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REPORT

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

Issue 1.0 - September 20, 2010

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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 of distributor integration with the MDM/R. This report includes information and status updates on:

- The Smart Metering Entity (SME) and the Meter Data Management and Repository (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). The target audience is those very knowledgeable with the provincial Smart Metering Initiative, the MDM/R and the implementation of Time-of-Use rates. For those less familiar with these topics it is suggested that a good understanding can be gained from material 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 Actual Enrolled Meter Counts by Distributor
- Distributor Testing Activities with the MDM/R (Three Month Outlook)
- MDM/R Enrolment Wave Calendar (2010 – 2011)

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

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.

- 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) sees no impediments at this time to either the MDM/R system or the SME providing appropriate or adequate support to distributor enrolment and the implementation of TOU billing under the Board's TOU mandate.

We continue to experience stable operation in the MDM/R production environment under Release 6.3 of the EnergyIP software solution.

Testing of EnergyIP Release 7.0 is nearing completion and those LDCs in MDM/R production operation have evaluated the production readiness of the release. Their assessment, as well as the results of ongoing testing of the software, will factor into the final deployment schedule and plan. Release 7.0 is currently targeted for deployment into the MDM/R production environment in mid November.

2.2 Processing Performance

The MDM/R continues to process meter read data at a sufficient rate to support the current volume of smart meters reporting daily data to production. In July 99.9999% and in August 100% of meter read data were processed according to contracted service levels. By the end of August, the MDM/R was processing daily meter read data from over 975K meters.

In July and August, contracted service levels were exceeded with respect to the processing of meter master data synchronizations, including enrolment of new smart meters into the MDM/R.

Synchronization files that are submitted to enroll 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 a situation related to the initial ramp up of large numbers of smart meters and will not be needed once full production volumes have been reached.

The SME continues to work with the largest Distributors in the province and their technology providers to ensure receipt of meter read data by the MDM/R of appropriate quality as elaborated below.

- Meter reads sent to the MDM/R must fulfill the Advanced Metering Infrastructure (AMI) functional specification (developed by the Ministry of Energy) requirement of containing at least 98% of the hourly interval data (i.e. no more than a 2% rate of estimating missing intervals).
- Meter read data sent to the MDM/R needs to be reasonably distributed over the midnight to 5 a.m. primary collection period (i.e. the system is not designed or sized to meet service levels if all the data is received at the end of the submission window).
- The preponderance of the daily meter read data for each meter must be “blocked” from midnight to midnight (i.e. minimal submittals of partial day data).

The same quality needs apply to all the LDCs in the province, but our focus to date has been on working with the largest Distributors because their conformance will have the greatest impact on performance. With this quality of submitted data and SME ongoing monitoring and tuning of the system, the MDM/R will be able to meet the processing requirements for the ~4.6 million smart meters projected when Ontario is fully under the time-of-use pricing regime.

2.3 Resourcing

The Smart Metering Entity continues to staff up for the increased workload projected with the Ontario Energy Board's (OEB's) Time-of-Use mandate. Many distributors have started to indicate a desire to accelerate their plans to meet both MDM/R enrolment and mandated TOU dates. On August 23rd, the registration and enrolment team completed its staffing growth plan to handle the volume of MDM/R enrolment anticipated under the TOU mandate. The MDM/R operations team hired one new member last month and is interviewing candidates to fill additional staffing needs by the end of 2010. We continue to monitor LDC support requirements and, if necessary, will adjust our staffing levels to match the level of support required.

2.4 Training

We continue to adjust our training and workshop session offerings to meet the needs of the LDCs. Recent adjustments have been made in recognition that the original introductory workshop is no longer needed, as all the LDCs have moved beyond the need for introductory information. 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 the year.

2.5 Additional Issues

The Cumulative Register Read Working Group (CRRWG) and its Design Sub-Committee (DSC) continue to work through the design of the MDM/R portion of the solution to the issues raised by Measurement Canada. These issues require the cumulative register reads to be on all time-of-use bills and the total energy consumption reported on the bill must equal the difference between the cumulative register reads at the beginning and end of the billing period.

In late August the full working group membership met to review the final portions of the design. The general view of the group was that the solution will satisfy Measurement Canada's requirements and will work for all the smart meters in the province. A meeting is scheduled for September 21, 2010 to present the solution to Measurement Canada. With Measurement Canada's concurrence that the design satisfies their requirements, the implementation of the design will move forward.

We have also scheduled a workshop on the new MDM/R interface that will be implemented to support the Measurement Canada requirements. This session will be held October 5, 2010 at the Toronto Congress Centre and will focus on providing LDCs sufficient information to begin developing their side of the interface.

