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REPORT

**Smart Metering Entity (SME)
Time-of-Use Mandate Progress Report
Through August 31, 2011**

Issue 13.0 - September 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 August, including the addition of 6 LDCs and around 100,000 meters to the MDM/R, except for two incidents noted below where meter read processing was delayed.

The IESO remains confident that with ongoing tuning, planned infrastructure improvements, and collaborative support of LDCs, that 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 August, the MDM/R was supporting 57 LDCs in production with a total of over 3.75 million enrolled smart meters, and regularly processing meter reads from around 3 million smart meters on a daily basis.

In August, 100% of the meter reads were processed within contracted service levels except for 2 incidents that delayed the processing of meter reads for 3 LDCs. These incidents were addressed by the SME and have not re-occurred. 100% of the meter master data updates, including enrolment of new smart meters, was processed within contracted service levels.

In August, the SME implemented additional improvements to the management of the storage infrastructure to support the increasing volumes of LDCs and meters.

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 August.

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 2011.

2.5 Additional Risks and Issues

Measurement Canada (MC)

As previously reported all the changes required in the MDM/R to support the provinces 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 IESO will continue to test new Release 7.2 functions and fixes to any defects that emerge in testing this latest release.

The SME continues to work closely with the LDCs as the solution rolls out and they prepare their systems. Additional workshops have been scheduled for September to provide LDCs, their agents and consultants detailed insight into the new rules and business implications for operation under EnergyIP Release 7.2 and the Measurement Canada 2011 Solution. We will continue to hold additional workshops as necessary until this next MDM/R release is promoted to production. We have also created a new page on our website (<http://smi-ieso.ca/>) devoted to informational materials related to the promotion of R7.2 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 Enrolment Schedules

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:

- 2 distributors are scheduled to complete cutover to production in September, 5 in October, 1 in November and 4 in December.
- 5 distributors are scheduled to be involved in enrolment testing and/or cutover activities in September, 11 in October, 6 in November and 3 in December.

There are no additional risks or 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 August Highlights

In August, 6 LDCs completed their enrolment testing and cutover to the production MDM/R environment. There are now a total of 57 LDCs in production with over 3.75 million meters enrolled in the MDM/R.

Enrolment activities in August included:

- **Cutovers** – The 6 LDCs that cutover to production are Enersource, Renfrew Hydro, St. Thomas Energy, Thunder Bay, Welland Hydro and Wellington North Power.
- **Enrolment Testing** – 4 distributors were in formal enrolment testing, including Brantford Power, North Bay Hydro, Ottawa River and Rideau St. Lawrence..
- **Unit Testing** – 10 additional LDCs were engaged in various stages of Unit testing.

Note: By the end of August, there were only 3 LDCs remaining who have not connected and begun testing with the MDM/R.

