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REPORT

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

Issue 11.0 - July 20, 2011

Table of Contents

Table of Contents	1
1. Introduction	2
1.1 Purpose.....	2
1.2 How to Use this Document	2
2. SME and MDM/R Readiness – Relevant Issues	4
2.1 MDM/R Operation and Software Testing	4
2.2 Processing Performance	4
2.3 Resourcing	4
2.4 Training	5
2.5 Additional Risks and Issues	5
3. Distributor Readiness – MDM/R Integration and Meter Enrolment	7
3.1 June Highlights.....	7
3.2 MDM/R Cutover Targets.....	7
3.3 MDM/R Enrolled Meter Counts by Distributor	9
3.4 Distributor Testing Activities with the MDM/R (Three Month Outlook)	11
3.5 MDM/R Enrolment Wave Calendar (2011-2012).....	13

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)

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 under EnergyIP R7.0 continued to experience stable and reliable operation in June, including the addition of 3 LDCs and around 170,000 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 June, the MDM/R was supporting 43 LDCs in production with a total of over 3.46 million enrolled smart meters, and regularly processing meter reads from over 2.7 million smart meters on a daily basis.

In June, 100% of the meter master data updates, including enrolment of new smart meters, were processed within contracted service levels. Except for one day in June, meter read data was processed within contracted service levels; the impact of the service level miss to the affected LDCs was not substantial.

The SME continues to monitor and tune the system, including putting in place the necessary infrastructure to support increasing volumes of LDCs and meters towards full provincial volumes. On July 10, the SME implemented an enhanced data storage system to further increase MDM/R performance and storage capacity.

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 June.

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, a revised high-level R7.2 target deployment schedule was communicated to the LDCs, the Ministry of Energy and the OEB in early June. This plan changed the strategy for promoting R7.2 to production. Previously two separate promotions were planned, the first being a base version of R7.2, followed by a second promotion of the balance of the Measurement Canada 2011 Solution. The impact of several changes to scheduled deliveries drove the convergence of the deployment plan into a single deployment of the full R7.2 and Measurement Canada 2011 Solution. All required system changes for the MC 2011 Solution have now been received and are under test, however, three important ramifications of the revised deployment schedule are highlighted below:

- LDCs will be able to begin testing the full breadth of the Measurement Canada 2011 Solution earlier than in the previous plan; and,
- Some LDCs that anticipated a R7.2 cutover to MDM/R production as early as mid August, will now have to wait several months for the availability of the new Standard XML Billing Interface in production; and,
- Some recent delays in the scheduled delivery of defect corrections could adversely affect the current targeted deployment of the full R7.2 and MC 2011 Solution to production in late October or early November. These new dates and associated regression testing are still being assessed and the overall schedule will be revised as necessary in late July or early August.

The combined Release 7.2 and Measurement Canada 2011 Solution was promoted to the Sandbox environment for LDC testing on July 12th. We encourage LDCs to begin testing as early as possible to be adequately prepared when this release is promoted to production.

The SME will continue to work closely with the LDCs as the solution rolls out and they prepare their systems. On July 13th a workshop was conducted 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 same workshop will be repeated on July 27th.

The IESO and eMeter have begun discussions focused on the possibility of an earlier delivery of one or more elements of the Measurement Canada 2012 Solution. Subsequent monthly reports will provide updates on the results of these discussions.

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:

- 9 distributors are scheduled to complete cutover to production in July, 7 in August, 1 in September and 4 in October.
- 15 distributors are scheduled to be involved in enrolment testing and/or cutover activities in July, 8 in August, 7 in September and 9 in October.

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 June Highlights

In June, 3 LDCs completed their enrolment testing and cutover to the production MDM/R environment. There are now a total of 43 LDCs in production with over 3.46 million meters enrolled in the MDM/R.

On June 1, 2011, Clinton Power and West Perth Power amalgamated with Erie Thames Powerlines. They will now be considered as one entity throughout this report. This implies that the total number of LDCs in Ontario has changed from 76 to 74.

Enrolment activities in June included:

- **Cutovers** - 3 LDCs completed their formal enrolment testing and cutover to production. These are Kingston, Niagara-on-the-Lake and Whitby.
- **Enrolment Testing** - 16 distributors were in formal enrolment testing, including Brant County Power, Cooperative Hydro Embrun, E.L.K. Energy, Enersource, Hearst Power, Hydro 2000, Hydro Hawkesbury, London Hydro, Niagara Peninsula, Ottawa River, Parry Sound Power, Renfrew Hydro, St. Thomas Energy, Thunder Bay, Wasaga and Wellington North Power.
- **Unit Testing** - 9 additional LDCs were engaged in various stages of Unit testing.

