

**EXTERNAL**

**REPORT**



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

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**Issue 12.0 - August 20, 2011**

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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). 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)

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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)

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**

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### **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 July, including the addition of 8 LDCs and around 200,000 meters to the MDM/R.

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 July, the MDM/R was supporting 51 LDCs in production with a total of over 3.65 million enrolled smart meters, and regularly processing meter reads from over 2.8 million smart meters on a daily basis.

In July, 100% of the meter reads were processed within contracted service levels. With the exception of one day affecting a few LDCs, 100% of the meter master data updates, including enrolment of new smart meters, were also processed within contracted service levels. Performance to service levels of meter master data updates was restored for all LDCs following removal of a change that, although correcting a known defect, also introduced an unanticipated slowdown in processing.

In July, the SME implemented an enhanced storage infrastructure for the production environment, delivering some performance improvements. Further enhancements to the infrastructure are underway as planned to support increasing processing volumes.

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 July.

## 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 of the required system changes for the Measurement Canada 2011 Solution have now been received and have been under test for several months. The combined Release 7.2 and Measurement Canada 2011 Solution was made available for LDC testing on July 12. Despite the defects identified during IESO testing that must be fixed before production use, this release provides a viable test platform. We are encouraging LDCs to begin testing as early as possible to be adequately prepared when this release is promoted to production.

We have issued an updated schedule to all the LDCs and other stakeholders indicating that the January 1, 2012 Measurement Canada deadline will not be met. Measurement Canada, the Ministry of Energy and the OEB were also briefed on the updated schedule. This revised schedule:

- Calls for deployment of the solution to Production in mid to late January rather than the previously targeted early November.
- Reflects the need to address defects identified through IESO and LDC testing.
- Reflects the need to suspend IT changes in December and early January because of the lower levels of support available during the holiday season.
- Shows that the earliest the new billing interface would be available in Production has shifted from early November to mid to late January. Some LDCs that have elected to halt or not begin development of the existing billing interface to the MDM/R, and instead focus their development and testing efforts on the new billing interface under Release 7.2, may be affected by changes to the deployment schedule.

The IESO continues to work closely with the LDCs as the solution rolls out and they prepare their systems. Workshops were held on July 13 and July 27 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.

The IESO and eMeter have continued discussions focused on the possibility of an earlier delivery of one or more 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:

- 6 distributors are scheduled to complete cutover to production in August, 2 in September, 5 in October and 3 in November.
- 7 distributors are scheduled to be involved in enrolment testing and/or cutover activities in August, 7 in September, 11 in October and 5 in November.

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

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### 3.1 July Highlights

In July, 8 LDCs completed their enrolment testing and cutover to the production MDM/R environment. There are now a total of 51 LDCs in production with over 3.65 million meters enrolled in the MDM/R.

Enrolment activities in July included:

- **Cutovers** – The 8 LDCs that cutover to production are Brant County Power, E.L.K. Energy, Hearst Power, Hydro Hawkesbury, London Hydro, Niagara Peninsula, Parry Sound Power and Wasaga.
- **Enrolment Testing** - 9 distributors were in formal enrolment testing, including Brantford Power, Cooperative Hydro Embrun, Enersource, Hydro 2000, Renfrew Hydro, St. Thomas Energy, Thunder Bay, Welland Hydro and Wellington North Power.
- **Unit Testing** - 10 additional LDCs were engaged in various stages of Unit testing.