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, Kenora Hydro, Parry Sound, Renfrew, Thunder Bay and Wellington North were not available from the OEB filings and therefore the source used for these numbers in the August 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 August 31, 2011	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
Actuals - Based on Production LDCs data			
Pre- Q2 2010	9	2,943,352	2,699,729
Q3 2010	2	155,416	154,288
Q4 2010	4	120,279	119,235
Q1 2011	13	281,271	277,724
Q2 2011	15	292,271	276,459
Q3 2011			
July 2011	8	234,174	224,319
August 2011	6	284,608	4,607
Actual Totals for LDCs in Production	57	4,311,371	3,756,361
Projected - Based on enrolment plans submitted to the SME			
September 2011	2	47,783	
Q4 2011	10	195,667	
2012	3	89,630	
Projected Totals for Committed LDCs	15	333,080	
Totals (Actual and Projected)	72	4,644,451	3,756,361
Not Committed - LDCs have not provided enrolment plans			
Schedules not yet determined	2	95,303	
Totals including non-committed LDCs	74	4,739,754	3,756,361
% Complete of total RPP Eligible Customers Enrolled in the MDM/R		79.3%	
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, Kenora Hydro, Parry Sound, Renfrew, Thunder Bay and Wellington North were not available from the OEB filings and therefore the source used for these numbers in the August 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 August 31, 2011	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
Atikokan Hydro	1	1	0	1,686	0.1%
Brant County Power	9,387	9,455	68	9,546	99.0%
Burlington Hydro	63,556	63,550	-6	63,550	100.0%
Chapleau	1,252	1,252	0	1,274	98.3%
Chatham-Kent	31,772	31,772	0	31,772	100.0%
COLLUS Power	15,542	15,619	77	15,475	100.9%
E.L.K. Energy	10,765	11,023	258	11,163	98.7%
Enersource	0	584	584	189,824	0.3%
Erie Thames	16,062	17,701	1,639	17,885	99.0%
Espanola	3,276	3,278	2	3,286	99.8%
Essex Power	27,172	27,305	133	27,914	97.8%
Fort Frances	1	1	0	3,731	0.0%
Guelph Hydro	47,432	47,432	0	48,044	98.7%
Haldimand County	20,647	20,675	28	20,849	99.2%
Halton Hills	20,643	20,643	0	20,643	100.0%
Hearst Power	2,623	2,690	67	2,504	107.4%
Horizon Utilities	227,631	227,822	191	232,533	98.0%
Hydro Hawkesbury	5,343	5,350	7	5,350	100.0%
Hydro One	1,079,931	1,082,213	2,282	1,195,154	90.6%
Hydro One Brampton	133,351	133,645	294	134,773	99.2%
Hydro Ottawa	286,920	288,633	1,713	299,856	96.3%
Innisfil Hydro	14,534	14,548	14	14,699	99.0%

As of August 31, 2011	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
Kenora Hydro	1	1	0	5,505	0.0%
Kingston Hydro	26,236	26,205	-31	26,350	99.4%
Kitchener-Wilmot	85,671	86,075	404	86,498	99.5%
Lakefront Utilities	9,546	9,503	-43	9,503	100.0%
Lakeland Power	9,506	9,513	7	9,444	100.7%
London Hydro	53,625	132,743	79,118	140,499	94.5%
Middlesex Power	7,888	7,894	6	7,894	100.0%
Midland Power	6,828	6,828	0	6,828	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	47,388	47,584	196	49,617	95.9%
Niagara-on-the-Lake	7,814	7,849	35	7,860	99.9%
Norfolk Power	17,655	17,660	5	18,800	93.9%
Northern Ontario Wires	5,776	5,776	0	6,057	95.4%
Oakville Hydro	64,150	64,243	93	62,317	103.1%
Orangeville Hydro	10,725	11,066	341	11,089	99.8%
Orillia Power	11,900	11,929	29	12,826	93.0%
Oshawa PUC	51,766	51,883	117	52,453	98.9%
Parry Sound	192	3,297	3,105	3,316	99.4%
PowerStream	286,841	287,746	905	312,000	92.2%
PUC Distribution	32,551	32,571	20	32,499	100.2%
Renfrew Hydro	0	108	108	3,899	2.8%
Sioux Lookout	1	1	0	2,692	0.0%
St. Thomas	0	203	203	16,263	1.2%
Thunder Bay	0	1	1	49,038	0.0%
Tillsonburg	6,321	6,323	2	6,660	94.9%
Toronto Hydro	612,241	612,241	0	699,617	87.5%
Veridian	110,143	111,659	1,516	112,107	99.6%
Wasaga	12,120	12,177	57	12,179	100.0%
Waterloo North	51,483	51,516	33	51,722	99.6%
Welland Hydro.	0	125	125	21,994	0.6%
Wellington North	0	3,586	3,586	3,590	99.9%
West Coast Huron	3,542	3,542	0	3,821	92.7%
Whitby Hydro	37,557	37,861	304	39,730	95.3%
Woodstock Hydro	13,798	13,817	19	14,880	92.9%
Total Meter Counts	3,658,749	3,756,361	97,612	4,311,371	87.1%

