported in this table. The *Enrolled in MDMR* column contains the aggregate total number of smart meters for those LDCs that are included in the Production LDCs column. It is included in this table to track the ramp-up of enrolled meters after the LDCs complete their cutover to MDM/R production operations. The source of these figures is the LDC filings with the OEB. The number of meters enrolled in the MDM/R for Lakeland Power was not available and therefore the source used for the December report was the MDM/R. The % complete figure at the bottom of the table indicates the percentage of the total RPP eligible customers enrolled in the MDM/R as of the reporting date.

As of January 31, 2011	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
Actuals - Based on Production LDCs data			
Pre- Q2 2010	9	2,934,548	2,270,981
Q3 2010	2	153,303	20,484
Q4 2010	4	119,764	87,534
Q1 2011			
January 2011	5	127,408	103,372
Actual Totals for LDCs in Production	20	3,335,023	2,482,371
Projected - Based on enrolment plans submitted to the SME			
February 2011	5	26,424	
March 2011	4	124,058	
Q2 2011	27	613,327	
Q3 2011	10	178,431	
Q4 2011	5	144,899	
2012	0	0	
Projected Totals for Committed LDCs	51	1,087,139	
Totals (Actual and Projected)	71	4,422,162	2,482,371
Not Committed - LDCs have not provided enrolment plans			
Schedules not yet determined	5	299,608	
Totals including non-committed LDCs	76	4,721,770	2,482,371
% Complete of total RPP Eligible Customers Enrolled in the MDM/R		52.6%	

Notes: (1) "RPP Eligible Customers" are the total customers reported to the OEB that will ultimately be put on TOU rates and whose smart meters will be enrolled in the MDM/R.

(2) "Enrolled in MDMR" represents the number of "RPP Eligible Customers" whose smart meters are currently enrolled in the MDM/R.

3.3 MDM/R Enrolled Meter Counts by Distributor

The MDM/R Enrolled Meter Counts by Distributor table shows each MDM/R production LDC's progress in enrolling smart meters over the previous month. The total meters enrolled in the previous and the current reporting months are provided, along with the net increase or decrease over the period. Note that in some cases there may be a small decrease in the number of meters enrolled from month to month. This reflects the routine day to day activities within an LDC's operation that involve the removals and deactivations of meters. The source of the data in the *Total Meters Enrolled* and the *Total RPP Eligible Customers* columns come from data filed by the LDCs with the OEB. The number of meters enrolled in the MDM/R for Lakeland Power was not available and therefore the source used for the December report was the MDM/R. The *% Complete* column indicates what percentages of the Total RPP Eligible Customers are enrolled in MDM/R production as of the end of the reporting period.

As of January 31, 2011	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 31-Dec	Total Meters Enrolled through 31-Jan	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Chatham-Kent	28,710	28,710	0	31,616	90.8%
Espanola	0	3,276	3,276	3,288	99.6%
Essex Power	0	4,176	4,176	27,840	15.0%
Halton Hills	12,480	20,272	7,792	20,479	99.0%
Horizon Utilities	213,452	213,452	0	232,798	91.7%
Hydro One	843,719	944,928	101,209	1,192,703	79.2%
Hydro One Brampton	212	212	0	132,824	0.2%
Hydro Ottawa	34,973	34,964	-9	297,751	11.7%
Lakeland Power	8,899	8,905	6	9,371	95.0%
Milton Hydro	27,465	27,465	0	27,465	100.0%
NewmarketTay	29,672	29,672	0	31,953	92.9%
Oakville Hydro	0	61,531	61,531	61,834	99.5%
Oshawa PUC	200	22,471	22,271	52,457	42.8%
PowerStream	270,587	271,713	1,126	316,208	85.9%
PUC Distribution	0	32,342	32,342	32,399	99.8%
Tillsonburg	6,305	6,298	-7	6,638	94.9%
Toronto Hydro	581,162	612,241	31,079	692,565	88.4%
Veridian	107,721	107,836	115	111,489	96.7%
Waterloo North	49,064	49,860	796	51,298	97.2%
West Perth Power	0	2,047	2,047	2,047	100.0%
Total Meter Counts	2,214,621	2,482,371	267,750	3,335,023	74.4%

3.4 Distributor Testing Activities with the MDM/R (Three Month Outlook)

The System Integration Testing, Qualification Testing and Cutover timelines provided in this table are sourced from the details in the Enrolment Wave Calendar. Unit testing timelines are provided by each LDC in their MDM/R project plan. Those LDC's names that appear in black are entering unit testing for the first time in the indicated month. Note that Enrolment Testing (SIT and QT) and Cutover to MDM/R production operations may be postponed and rescheduled for some LDCs if the number of LDCs being concurrently tested exceeds the support capacity of the SME (i.e. enrolment of up to six LDCs per month).

