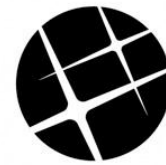


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**REPORT**

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**Smart Metering Entity (SME)  
Time-of-Use Mandate Progress Report  
Through November 30, 2010**

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**Issue 4.0 - December 20, 2010**

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# 1. Introduction

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## 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<sup>1</sup>) 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.

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<sup>1</sup> 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**

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### **2.1 MDM/R Operation and Software Testing**

The Smart Metering Entity (SME) continues to experience stable operation in the MDM/R production environment under Release 6.3 (R6.3) of the EnergyIP software solution. Where risks have been identified we feel that they are manageable. Therefore, we remain confident that we can continue to adequately support distributor enrolment and the implementation of TOU billing under the Board's TOU mandate.

Testing of EnergyIP Release 7.0 (R7.0) continues. The previous target rollout to production in mid-December was delayed to allow time for two significant defects to be fixed and retested. One of the defects affected all LDCs. The other was significant for one LDC due to the unique way they use synchronization to align their system databases with the MDM/R. The next target rollout date is the end of January. This date was established after consideration of feedback from production LDCs as well as LDCs who are nearing completion of formal enrolment testing. It accommodates a number of requirements including year-end code freezes for both the SME and LDCs, production LDC regression test plans, allows sufficient time for LDCs currently in enrolment testing to complete their cutover to production MDM/R operations under R6.3 and provides time for R7.0 validation and performance benchmark testing in the production support system.

To support LDC time-of-use implementation schedules, the SME has provided two separate environments for LDCs to complete enrolment testing and certification activities under either R6.3 or R7.0, depending on the timelines identified in their individual project plans.

### **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 November, 100% of meter read data were processed according to contracted service levels. By the end of November, the MDM/R was processing daily meter read data from over 1.3M meters.

In November, 100% 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**

The Smart Metering trainer who has been on the SME Registration and Enrolment team for almost a year will be leaving the team in mid-December. There will be a two week overlap with our new trainer who comes to us with significant MDM/R project management experience in Ontario over the last two years. We expect a smooth transition with no interruption to the MDM/R training schedule.

The project management experience of the new trainer also provides greater flexibility within our registration and enrolment team to potentially handle the concurrent enrolment of a larger number of LDCs than originally planned.

## 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. Although we will be bringing on a new trainer in December to deliver our training program, we expect to maintain the high quality of our training sessions throughout the transition.

## 2.5 Additional Risks and Issues

### Measurement Canada

In September the Cumulative Register Read Working Group (CRRWG) presented to Measurement Canada its proposed approach to address their concerns around time-of-use (TOU) electricity invoices issued to electricity purchasers in the Province of Ontario. Measurement Canada indicated the proposed approach as being satisfactory for the purposes of addressing their concerns. In early November the IESO and the Ministry of Energy met with Measurement Canada to discuss implementation plans for the solution to the Measurement Canada concerns. The meeting was very constructive and Measurement Canada indicated their intent to be proactively involved in the tracking of the solution implementation. The IESO 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.

Additional implementation details needed to be finalized before a high level implementation schedule could be provided. In this regard, the IESO did not provide the high-level schedule to the CRRWG members by the targeted end of November. However, sufficient progress has since been made on the details and a schedule should be available before the end-of-year holiday break.

### 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.

During November, five distributors have adjusted their schedules and deferred a significant portion of their enrolment activities to Q1 2011. There are 21 distributors scheduled to be in enrolment testing concurrently in January, 24 in February and 22 in March 2011. These projections would result in 33 different LDCs being involved in enrolment testing, with 20 of them cutting over to production during Q1 2011. The wave calendar illustrates that if distributors maintain the schedules that they have submitted to the SME, the number of organizations requesting enrolment testing in Q1 2011 could exceed the SME's capacity to enroll them all at the scheduled times. This situation is difficult to predict because distributor schedules are considered tentative and often change up to final confirmation a few weeks before the scheduled SIT start date.

Should the situation occur where the SME's enrolment capability cannot concurrently meet LDC demand, the SME would 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 on both the LDCs and the overall provincial TOU rollout objectives.

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

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### 3.1 November Highlights

Distributors in formal enrolment testing in November included:

Chapleau, Espanola, Essex Power, Lakeland Power, Oakville Hydro, Oshawa PUC, PUC Distribution, West Perth Power.

In November, Tillsonburg and Waterloo North successfully cutover to Production.