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 August 31, 2011	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Sep-11	Oct-11	Nov-11
In Unit Testing	Bluewater Cambridge Centre Wellington Festival Hydro Greater Sudbury Peterborough	Bluewater Cambridge Festival Hydro Peterborough	Festival Hydro Peterborough
In Enrolment Testing - SIT	Centre Wellington CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne	Bluewater Cambridge CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Greater Sudbury Grimsby Power Westario Power	Bluewater Cambridge
In Enrolment Testing - QT	Centre Wellington North Bay Hydro Rideau St. Lawrence	Centre Wellington CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Greater Sudbury Grimsby Power	Bluewater Cambridge Greater Sudbury Grimsby Power Westario Power
Cutover	Brantford Power Ottawa River	Centre Wellington Embrun Hydro 2000 North Bay Hydro Rideau St. Lawrence	CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Greater Sudbury Grimsby Power

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
63,550	Burlington Hydro Inc.
1,274	Chapleau Public Utilities Corp.
31,772	Chatham-Kent Hydro Inc.
15,475	Collus Power Corp
11,163	E.L.K. Energy Inc.
189,824	Enersource Hydro Mississauga Inc.*
17,885	Erie Thames Powerlines Corp. (amalgamated with Clinton Power and West Perth Power on June 1, 2011)
3,286	Espanola Regional Hydro Distribution Corp.
27,914	Essex Power Lines Corp.
3,731	Fort Frances Power Corp.
48,044	Guelph Hydro Electric Systems Inc.
20,849	Haldimand County Hydro
20,643	Halton Hills
2,504	Hearst Power Distribution Company Ltd
232,533	Horizon Utilities Corporation
5,350	Hydro Hawkesbury Inc.
1,195,154	Hydro One
134,773	Hydro One Brampton Networks Inc.
299,856	Hydro Ottawa Limited
14,699	Innisfil Hydro Distribution Systems Ltd.
5,505	Kenora Hydro Electric Corp Ltd
26,350	Kitchener-Wilmot Hydro Inc.
86,498	Kingston Hydro Corporation
9,503	Lakefront Utilities Inc.
9,444	Lakeland Power Distribution Ltd.
140,499	London Hydro
7,894	Middlesex Power Distribution Corp. (bought Newbury(185) and Dutton (622))
6,828	Midland Power Utility Corp
27,971	Milton Hydro
32,342	Newmarket Hydro Ltd./Tay Hydro
7,860	Niagara-on-the-Lake Hydro Inc.
49,617	Niagara Peninsula Energy Inc. (includes Peninsula West @ 14,351)
18,800	Northern Ontario Wires Inc.
6,057	Norfolk Power Distribution Inc.
62,317	Oakville Hydro Electricity Distribution Inc.
11,089	Orangeville Hydro Ltd. (includes Grand Valley (659))
12,826	Orillia Power Distribution Corp.
52,453	Oshawa PUC Networks Inc.
3,316	Parry Sound Power Corp.
312,000	PowerStream Inc
32,499	PUC Distribution Inc.
3,899	Renfrew Hydro Inc.*
2,692	Sioux Lookout Hydro
16,263	St. Thomas Energy Inc.*
49,038	Thunder Bay Electricity Distribution Inc.*
6,660	Tillsonburg Hydro Inc.
699,617	Toronto Hydro Electric Services Ltd.
112,107	Veridian Connections
12,179	Wasaga Distribution Inc.
51,722	Waterloo North Hydro Inc.
21,994	Welland Hydro-Electric System Corp.*
3,590	Wellington North Power Inc.*
3,821	West Coast Huron Energy Inc.
39,730	Whitby Hydro Energy Services Corp.
14,880	Woodstock Hydro Services Inc.
4,311,371	Production total customer count
4,739,754	All LDC total customer count

* LDCs that cutover to MDM/R Production in August 2011