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REPORT

**Smart Metering Entity (SME)
Time-of-Use Mandate Progress Report
Through September 30, 2011**

Issue 14.0 - October 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 (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). This report focuses on updates through the end of the indicated month. However, in the area of MDM/R readiness (Section 2) important updates that occurred between the end of the reporting month and the date the report is submitted to the OEB will also be reported. 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 (2011-2012)

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 the MDM/R Enrolment Wave Calendar 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 MDM/R production environment continued to experience stable and reliable operation in September, including the addition of 2 LDCs and around 88,000 meters to the MDM/R.

The IESO remains confident that with ongoing tuning, planned infrastructure improvements and collaborative support of LDCs, the MDM/R will continue to offer a stable system and effectively support LDCs time-of-use implementation plans and ramp up of meters to full provincial volumes.

2.2 Processing Performance

By the end of September, the MDM/R was supporting 59 LDCs in production with a total of over 3.8 million enrolled smart meters, and regularly processing meter reads from almost 3.1 million smart meters on a daily basis.

In September, 100% of the meter reads and meter master data updates were processed within contracted service levels. Billing quantity requests were processed within service levels except for one instance where a few requests for three LDCs were delayed for a short period.

Note: LDCs continue to be asked to schedule their synchronization files in advance whenever they contain an initial ramp-up of more than 15,000 meters in order to avoid conflicting requests. 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 SME continues to make resources available to LDCs in support of their time-of-use implementation plans. There were no significant resource changes in September.

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. For training details, please refer to the training page and workshop calendar for the remainder of 2011 and Q1 2012 on the SME website (<http://www.smi-ieso.ca/training>).

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

With most of the remaining non-production distributors in various stages of preparations to integrate with the MDM/R we are confident that the SME can continue to provide support to LDCs in all stages of enrolment testing.

The projected enrolment and cutover activities for the next four months now include:

- Five distributors are scheduled to complete cutover to production in October, none in November, one in December and none in January.
- Nine distributors are scheduled to be involved in enrolment testing and/or cutover activities in October, six in November, five in December and seven in January.

2.5 Additional Risks and Issues

Measurement Canada (MC)

As previously reported, all the changes required to the MDM/R to support the province's Measurement Canada 2011 Solution have been received and have been under test for several months. These changes, delivered as part of a new version of the software (Release 7.2) were made available for LDC testing on July 12. This provides a viable platform against which LDCs can test the changes to their systems which support the 2011 solution and prepare themselves for its migration into production.

The SME is working toward the targeted deployment timeline of mid-January that was shared with the LDCs in July, but we are dealing with a number of defects and cannot confirm yet that we will hit the targeted date. We continue to test new Release 7.2 functions and fixes to any defects that emerge in testing. We will provide further updates on the solution implementation and schedule in November following our assessment of the results of testing and any remaining defects.

The SME will require LDCs to complete a certification process before transitioning to the new XML Billing Service Standard interface of the Measurement Canada 2011 solution. This involves successfully performing a set of predefined test cases. The IESO published the certification requirements and test cases for LDCs to support this transition.

The SME continues to work closely with the LDCs as the solution rolls out and they prepare their systems. Workshops, drop-in sessions, and webinars are being offered to support the LDCs preparations for Release 7.2 and Measurement Canada 2011 solution. Please refer to the SME website (<http://smi-ieso.ca/>) for materials related to the promotion of Release 7.2 and the Measurement Canada 2011 Solution.

The SME and eMeter have continued discussions focused on the definition and development of the elements of the Measurement Canada 2012 Solution.

Distributor Readiness – MDM/R Integration and Meter Enrolment

3.1 September Highlights

In September, two LDCs completed their enrolment testing and cutover to the production MDM/R environment. By the end of September there were 59 LDCs in production with over 3.8 million meters enrolled in the MDM/R.

Enrolment activities in September included:

- **Cutover:** 2 LDCs - Brantford Power and Ottawa River completed cutover activities.
- **Enrolment Testing in Progress:** 3 LDCs - Centre Wellington Hydro, North Bay Hydro and Rideau St. Lawrence.
- **Unit Testing:** 8 LDCs were engaged in various stages of Unit testing. They included Bluewater Power, Cambridge and North Dumfries Hydro, Canadian Niagara Power, Festival Hydro, Greater Sudbury Hydro, Grimsby Power, Peterborough Distribution and Westario Power.

Note: By the end of September, there were only two LDCs that had not connected to and started testing with the MDM/R. There are two LDCs who completed enrolment testing prior to September and are scheduled to cutover to production in October.

