Project Plan Workshop

Date: Tuesday July 20, 2010

Agenda

Introductions & Workshop Objective	9:00am – 9:30am	Jim Murphy
Project Plan Overview	9:30am – 9:45am	Jim Murphy
Task Categories Review		
MDM/R Training – CIS Implementation	9:45am – 10:00	Jim Murphy
Breakout Session	***10:00am – 10:45am***	***All***
MDM/R Registration	10:45am – 11:15am	Luis Orozco
AS2 Server Connectivity to all environments	11:15am – 11:30am	Luis Orozco
Breakout Session	***11:30am – 11:45pm***	***All***
Lunch	**11:45pm – 12:15pm**	
Unit Testing	12:15pm – 12:45pm	Gissella Lopez
MDM/R Enrolment (SIT, QT, Cutover, Post Cutover)	12:45pm – 1:40pm	Gissella Lopez
Next Steps	1:55pm – 2:00pm	Gissella Lopez
Breakout Session	***1:40pm – 1:55pm***	***All***

Project Plan Overview

Objective

- **To provide Local Distribution Companies (LDCs) with an understanding of the key activities that are necessary for building a project plan**
  - The session will focus on activities to enable MDM/R integration however LDCs must build an overall Project Plan to enable Time of Use (TOU) Implementation.
  - Since LDC operations can be unique to each organization, the activities discussed are not an exhaustive list. LDCs should include all activities in their project plan that are unique to their organizations.
- **To ensure that LDCs understand that the timelines in the project plan are mostly under their control.**
  - The Independent Electricity System Operator (IESO) specifies the timelines for enrolment activities (SIT - System Integration Testing , QT - Qualification Testing and Cutover).
  - The LDC is responsible for notifying the IESO regarding its readiness for enrolment.
  - The IESO will confirm that we are able to honour the wave request upon receipt of your Registration Application and Project Plan.

Project Plan Overview

The MDM/R and TOU Implementation Project Plan will answer the Why, What, Who, How and When questions.

Why is the Project Plan being done ?

- The project plan will track;
  - 10 key milestones, tasks which need to be done, by category, by whom and when
- The project plan template provided by the IESO focuses on the activities that impact the registration & enrolment process and the cutover to MDM/R.
- The LDC should expand the plan to include more detailed internal activities such as integration with internal systems, unit testing and TOU rollout.
- 80% of all residences & small businesses in Ontario must be enabled for TOU bills by June 2011.
- LDCs that will contribute to the provincial targets must be integrated with the MDM/R by Q2 of 2011

Project Plan Overview

Why is the Project Plan being done ?

- The project plan will be used by both the LDC and the IESO to manage workload and coordinate tasks.

- Task Categories defined in the template are as follows
  - MDM/R Training
  - LDC Business Readiness Activities
  - AMCC Implementation
  - CIS Implementation
  - MDM/R Registration
  - AS2 Server Connectivity to all environments
  - Unit Testing
  - Enrolment Testing Self Certification
  - MDM/R Enrolment – SIT, QT and Cutover
  - Post MDM/R Cutover