Note: By the end of June, there were only 6 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, Kingston Hydro and Whitby Hydro were not available from the OEB filings and therefore the source used for these numbers in the June 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 June 30, 2011	MDM/R Cutover Targets		
	Production LDCs	RPP Eligible Customers	Enrolled in MDMR
Actuals - Based on Production LDCs data			
Pre- Q2 2010	9	2,938,397	2,669,405
Q3 2010	2	154,817	153,647
Q4 2010	4	120,079	118,492
Q1 2011	13	280,620	273,157
Q2 2011			
April 2011	1	20,833	20,615
May 2011	11	197,414	180,277
June 2011	3	73,648	45,476
Actual Totals for LDCs in Production	43	3,785,808	3,461,069
Projected - Based on enrolment plans submitted to the SME			
Q3 2011	17	558,491	
Q4 2011	10	249,171	
2012	1	19,335	
Projected Totals for Committed LDCs	28	826,997	
Totals (Actual and Projected)	71	4,612,805	3,461,069
Not Committed - LDCs have not provided enrolment plans			
Schedules not yet determined	3	118,585	
Totals including non-committed LDCs	74	4,731,390	3,461,069
% Complete of total RPP Eligible Customers Enrolled in the MDM/R		73.2%	
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, Kingston Hydro and Whitby Hydro were not available from the OEB filings and therefore the source used for these numbers in the June 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 June 30, 2011	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 31-May	Total Meters Enrolled through 30-Jun	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Atikokan Hydro	1	1	0	1,686	0.1%
Burlington Hydro	63,673	63,379	-294	63,500	99.8%
Chapleau	1,252	1,252	0	1,274	98.3%
Chatham-Kent	31,799	31,799	0	31,839	99.9%
COLLUS Power	15,443	15,527	84	15,531	100.0%
Erie Thames	13,963	16,025	2,062	17,885	89.6%
Espanola	3,277	3,277	0	3,287	99.7%
Essex Power	27,134	27,134	0	27,917	97.2%
Fort Frances	1	1	0	3,729	0.0%
Guelph Hydro	14,458	44,509	30,051	48,044	92.6%
Haldimand County	20,502	20,615	113	20,833	99.0%
Halton Hills	20,480	20,623	143	20,623	100.0%
Horizon Utilities	226,255	227,339	1,084	232,786	97.7%
Hydro One	1,076,228	1,079,931	3,703	1,193,323	90.5%
Hydro One Brampton	132,642	133,024	382	134,194	99.1%
Hydro Ottawa	177,159	264,087	86,928	299,312	88.2%
Innisfil Hydro	14,492	14,511	19	14,670	98.9%

As of June 30, 2011	MDM/R Enrolled Meter Counts by Distributor				
Distributor	Total Meters Enrolled through 31-May	Total Meters Enrolled through 30-Jun	Increased Meter Enrolment this Month	Total RPP Eligible Customers	% Complete for Production LDCs
Kenora Hydro	1	1	0	5,511	0.0%
Kingston Hydro	0	116	116	26,345	0.4%
Kitchener-Wilmot	85,116	85,389	273	86,198	99.1%
Lakefront Utilities	9,510	9,462	-48	9,539	99.2%
Lakeland Power	9,479	9,492	13	9,437	100.6%
Middlesex Power	7,617	7,885	268	7,885	100.0%
Midland Power	6,821	6,826	5	6,826	100.0%
Milton Hydro	27,465	27,971	506	27,971	100.0%
NewmarketTay	29,672	29,672	0	32,342	91.7%
Niagara-on-the-Lake	0	7,811	7,811	7,811	100.0%
Norfolk Power	17,430	17,632	202	18,793	93.8%
Northern Ontario Wires	5,776	5,776	0	6,057	95.4%
Oakville Hydro	64,088	62,395	-1,693	62,074	100.5%
Orangeville Hydro	10,464	10,728	264	11,037	97.2%
Orillia Power	11,790	11,866	76	12,732	93.2%
Oshawa PUC	51,052	51,306	254	52,453	97.8%
PowerStream	285,832	286,674	842	312,000	91.9%
PUC Distribution	32,420	32,527	107	32,475	100.2%
Sioux Lookout	1	1	0	2,691	0.0%
Tillsonburg	6,309	6,319	10	6,650	95.0%
Toronto Hydro	612,241	612,241	0	696,923	87.8%
Veridian	109,427	109,691	264	111,901	98.0%
Waterloo North	51,026	51,375	349	51,539	99.7%
West Coast Huron	3,542	3,542	0	3,821	92.7%
Whitby Hydro	0	37,549	37,549	39,492	95.1%
Woodstock Hydro	13,756	13,788	32	14,872	92.7%
Total Meter Counts	3,289,594	3,461,069	171,475	3,785,808	91.4%

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 June 30, 2011	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Jul-11	Aug-11	Sep-11
In Unit Testing	Bluewater Brantford Power Cambridge Centre Wellington Greater Sudbury North Bay Hydro Peterborough Rideau St. Lawrence Welland Hydro.	Bluewater Cambridge Centre Wellington Festival Hydro Peterborough Rideau St. Lawrence	Bluewater Cambridge Centre Wellington Festival Hydro Peterborough
In Enrolment Testing - SIT	Brantford Power St. Thomas Welland Hydro.	Brantford Power Greater Sudbury Rideau St. Lawrence	Bluewater Centre Wellington CNPI - EOP CNPI - Fort Erie CNPI - Port Colborne Peterborough

As of June 30, 2011	<i>Distributor Testing Activities with the MDM/R (Three Month Outlook)</i>		
	Jul-11	Aug-11	Sep-11
In Enrolment Testing - QT	Brant County Power E.L.K. Energy Embrun Enersource Hydro 2000 Niagara Peninsula Parry Sound Renfrew Hydro St. Thomas Thunder Bay Welland Hydro. Wellington North	Brantford Power Greater Sudbury St. Thomas Welland Hydro.	Centre Wellington Greater Sudbury Rideau St. Lawrence
Cutover	Brant County Power E.L.K. Energy Hearst Power Hydro Hawkesbury London Hydro Niagara Peninsula Parry Sound Renfrew Hydro Thunder Bay Wasaga Wellington North	Embrun Enersource Hydro 2000 Renfrew Hydro St. Thomas Welland Hydro. Wellington North	Brantford Power Greater Sudbury

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.