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 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 cut-over 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; however, due to timing, the figures used throughout this report are from the LDCs filings for the month preceding the reporting period. 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 MDM/R production system. 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 August 31, 2010	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
Pre- Q2 2010	9	2,917,432	1,505,952
Q3 2010			
July 2010	1	20,597	6,679
August 2010	0	0	0
September 2010	1	130,390	
Q4 2010	11	275,726	
Q1 2011	14	537,648	
Q2 2011	6	194,143	
Q3 2011	1	34,592	
Q4 2011	0	0	
Other	0	0	
Not committed	33	558,635	
Totals	76	4,669,163	1,512,631
% Complete of total RPP Eligible Customers Enrolled in the MDM/R		32.4%	
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.			

3.2 MDM/R Enrolled Meter Counts by Distributor

The MDM/R Monthly Meter Counts 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* columns is the MDM/R production system. The *Total RPP Eligible Customers* comes from data filed by the LDCs with the OEB. The *% Complete* column indicates what percentage of the *Total RPP Eligible Customers* are currently enrolled in MDM/R production, as of the end of the reporting period.

As of August 31, 2010	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled Through 31-Jul	Total Meters Enrolled Through 31-Aug	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Chatham-Kent	2,056	2,301	245	26,352	8.7%
Halton Hills	408	6,679	6,271	20,597	32.4%
Horizon Utilities	78,433	99,715	21,282	231,314	43.1%
Hydro One	453,110	546,169	93,059	1,191,587	45.8%
Hydro Ottawa	4,998	24,992	19,994	294,766	8.5%
Milton Hydro	26,642	26,719	77	26,726	100.0%
NewmarketTay	25,948	25,986	38	31,953	81.3%
PowerStream	173,994	192,002	18,008	316,208	60.7%
Toronto Hydro	410,206	523,143	112,937	687,794	76.1%
Veridian	52,913	64,925	12,012	110,732	58.6%
Total Meter Counts	1,228,708	1,512,631	283,923	2,938,029	51.5%

3.3 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 August 31, 2010		Distributor Testing Activities with the MDM/R (Three Month Outlook)		
	Sep-10	Oct-10	Nov-10	
In Unit Testing	Bluewater	Bluewater	Bluewater	
	Chapleau	Chapleau	COLLUS Power	
	COLLUS Power	COLLUS Power	Erie Thames	
	Enersource	Enersource	Guelph Hydro	
	Espanola	Erie Thames	Haldimand County	
	Haldimand County	Espanola	Innisfil Hydro	
	Hearst Power	Guelph Hydro	Kingston Hydro	
	Innisfil Hydro	Haldimand County	Lakefront Utilities	
	Kitchener-Wilmot	Hearst Power	London Hydro	
	Lakefront Utilities	Innisfil Hydro	Niagara-on-the-Lake	
	Lakeland Power	Lakefront Utilities	West Coast Huron	
	London Hydro	London Hydro	Woodstock Hydro	
	Niagara-on-the-Lake	Niagara-on-the-Lake		
	Northern Ontario Wires	Northern Ontario Wires		
	Oakville Hydro	Oakville Hydro		
	Orillia Power	Orillia Power		
	PUC Distribution	West Coast Huron		
	Woodstock Hydro	Woodstock Hydro		
	In Enrolment Testing-SIT	Essex Power	Chapleau	COLLUS Power
		Lakeland Power	Espanola	Enersource
Oshawa PUC		Kitchener-Wilmot	Hearst Power	
Tillsonburg		Northern Ontario Wires	Oakville Hydro	
Waterloo North		Oshawa PUC	Woodstock Hydro	
West Perth Power		PUC Distribution		
	West Perth Power			
In Enrolment Testing- QT	Essex Power	Espanola	Chapleau	
	Tillsonburg	Essex Power	Enersource	
		Kitchener-Wilmot	Espanola	
		Lakeland Power	Hearst Power	
		Oshawa PUC	Kitchener-Wilmot	
		PUC Distribution	Northern Ontario Wires	
		Tillsonburg	Oshawa PUC	
		Waterloo North	PUC Distribution	
		West Perth Power	West Perth Power	
		Woodstock Hydro		
Cutover	Hydro One Brampton	Tillsonburg	Chapleau	
			Espanola	
			Essex Power	
			Lakeland Power	
			Northern Ontario Wires	
			Oshawa PUC	
			PUC Distribution	
			Waterloo North	
		West Perth Power		

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

The 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 indicates that the SME has not received a project plan but has received verbal confirmation of the LDC's three enrolment testing milestones. 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 four 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.

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.

- The End -