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REPORT

**Smart Metering Entity (SME)
Time-of-Use Mandate Progress Report
Through October 31, 2010**

Issue 3.0 - November 20, 2010

Table of Contents

Table of Contents	1
1. Introduction	2
1.1 Purpose	2
1.2 How to Use this Document	2
2. SME and MDM/R Readiness – Relevant Issues	4
2.1 MDM/R Operation and Software Testing	4
2.2 Processing Performance	4
2.3 Resourcing	5
2.4 Training	5
2.5 Additional Issues	5
3. Distributor Readiness – MDM/R Integration and Meter Enrolment	6
3.1 October Highlights	6
3.2 MDM/R Cutover Targets	6
3.3 MDM/R Enrolled Meter Counts by Distributor	8
3.4 Distributor Testing Activities with the MDM/R (Three Month Outlook)	9
3.5 MDM/R Enrolment Wave Calendar (2010 – 2011).....	11

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 (LDC¹) 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 Smart Metering Entity (SME) continues to effectively support distributor enrolment and the implementation of TOU billing under the Board's TOU mandate.

The SME continues to experience stable operation in the MDM/R production environment under Release 6.3 (R6.3) of the EnergyIP software solution.

Testing of EnergyIP Release 7.0 (R7.0) is nearing completion and those LDCs in MDM/R production operation are evaluating the production readiness of the release. Based on internal and LDC testing, the SME will decide in early November whether to upgrade the software in order to address a number of defects identified by the production LDCs as needing to be fixed prior to the completion of LDC regression testing. Subsequently, a deployment schedule to promote R7.0 to the production MDM/R will be sent out.

The results of ongoing testing will factor into the final deployment schedule and plan. Release 7.0 is currently targeted for deployment into the MDM/R production environment for mid December.

An external audit of the IESO's Meter Data Management and Repository (MDM/R) operations processes and procedures was recently completed with the organization receiving an unqualified opinion for the audit period April 1, 2010 to September 30, 2010.

The IESO is committed to establishing and maintaining effective controls over MDM/R operations and recognizes the importance of having robust controls, processes, and procedures to ensure the accurate, complete, and timely processing of the MDM/R and to ensure the confidentiality of electricity consumption information. The report by PricewaterhouseCoopers LLP found that:

- The controls that were tested were operating with sufficient effectiveness to provide reasonable assurance that the control objectives were achieved during the audit period April 1, 2010 to September 30, 2010;
- The description of controls presented fairly, in all material respects, the relevant controls that were placed in operation as at September 30, 2010; and,
- Controls were suitably designed to provide reasonable assurance that the specified control objectives would be achieved.

This audit is conducted every year to provide assurance to MDM/R service recipients and their auditors that the IESO's internal controls governing the operation of the MDM/R are suitably designed and effectively administered. This audit was conducted in accordance with Section 5970 standards established by The Canadian Institute of Chartered Accountants.

2.2 Processing Performance

The MDM/R continues to process meter read data at processing rates that support the current volume of smart meters reporting daily data to production. In October, 98.6% of meter read data were processed according to contracted service levels. By the end of October, the MDM/R was processing daily meter read data from over 1.24M meters.

In October, 99.2% of the meter master data updates, including enrolment of new smart meters into the MDM/R, processed via the synchronization interface were processed 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.

2.3 Resourcing

No changes to report in October.

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. Technical workshops, business process workshops and, to a lesser extent, project planning workshops are all scheduled in the coming months. Please refer to the SME website (<http://www.smi-ieso.ca/training>) for more details on training and the training calendar for the remainder of 2010 and the first half of 2011.

2.5 Additional Issues

Measurement Canada

With Measurement Canada's concurrence that the Cumulative Register Read Working Group's proposed solution satisfies their requirements, the implementation of the design will move forward. The SME is targeting providing a preliminary schedule on the implementation details for the complete MDM/R portion of the solution by the end of November. The distributors will need to develop their own plans and schedules for implementing their part of the solution.

A workshop to introduce the MDM/R's new EnergyIP Standard Billing XML Interface that will be implemented to support the Measurement Canada requirements was held on October 5, 2010. This session focused on providing LDCs, their agents and software vendors sufficient information to begin developing their side of the interface. Over 100 people attended the session.

Distributor Enrolment Schedules

There is a risk that distributors will continue to adjust their schedules and defer enrolment activities to Q1 and Q2 2011. Distributors' changing schedules may result in significantly more distributors requesting to enter enrolment testing concurrently than originally planned. October's wave calendar is projecting that if distributors maintain the schedules that they have submitted to the SME, the number of distributors concurrently requesting to start enrolment testing in Q1 2011 may exceed SME's enrolment capacity. However, until distributors confirm their schedules a few weeks before the start of SIT, they are considered tentative and could change.