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 Atikokan Hydro, Fort Frances, Hydro Hawkesbury, Kenora Hydro, Ottawa River, Parry Sound, Thunder Bay and West Coast Huron were not available from the OEB filings and therefore the source used for these numbers in the September 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 September 30, 2011	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
Actuals - Based on Production LDCs data			
Pre- Q2 2010	9	2,944,078	2,713,229
Q3 2010	2	155,827	154,677
Q4 2010	4	120,412	119,479
Q1 2011	13	281,522	281,351
Q2 2011	15	292,724	285,728
Q3 2011			
July 2011	8	234,279	228,983
August 2011	6	284,640	20,316
September 2011	2	47,814	37,415
Actual Totals for LDCs in Production	59	4,361,296	3,841,178
Projected - Based on enrolment plans submitted to the SME			
Q4 2011	6	84,745	
2012	7	200,304	
Projected Totals for Committed LDCs	13	285,049	
Totals (Actual and Projected)	72	4,646,345	3,841,178
Not Committed - LDCs have not provided enrolment plans			
Schedules not yet determined	2	95,290	
Totals including non-committed LDCs	74	4,741,635	3,841,178
% Complete of total RPP Eligible Customers Enrolled in the MDM/R		81.0%	
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 Atikokan Hydro, Fort Frances, Hydro Hawkesbury, Kenora Hydro, Ottawa River, Parry Sound, Thunder Bay and West Coast Huron were not available from the OEB filings and therefore the source used for these numbers in the September 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 September 30, 2011	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 31-Aug	Total Meters Enrolled through 30-Sep	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Atikokan Hydro	1	1,653	1,652	1,686	98.0%
Brant County Power	9,455	9,460	5	9,546	99.1%
Brantford Power	0	37,314	37,314	37,513	99.5%
Burlington Hydro	63,550	63,632	82	63,632	100.0%
Chapleau	1,252	1,255	3	1,274	98.5%
Chatham-Kent	31,772	31,772	0	31,772	100.0%
COLLUS Power	15,619	15,643	24	15,647	100.0%
E.L.K. Energy	11,023	11,033	10	11,163	98.8%
Enersource	584	3,709	3,125	190,104	2.0%
Erie Thames	17,701	17,701	0	17,886	99.0%
Espanola	3,278	3,279	1	3,287	99.8%
Essex Power	27,305	27,448	143	27,905	98.4%
Fort Frances	1	1	0	3,731	0.0%
Guelph Hydro	47,432	47,833	401	48,044	99.6%
Haldimand County	20,675	20,687	12	20,874	99.1%
Halton Hills	20,643	20,643	0	20,643	100.0%
Hearst Power	2,690	2,690	0	2,504	107.4%
Horizon Utilities	227,822	228,174	352	232,828	98.0%
Hydro Hawkesbury	5,350	5,350	0	5,350	100.0%
Hydro One	1,082,213	1,082,301	88	1,196,055	90.5%
Hydro One Brampton	133,645	134,034	389	135,184	99.1%
Hydro Ottawa	288,633	290,175	1,542	300,337	96.6%
Innisfil Hydro	14,548	14,556	8	14,697	99.0%

As of September 30, 2011	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 31-Aug	Total Meters Enrolled through 30-Sep	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Kenora Hydro	1	5,513	5,512	5,505	100.1%
Kingston Hydro	26,205	26,284	79	26,426	99.5%
Kitchener-Wilmot	86,075	86,265	190	86,583	99.6%
Lakefront Utilities	9,503	9,522	19	9,522	100.0%
Lakeland Power	9,513	9,537	24	9,466	100.8%
London Hydro	132,743	137,284	4,541	140,499	97.7%
Middlesex Power	7,894	7,902	8	7,902	100.0%
Midland Power	6,828	6,826	-2	6,826	100.0%
Milton Hydro	27,971	27,971	0	27,971	100.0%
NewmarketTay	29,672	29,672	0	32,342	91.7%
Niagara Peninsula	47,584	47,664	80	49,690	95.9%
Niagara-on-the-Lake	7,849	7,864	15	7,875	99.9%
Norfolk Power	17,660	17,665	5	18,803	93.9%
Northern Ontario Wires	5,776	5,776	0	6,057	95.4%
Oakville Hydro	64,243	64,507	264	62,442	103.3%
Orangeville Hydro	11,066	11,085	19	11,098	99.9%
Orillia Power	11,929	12,224	295	12,848	95.1%
Oshawa PUC	51,883	51,992	109	52,453	99.1%
Ottawa River	0	101	101	10,301	1.0%
Parry Sound	3,297	3,298	1	3,316	99.5%
PowerStream	287,746	299,204	11,458	312,000	95.9%
PUC Distribution	32,571	32,584	13	32,508	100.2%
Renfrew Hydro	108	108	0	3,872	2.8%
Sioux Lookout	1	2,692	2,691	2,692	100.0%
St. Thomas	203	16,260	16,057	16,260	100.0%
Thunder Bay	1	1	0	49,084	0.0%
Tillsonburg	6,323	6,327	4	6,670	94.9%
Toronto Hydro	612,241	612,241	0	698,549	87.6%
Veridian	111,659	111,719	60	112,224	99.6%
Wasaga	12,177	12,204	27	12,211	99.9%
Waterloo North	51,516	51,623	107	51,823	99.6%
Welland Hydro.	125	125	0	21,727	0.6%
Wellington North	113	113	0	3,593	3.1%
West Coast Huron	3,542	3,542	0	3,821	92.7%
Whitby Hydro	37,861	38,136	275	39,795	95.8%
Woodstock Hydro	13,817	15,004	1,187	14,880	100.8%
Total Meter Counts	3,752,888	3,841,178	88,290	4,361,296	88.1%

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.