Note: By the end of July, there were only 4 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, E.L.K. Energy, Fort Frances, Kenora Hydro, Lakefront and Parry Sound were not available from the OEB filings and therefore the source used for these numbers in the July 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 July 31, 2011	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
<b>Actuals - Based on Production LDCs data</b>			
Pre- Q2 2010	9	2,939,098	2,693,122
Q3 2010	2	155,122	153,994
Q4 2010	4	120,224	119,076
Q1 2011	13	280,943	275,433
Q2 2011	15	292,134	275,681
Q3 2011			
July 2011	8	233,843	141,443
<b>Actual Totals for LDCs in Production</b>	<b>51</b>	<b>4,021,364</b>	<b>3,658,749</b>
<b>Projected - Based on enrolment plans submitted to the SME</b>			
August 2011	6	284,777	
September 2011	2	60,851	
Q4 2011	11	206,138	
2012	1	19,335	
<b>Projected Totals for Committed LDCs</b>	<b>20</b>	<b>571,101</b>	
<b>Totals (Actual and Projected)</b>	<b>71</b>	<b>4,592,465</b>	<b>3,658,749</b>
<b>Not Committed - LDCs have not provided enrolment plans</b>			
Schedules not yet determined	3	141,153	
<b>Totals including non-committed LDCs</b>	<b>74</b>	<b>4,733,618</b>	<b>3,658,749</b>
<b>% Complete of total RPP Eligible Customers Enrolled in the MDM/R</b>		<b>77.3%</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 number of meters enrolled in the MDM/R for Atikokan Hydro, E.L.K. Energy, Fort Frances, Kenora Hydro, Lakefront and Parry Sound were not available from the OEB filings and therefore the source used for these numbers in the July 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 July 31, 2011	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 30-Jun	Total Meters Enrolled through 31-Jul	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	0	9,387	9,387	9,546	98.3%
Burlington Hydro	63,379	63,556	177	63,556	100.0%
Chapleau	1,252	1,252	0	1,274	98.3%
Chatham-Kent	31,799	31,772	-27	31,772	100.0%
COLLUS Power	15,527	15,542	15	15,546	100.0%
E.L.K. Energy	0	10,765	10,765	11,069	97.3%
Erie Thames	16,025	16,062	37	17,885	89.8%
Espanola	3,277	3,276	-1	3,287	99.7%
Essex Power	27,134	27,172	38	27,854	97.6%
Fort Frances	1	1	0	3,731	0.0%
Guelph Hydro	44,509	47,432	2,923	48,044	98.7%
Haldimand County	20,615	20,647	32	20,842	99.1%
Halton Hills	20,623	20,643	20	20,643	100.0%
Hearst Power	0	2,623	2,623	2,504	104.8%
Horizon Utilities	227,339	227,631	292	232,521	97.9%
Hydro Hawkesbury	0	5,343	5,343	5,350	99.9%
Hydro One	1,079,931	1,079,931	0	1,193,323	90.5%
Hydro One Brampton	133,024	133,351	327	134,479	99.2%
Hydro Ottawa	264,087	286,920	22,833	299,576	95.8%
Innisfil Hydro	14,511	14,534	23	14,674	99.0%

As of July 31, 2011	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 30-Jun	Total Meters Enrolled through 31-Jul	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Kenora Hydro	1	1	0	5,509	0.0%
Kingston Hydro	116	26,236	26,120	26,335	99.6%
Kitchener-Wilmot	85,389	85,671	282	86,345	99.2%
Lakefront Utilities	9,462	9,546	84	9,548	100.0%
Lakeland Power	9,492	9,506	14	9,448	100.6%
London Hydro	0	53,625	53,625	140,499	38.2%
Middlesex Power	7,885	7,888	3	7,888	100.0%
Midland Power	6,826	6,828	2	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	0	47,388	47,388	49,438	95.9%
Niagara-on-the-Lake	7,811	7,814	3	7,829	99.8%
Norfolk Power	17,632	17,655	23	18,796	93.9%
Northern Ontario Wires	5,776	5,776	0	6,057	95.4%
Oakville Hydro	62,395	64,150	1,755	62,219	103.1%
Orangeville Hydro	10,728	10,725	-3	11,038	97.2%
Orillia Power	11,866	11,900	34	12,808	92.9%
Oshawa PUC	51,306	51,766	460	52,453	98.7%
Parry Sound	0	192	192	3,301	5.8%
PowerStream	286,674	286,841	167	312,000	91.9%
PUC Distribution	32,527	32,551	24	32,483	100.2%
Sioux Lookout	1	1	0	2,688	0.0%
Tillsonburg	6,319	6,321	2	6,656	95.0%
Toronto Hydro	612,241	612,241	0	697,640	87.8%
Veridian	109,691	110,143	452	111,953	98.4%
Wasaga	0	12,120	12,120	12,136	99.9%
Waterloo North	51,375	51,483	108	51,667	99.6%
West Coast Huron	3,542	3,542	0	3,821	92.7%
Whitby Hydro	37,549	37,557	8	39,634	94.8%
Woodstock Hydro	13,788	13,798	10	14,872	92.8%
<b>Total Meter Counts</b>	<b>3,461,069</b>	<b>3,658,749</b>	<b>197,680</b>	<b>4,021,364</b>	<b>91.0%</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.

As of July 31, 2011	Distributor Testing Activities with the MDM/R (Three Month Outlook)		
	Aug-11	Sep-11	Oct-11
In Unit Testing	Bluewater Cambridge Centre Wellington CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Festival Hydro Grimsby Power Peterborough Rideau St. Lawrence Westario Power	Bluewater Cambridge Centre Wellington Festival Hydro Grimsby Power Peterborough Westario Power	Cambridge Festival Hydro
In Enrolment Testing - SIT	Brantford Power North Bay Hydro Rideau St. Lawrence	Bluewater Centre Wellington CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Peterborough	Bluewater Cambridge CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Grimsby Power Westario Power
In Enrolment Testing - QT	Brantford Power North Bay Hydro St. Thomas Welland Hydro.	Centre Wellington North Bay Hydro Rideau St. Lawrence	Bluewater Centre Wellington CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Grimsby Power Peterborough
Cutover	Enersource Renfrew Hydro St. Thomas Thunder Bay Welland Hydro. Wellington North	Brantford Power North Bay Hydro	Centre Wellington Embrun Hydro 2000 Ottawa River Peterborough Rideau St. Lawrence

### **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.