To ensure that the SME can do the best possible job of supporting distributors through the enrolment testing process, distributors are encouraged to provide the SME with timely implementation plan and schedule updates. Such timely updates will allow the SME to continue to manage overall enrolment testing schedules and align support resources as required.

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 October Highlights

Distributors in formal enrolment testing in October included:

Espanola, Essex Power, Lakeland Power, Oshawa PUC, PUC Distribution, Tillsonburg and Waterloo North.

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 % 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 October 31, 2010	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
Actuals - Based on Production LDCs data			
Pre- Q2 2010	9	2,925,283	1,811,757
Q3 2010	2	152,280	9,019
Q4 2010			
October 2010	0	0	0
Actual Totals for LDCs in Production	11	3,077,563	1,820,776
Projected - Based on enrolment plans submitted to the SME			
November 2010	3	85,503	
December 2010	4	96,310	
Q1 2011	18	631,477	
Q2 2011	11	272,161	
Q3 2011	9	150,355	
Q4 2011	1	49,988	
2012	0	0	
Projected Totals for Committed LDCs	46	1,285,794	
Totals (Actual and Projected)	57	4,363,357	1,820,776
Not Committed - LDCs have not provided enrolment plans			
Schedules not yet determined	19	339,677	
Totals including non-committed LDCs	76	4,703,034	1,820,776
% Complete of total RPP Eligible Customers Enrolled in the MDM/R		38.7%	
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 % *Complete* column indicates what percentages of the Total RPP Eligible Customers are currently enrolled in MDM/R production, as of the end of the reporting period.

As of October 31, 2010	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 30-Sep	Total Meters Enrolled through 31-Oct	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Chatham-Kent	7,104	16,358	9,254	31,324	52.2%
Halton Hills	8,808	8,807	-1	20,461	43.0%
Horizon Utilities	152,108	157,927	5,819	231,728	68.2%
Hydro One	579,444	633,768	54,324	1,188,804	53.3%
Hydro One Brampton	212	212	0	131,819	0.2%
Hydro Ottawa	35,000	35,000	0	296,383	11.8%
Milton Hydro	27,040	27,099	59	27,123	99.9%
NewmarketTay	29,672	29,672	0	31,953	92.9%
PowerStream	225,405	243,819	18,414	316,208	77.1%
Toronto Hydro	581,162	581,162	0	690,623	84.2%
Veridian	71,811	86,952	15,141	111,137	78.2%
Total Meter Counts	1,717,766	1,820,776	103,010	3,077,563	59.2%

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 October 31, 2010	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Nov-10	Dec-10	Jan-11
In Unit Testing	Bluewater Chapleau COLLUS Power Enersource Erie Thames Guelph Hydro Haldimand County Hearst Power Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities London Hydro Midland Power Niagara-on-the-Lake Northern Ontario Wires Orillia Power Wellington North West Coast Huron Woodstock Hydro	Bluewater COLLUS Power Erie Thames Guelph Hydro Haldimand County Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities London Hydro Midland Power Niagara-on-the-Lake Orillia Power Wellington North West Coast Huron Whitby Hydro Woodstock Hydro	Bluewater Burlington Hydro COLLUS Power Festival Hydro Greater Sudbury Guelph Hydro Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities London Hydro Midland Power Norfolk Power North Bay Hydro Wellington North Whitby Hydro Woodstock Hydro

As of October 31, 2010	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Nov-10	Dec-10	Jan-11
In Enrolment Testing - SIT	Chapleau Enersource Northern Ontario Wires Oakville Hydro Sioux Lookout	Niagara-on-the-Lake Northern Ontario Wires Orillia Power Sioux Lookout	COLLUS Power Erie Thames Guelph Hydro Haldimand County Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities London Hydro Midland Power West Coast Huron Woodstock Hydro
In Enrolment Testing - QT	Enersource Espanola Essex Power Lakeland Power Oshawa PUC PUC Distribution	Enersource Oakville Hydro	Chapleau COLLUS Power Erie Thames Haldimand County Niagara-on-the-Lake Northern Ontario Wires Orillia Power Sioux Lookout West Coast Huron Woodstock Hydro
Cutover	Espanola Essex Power Oshawa PUC PUC Distribution Tillsonburg Waterloo North	Espanola Essex Power Lakeland Power Oshawa PUC PUC Distribution	Enersource Oakville Hydro

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.