As of January 31, 2011	*Distributor Testing Activities with the MDM/R (Three Month Outlook)*		
	Feb-11	Mar-11	Apr-11
In Unit Testing	Atikokan Hydro	Bluewater	Bluewater
	Bluewater	Brant County Power	Brant County Power
	Brant County Power	Brantford Power	Brantford Power
	Brantford Power	Burlington Hydro	Centre Wellington
	Burlington Hydro	Centre Wellington	E.L.K. Energy
	Clinton Power	Clinton Power	Embrun
	COLLUS Power	E.L.K. Energy	Festival Hydro
	E.L.K. Energy	Embrun	Fort Frances
	Festival Hydro	Festival Hydro	Hearst Power
	Greater Sudbury	Fort Frances	Hydro 2000
	Guelph Hydro	Hearst Power	Hydro Hawkesbury
	Haldimand County	Hydro 2000	Kenora Hydro
	Hearst Power	Hydro Hawkesbury	Ottawa River
	Hydro Hawkesbury	Kingston Hydro	Peterborough
	Kingston Hydro	Niagara Peninsula	Welland Hydro.
	London Hydro	Norfolk Power	
	Midland Power	North Bay Hydro	
	Niagara Peninsula	Ottawa River	
	Norfolk Power	Peterborough	
	North Bay Hydro	Renfrew Hydro	
	Orangeville Hydro	St. Thomas	
	Parry Sound	Welland Hydro.	
	Peterborough	Whitby Hydro	
	Renfrew Hydro		
	St. Thomas		
	Wasaga		
	Wellington North		
	Whitby Hydro		
	Woodstock Hydro		

As of January 31, 2011	*Distributor Testing Activities with the MDM/R (Three Month Outlook)*		
	Feb-11	**Mar-11**	**Apr-11**
In Enrolment Testing - SIT	COLLUS Power Erie Thames Greater Sudbury Guelph Hydro Haldimand County Kitchener-Wilmot London Hydro Midland Power Orangeville Hydro Parry Sound Wasaga Wellington North Woodstock Hydro	Atikokan Hydro COLLUS Power Greater Sudbury Kingston Hydro Midland Power Niagara Peninsula North Bay Hydro Orangeville Hydro St. Thomas Wasaga Whitby Hydro	Brant County Power Burlington Hydro Clinton Power Fort Frances Hearst Power Kingston Hydro Norfolk Power Renfrew Hydro Whitby Hydro
In Enrolment Testing - QT	Erie Thames Guelph Hydro Innisfil Hydro Kitchener-Wilmot Lakefront Utilities Parry Sound West Coast Huron Woodstock Hydro	Atikokan Hydro COLLUS Power Erie Thames Greater Sudbury Guelph Hydro Haldimand County Kitchener-Wilmot London Hydro Midland Power Niagara Peninsula Orangeville Hydro Parry Sound Wasaga Wellington North Woodstock Hydro	Atikokan Hydro Brant County Power Clinton Power COLLUS Power Fort Frances Greater Sudbury Kingston Hydro London Hydro Midland Power Niagara Peninsula Norfolk Power North Bay Hydro Orangeville Hydro St. Thomas Wasaga Whitby Hydro
Cutover	Chapleau Lakefront Utilities Northern Ontario Wires Orillia Power Sioux Lookout West Coast Huron	Erie Thames Innisfil Hydro Kitchener-Wilmot Lakefront Utilities Parry Sound	Atikokan Hydro COLLUS Power Greater Sudbury Guelph Hydro Haldimand County London Hydro Midland Power Niagara Peninsula Orangeville Hydro Parry Sound Wasaga Wellington North

3.5 MDM/R Enrolment Wave Calendar (2010 – 2011)

The MDM/R Enrolment Wave Calendar is an integrated plan illustrating the three formal enrolment testing milestones of SIT, QT and Cutover for all non-production LDCs. The background colour for each LDC's name indicates the source of the information used in the calendar:

- Green indicates that the LDC has submitted a project plan, completed Unit testing and the SME has accepted the LDC's Self-Certification for Enrolment Testing.
- Blue indicates that the SME has reviewed and accepted the LDC's project plan.
- Yellow either indicates that the SME has not received a project plan but has received verbal confirmation of the LDC's three enrolment testing milestones or that the LDC has verbally indicated that it will re-submit a new plan. This information is not used for projecting LDC cutover dates in any of the other charts in this report.
- Red indicates that the LDC has not shared their plan with the SME.
- White indicates a production LDC that has completed Cutover.