Project Plan Overview

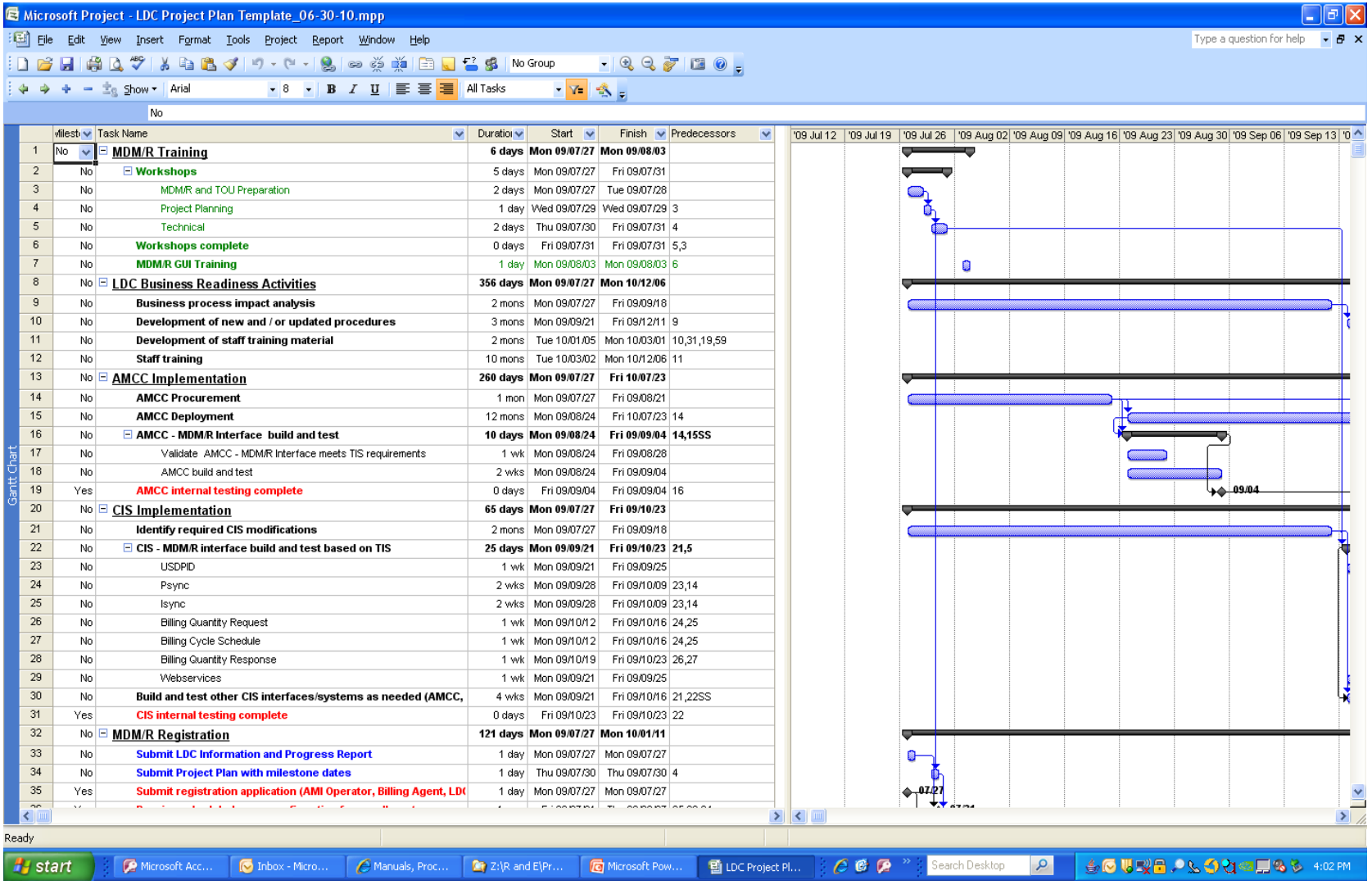
What is the work that needs to be done on the project, the major deliverables and what needs to be done first?

The work that needs to be done, major deliverables and associated timings for completion are identified in the Project Plan template within the following breakdown by column:

- Unique ID #
- Percentage Complete
- Task Names
- Duration
- Start Date
- Finish Date
- Task Dependencies
- Owner of the task

Project Plan Overview

Power to Ontario. On Demand.