### 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 November 30, 2010	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
<b>Actuals - Based on Production LDCs data</b>			
Pre- Q2 2010	9	2,928,603	1,910,409
Q3 2010	2	152,655	9,019
Q4 2010			
October 2010	0	0	0
November 2010	2	57,791	54,314
<b>Actual Totals for LDCs in Production</b>	<b>13</b>	<b>3,139,049</b>	<b>1,973,742</b>
<b>Projected - Based on enrolment plans submitted to the SME</b>			
December 2010	3	88,526	
Q1 2011	19	341,918	
Q2 2011	19	473,056	
Q3 2011	9	150,360	
Q4 2011	1	50,124	
2012	0	0	
<b>Projected Totals for Committed LDCs</b>	<b>51</b>	<b>1,103,984</b>	
<b>Totals (Actual and Projected)</b>	<b>64</b>	<b>4,243,033</b>	<b>1,973,742</b>
<b>Not Committed - LDCs have not provided enrolment plans</b>			
Schedules not yet determined	12	465,603	
<b>Totals including non-committed LDCs</b>	<b>76</b>	<b>4,708,636</b>	<b>1,973,742</b>
<b>% Complete of total RPP Eligible Customers Enrolled in the MDM/R</b>		<b>41.9%</b>	
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 enrolled in MDM/R production as of the end of the reporting period.

As of November 30, 2010	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 31-Oct	Total Meters Enrolled through 30-Nov	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Chatham-Kent	16,358	22,714	6,356	31,361	72.4%
Halton Hills	8,807	8,807	0	20,461	43.0%
Horizon Utilities	157,927	158,798	871	231,827	68.5%
Hydro One	633,768	690,930	57,162	1,190,684	58.0%
Hydro One Brampton	212	212	0	132,194	0.2%
Hydro Ottawa	35,000	34,973	-27	296,860	11.8%
Milton Hydro	27,099	27,364	265	27,364	100.0%
NewmarketTay	29,672	29,672	0	31,953	92.9%
PowerStream	243,819	257,254	13,435	316,208	81.4%
Tillsonburg	0	6,279	6,279	6,608	95.0%
Toronto Hydro	581,162	581,162	0	691,032	84.1%
Veridian	86,952	107,542	20,590	111,314	96.6%
Waterloo North	0	48,035	48,035	51,183	93.8%
<b>Total Meter Counts</b>	<b>1,820,776</b>	<b>1,973,742</b>	<b>152,966</b>	<b>3,139,049</b>	<b>62.9%</b>

### 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 November 30, 2010	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Dec-10	Jan-11	Feb-11
<b>In Unit Testing</b>	Bluewater COLLUS Power E.L.K. Energy Erie Thames Guelph Hydro Haldimand County Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities London Hydro Middlesex Power Midland Power Niagara-on-the-Lake Orangeville Hydro Orillia Power Parry Sound Wasaga Wellington North West Coast Huron Whitby Hydro Woodstock Hydro	Bluewater Burlington Hydro COLLUS Power E.L.K. Energy Festival Hydro Greater Sudbury Guelph Hydro Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities London Hydro Middlesex Power Midland Power Niagara Peninsula Niagara-on-the-Lake Norfolk Power North Bay Hydro Orangeville Hydro Parry Sound St. Thomas Wasaga Wellington North Whitby Hydro Woodstock Hydro	Atikokan Hydro Bluewater Brant County Power Brantford Power Burlington Hydro Clinton Power E.L.K. Energy Festival Hydro Greater Sudbury Hydro Hawkesbury Niagara Peninsula Norfolk Power North Bay Hydro Orangeville Hydro Parry Sound Peterborough St. Thomas Wasaga Wellington North Whitby Hydro

As of November 30, 2010	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Dec-10	Jan-11	Feb-11
In Enrolment Testing - SIT	Northern Ontario Wires Orillia Power Sioux Lookout	COLLUS Power Erie Thames Guelph Hydro Haldimand County Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities Midland Power Niagara-on-the-Lake West Coast Huron Woodstock Hydro	Erie Thames Greater Sudbury Guelph Hydro Kingston Hydro London Hydro Midland Power Orangeville Hydro Parry Sound Wasaga Wellington North
In Enrolment Testing - QT	Essex Power Lakeland Power Oakville Hydro Oshawa PUC PUC Distribution West Perth Power	Chapleau COLLUS Power Haldimand County Northern Ontario Wires Orillia Power Sioux Lookout West Coast Huron Woodstock Hydro	COLLUS Power Erie Thames Guelph Hydro Haldimand County Innisfil Hydro Kingston Hydro Kitchener-Wilmot Lakefront Utilities Midland Power Niagara-on-the-Lake Orillia Power Sioux Lookout West Coast Huron Woodstock Hydro
Cutover	Essex Power Lakeland Power Oshawa PUC	Espanola Oakville Hydro PUC Distribution West Perth Power	Chapleau COLLUS Power Northern Ontario Wires Orillia Power Sioux Lookout West Coast Huron

### **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.