The RPP eligible customer counts come from data filed by the LDCs with the OEB. As LDC plans change, the reason code will indicate one of five possible reasons.

1. The change may have been initiated by the SME due to resource or system constraints.
2. The LDC may have re-submitted a new plan.
3. The LDC may have missed timelines for their project tasks and therefore was not ready to proceed in accordance with their plan.
4. The LDC may have entered enrolment testing but subsequently had to withdraw because they were unable to successfully complete the tests.
5. The LDC's previous plan has changed but they have not re-submitted a new plan.

When an LDC's schedule is changed, the milestones for the previous schedule remain on the calendar but are greyed out.

Finally, each section on the timeline represents a one week period starting on a Monday.

MDM/R Enrolment Wave Calendar

As of Jan 31, 2011

Current wave indicated by: S SIT - normally 2 weeks; Q QT - normally 4 weeks; C Cutover - normally 2 weeks

Previous wave indicated by: S; Q; C

Reason for Latest Change	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Reason Code: 1: IESO Change 2: LDC Plan change 3: LDC Not Ready 4: LDC Wave Failure 5: Update pending	January	January	January	January	January	February	February	February	February	March	March	March	March	April	April	April	April	May	May	May	May	May	June	June	June	June	July	July	July	August	August	August	August	August	Sept	Sept	Sept	Sept	October	October	October	October	October	Nov	Nov	Nov	Nov	Dec	Dec	Dec	Dec
	3	10	17	24	31	7	14	21	28	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	#	#	25	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26
	January to December 2011																																																	

RPP Eligible Customers	LDC Name	
11,551	Algoma Power Inc.	
1,686	Atikokan Hydro Inc.	2
34,942	Bluewater Power Distribution Corp.	2
9,546	Brant County Power Inc	2
37,286	Brantford Power Inc.	2
63,299	Burlington Hydro Inc.	
50,251	Cambridge & North Dumfries Hydro Inc.	2
6,388	Centre Wellington Hydro Ltd.	
1,274	Chapleau Public Utilities Corp.	2
1,632	Clinton Power Corp.	2
3,494	CNPI - EOP	2
15,517	CNPI - Fort Erie	2
9,060	CNPI - Port Colborne Hydro Inc	2
15,462	Collus Power Corp	2
1,780	Cooperative Hydro Embrun Inc.	2
11,088	E.L.K. Energy Inc.	2
188,787	Enersource Hydro Mississauga Inc.	3, 5
83,727	ENWIN Powerlines Ltd.	
14,206	Erie Thames Powerlines Corp.	2
19,335	Festival Hydro Inc.	2
3,727	Fort Frances Power Corp.	2
46,043	Greater Sudbury Hydro Inc.	
10,052	Grimsby Power Inc.	2
48,044	Guelph Hydro Electric Systems Inc.	2
20,820	Haldimand County Hydro	2
2,504	Hearst Power Distribution Company Ltd	2
1,186	Hydro 2000 Inc.	2
5,403	Hydro Hawkesbury Inc.	2
14,637	Innisfil Hydro Distribution Systems Ltd.	2
5,513	Kenora Hydro Electric Corp Ltd	2
26,643	Kingston Hydro Corporation	2
85,705	Kitchener-Wilmot Hydro Inc.	2
9,510	Lakefront Utilities Inc.	2
140,499	London Hydro	2
7,765	Middlesex Power Distribution Corp. (bought Newbury(185) and Dutton (622))	3, 5
6,807	Midland Power Utility Corp	2
49,162	Niagara Peninsula Energy Inc. (includes Peninsula West @ 14,351)	2
7,778	Niagara-on-the-Lake Hydro Inc.	2,5
18,759	Norfolk Power Distribution Inc.	
23,527	North Bay Hydro Distribution Limited	
6,090	Northern Ontario Wires Inc.	2
11,026	Orangeville Hydro Ltd. (includes Grand Valley (659))	
12,637	Orillia Power Distribution Corp.	2
10,301	Ottawa River Power Corp.	2

MDM/R Enrolment Wave Calendar

As of Jan 31, 2011

Current wave indicated by: S SIT - normally 2 weeks; Q QT - normally 4 weeks; C Cutover - normally 2 weeks

Previous wave indicated by: S; Q; C

| Reason for Latest Change | M | M | M