	Milest	Task Name	Duration	Start	Finish	Predecessors
1	No	**MDM/R Training**	**6 days**	**Mon 09/07/27**	**Mon 09/08/03**	
2	No	**Workshops**	5 days	Mon 09/07/27	Fri 09/07/31	
3	No	MDM/R and TOU Preparation	2 days	Mon 09/07/27	Tue 09/07/28	
4	No	Project Planning	1 day	Wed 09/07/29	Wed 09/07/29	3
5	No	Technical	2 days	Thu 09/07/30	Fri 09/07/31	4
6	No	**Workshops complete**	0 days	Fri 09/07/31	Fri 09/07/31	5,3
7	No	**MDM/R GUI Training**	1 day	Mon 09/08/03	Mon 09/08/03	6
8	No	**LDC Business Readiness Activities**	**356 days**	**Mon 09/07/27**	**Mon 10/12/06**	
9	No	**Business process impact analysis**	2 mons	Mon 09/07/27	Fri 09/09/18	
10	No	**Development of new and / or updated procedures**	3 mons	Mon 09/09/21	Fri 09/12/11	9
11	No	**Development of staff training material**	2 mons	Tue 10/01/05	Mon 10/03/01	10,31,19,59
12	No	**Staff training**	10 mons	Tue 10/03/02	Mon 10/12/06	11
13	No	**AMCC Implementation**	**260 days**	**Mon 09/07/27**	**Fri 10/07/23**	
14	No	**AMCC Procurement**	1 mon	Mon 09/07/27	Fri 09/08/21	
15	No	**AMCC Deployment**	12 mons	Mon 09/08/24	Fri 10/07/23	14
16	No	**AMCC - MDM/R Interface build and test**	**10 days**	**Mon 09/08/24**	**Fri 09/09/04**	**14,15SS**
17	No	Validate AMCC - MDM/R Interface meets TIS requirements	1 wk	Mon 09/08/24	Fri 09/08/28	
18	No	AMCC build and test	2 wks	Mon 09/08/24	Fri 09/09/04	
19	Yes	**AMCC internal testing complete**	0 days	Fri 09/09/04	Fri 09/09/04	16
20	No	**CIS Implementation**	**65 days**	**Mon 09/07/27**	**Fri 09/10/23**	
21	No	**Identify required CIS modifications**	2 mons	Mon 09/07/27	Fri 09/09/18	
22	No	**CIS - MDM/R interface build and test based on TIS**	**25 days**	**Mon 09/09/21**	**Fri 09/10/23**	**21,5**
23	No	USDPID	1 wk	Mon 09/09/21	Fri 09/09/25	
24	No	Psync	2 wks	Mon 09/09/28	Fri 09/10/09	23,14
25	No	Isync	2 wks	Mon 09/09/28	Fri 09/10/09	23,14
26	No	Billing Quantity Request	1 wk	Mon 09/10/12	Fri 09/10/16	24,25
27	No	Billing Cycle Schedule	1 wk	Mon 09/10/12	Fri 09/10/16	24,25
28	No	Billing Quantity Response	1 wk	Mon 09/10/19	Fri 09/10/23	26,27
29	No	Webservices	1 wk	Mon 09/09/21	Fri 09/09/25	
30	No	**Build and test other CIS interfaces/systems as needed (AMCC,**	4 wks	Mon 09/09/21	Fri 09/10/16	21,22SS
31	Yes	**CIS internal testing complete**	0 days	Fri 09/10/23	Fri 09/10/23	22
32	No	**MDM/R Registration**	**121 days**	**Mon 09/07/27**	**Mon 10/01/11**	
33	No	**Submit LDC Information and Progress Report**	1 day	Mon 09/07/27	Mon 09/07/27	
34	No	**Submit Project Plan with milestone dates**	1 day	Thu 09/07/30	Thu 09/07/30	4
35	Yes	**Submit registration application (AMI Operator, Billing Agent, LD(**	1 day	Mon 09/07/27	Mon 09/07/27	

Project Plan Overview

Who will be involved, what will be their responsibilities within the project? Who will organize the efforts?

- Ensure there is a Project Manager who will be responsible for;
  - Managing MDM/R enrolment & TOU implementation
  - Building a detailed integrated project plan to highlight key tasks & milestones, critical path, resource requirements & dependencies
  - Developing a comprehensive cutover plan, including customer communications and cutting over to TOU bills
  - Assignment of individuals to the Task Categories and associated deliverables
  - Tracking and reporting progress in achieving milestones
  - Identification of key issues and risks that impact milestones.
  - Development of resolutions.
  - Communication with internal and external stakeholders
  - Project should also involve development, testing and business representatives.