As of September 30, 2011	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Oct-11	Nov-11	Dec-11
In Unit Testing	Cambridge CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Hydro Festival Hydro Grimsby Power Peterborough Westario Power	Festival Hydro Peterborough	Festival Hydro Peterborough
In Enrolment Testing - SIT	Bluewater Cambridge CNPI - OEP CNPI - Fort Erie CNPI - Port Colborne Hydro Greater Sudbury Hydro	Bluewater Cambridge CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Hydro Grimsby Power Westario Power	
In Enrolment Testing - QT	Centre Wellington Greater Sudbury Hydro North Bay Hydro	Bluewater Cambridge CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Hydro Greater Sudbury Hydro Grimsby Power Westario Power	Bluewater Cambridge CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Hydro Grimsby Power Westario Power
Cutover	Centre Wellington Embrun Hydro 2000 North Bay Hydro Rideau St. Lawrence	Greater Sudbury Hydro	Greater Sudbury Hydro

3.5 MDM/R Enrolment Wave Calendar (2011-2012)

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.
- Orange indicates that the LDC is scheduled for amalgamation.

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.

	MDMR Production LDCs	
1,686	Atikokan Hydro Inc.	
9,546	Brant County Power Inc	
37,513	Brantford Power Inc.*	
63,632	Burlington Hydro Inc.	
1,274	Chapleau Public Utilities Corp.	
31,772	Chatham-Kent Hydro Inc.	
15,647	Collus Power Corp	
11,163	E.L.K. Energy Inc.	
190,104	Enersource Hydro Mississauga Inc.	
17,886	Erie Thames Powerlines Corp. (amalgamated with Clinton Power and West Perth Power on June 1, 2011)	
3,287	Espanola Regional Hydro Distribution Corp.	
27,905	Essex Power Lines Corp.	
3,731	Fort Frances Power Corp.	
48,044	Guelph Hydro Electric Systems Inc.	
20,874	Haldimand County Hydro	
20,643	Halton Hills	
2,504	Hearst Power Distribution Company Ltd	
232,828	Horizon Utilities Corporation	
5,350	Hydro Hawkesbury Inc.	
1,196,055	Hydro One	
135,184	Hydro One Brampton Networks Inc.	
300,337	Hydro Ottawa Limited	
14,697	Innisfil Hydro Distribution Systems Ltd.	
5,505	Kenora Hydro Electric Corp Ltd	
26,426	Kitchener-Wilmot Hydro Inc.	
86,583	Kingston Hydro Corporation	
9,522	Lakefront Utilities Inc.	
9,466	Lakeland Power Distribution Ltd.	
140,499	London Hydro	
7,902	Middlesex Power Distribution Corp. (bought Newbury(185) and Dutton (622))	
6,826	Midland Power Utility Corp	
27,971	Milton Hydro	
32,342	Newmarket Hydro Ltd./Tay Hydro	
7,875	Niagara-on-the-Lake Hydro Inc.	
49,690	Niagara Peninsula Energy Inc. (includes Peninsula West @ 14,351)	
18,803	Northern Ontario Wires Inc.	
6,057	Norfolk Power Distribution Inc.	
62,442	Oakville Hydro Electricity Distribution Inc.	
11,098	Orangeville Hydro Ltd. (includes Grand Valley (659))	
12,848	Orillia Power Distribution Corp.	
52,453	Oshawa PUC Networks Inc.	
10,301	Ottawa River Power Corp.*	
3,316	Parry Sound Power Corp.	
312,000	PowerStream Inc	
32,508	PUC Distribution Inc.	
3,872	Renfrew Hydro Inc.	
2,692	Sioux Lookout Hydro	
16,260	St. Thomas Energy Inc.	
49,084	Thunder Bay Electricity Distribution Inc.	
6,670	Tillsonburg Hydro Inc.	
698,549	Toronto Hydro Electric Services Ltd.	
112,224	Veridian Connections	
12,211	Wasaga Distribution Inc.	
51,823	Waterloo North Hydro Inc.	
21,727	Welland Hydro-Electric System Corp.	
3,593	Wellington North Power Inc.	
3,821	West Coast Huron Energy Inc.	
39,795	Whitby Hydro Energy Services Corp.	
14,880	Woodstock Hydro Services Inc.	
4,361,296	Production total customer count	
4,741,635	All LDC total customer count	

* LDC that cutover to MDM/R production in September 2011