Project Plan Overview

How many resources are required? How will the project be managed?

- Resources required will be different for each LDC dependent upon:
  - Size of the LDC and number of resources available
  - Job roles and responsibilities
  - Testing efforts and timing
- Typical resources required would be:
  - Project Manager, Billing, Metering and IT
- The project will be managed by the LDCs Project Manager in coordination with an IESO appointed Project Manager
- Key aspects to managing the project are keeping to the plan, monitoring the progress, documentation and weekly / daily communications

Project Plan Overview

When will the project be completed?

- The project completion is dependent upon the LDC ensuring they have completed all of the Task Categories and associated deliverables within the Project Plan. Task Categories associated with MDM/R Integration are:
  - Workshops
  - LDC Business Readiness
  - AMCC implementation
  - CIS Implementation
  - MDM/R Registration
  - AS2 Connectivity
  - LDC Unit Testing
  - Formal Enrolment Testing (Self Certification, SIT and QT)
  - Cutover to Production
  - TOU Roll-out
- LDCs are responsible for ensuring TOU implementation milestones are also achieved

Project Plan Overview

It is very important to identify the Stakeholders for this project.

Stakeholder examples:

- Internal Stakeholders
  - Project Sponsor, Project Manager and Project Team

- External Stakeholders
  - Customers, IESO, AMI Operators, Billing Agents, Ontario Energy Board (OEB) and Ministry

Project Plan Overview

What is a Wave – How do I get in one?

- Two month period allocated for formal enrolment testing and cutover to MDM/R production operations.
  - Includes SIT, QT and Cutover to MDM/R

  NOTE: *Does not include Unit testing, Connectivity Testing or TOU roll-out.*

- LDCs request a wave assignment by submitting the MDM/R Registration Application and Project Plan.

- The number of LDCs simultaneously in a wave is dependant on the IESO / IBM resources available to support the wave.

- The IESO will confirm; that in the absence of any mandated schedules for TOU rollout, we are able to honour the wave assignment request submitted

Project Plan Overview

What is a Wave – How do I get in one?

- LDC's can request a wave assignment change and if an appropriate time slot and resources are available will be accommodated
- LDCs will be bumped out of a wave and re-assigned if delays in your progress require you to reassess any key enrolment milestones.
- Key Milestones in the Project Plan that would cause wave re-assignment would be:
  - Self Certification for Enrolment Testing complete (not completed)
  - Exit SIT (SIT Execution not completed)
  - Exit Qualification Testing (QT Test Execution not completed)
  - Self Certification of Cutover Complete (review and acceptance not complete)

Project Plan Updates

Project Plan Updates

- The Project Plan is a "living" document
- Updates required throughout the project when deliverables are completed.
- Any delays that affect the formal enrolment period must be reported immediately.
  - Coordinated efforts between both the LDC and IESO project managers can then be performed to re-align resource assignments, deliverable timings and potentially develop a revised project plan.

Task Category Review

- The following slides will follow the Task Categories from the Project Plan template
- The number in the title of each slide coincides with the ID # column from the Project Plan template

1 MDM/R Training

IESO provides introductory and advanced technical training. We highly recommend that all LDCs attend the various Workshops offered .

Introductory Workshop:

- Basic MDM/R configuration, concepts and terminology
- Explanation of registration and enrolment
- How to use documentation and training guide
- Introductory Workshops are a pre-requisite to all other workshops

Non-technical Workshops:

- Project Planning
- Business Processes

1 MDM/R Training

Timelines

- The Introductory and Business Process workshops are 1 day sessions that will be offered periodically at the locations throughout the province.

- The Project Planning workshop will be offered by invitation to LDCs who are ready to offer a draft project plan and request a wave commitment.

Recommended Attendees

- Anyone involved with Smart Meter installation and MDM/R Integration including Project Manager, Metering, Billing, IT and Customer Care.

1 MDM/R Training

Technical Workshops include:

- IT Connectivity, Infrastructure and File Transfer
- Advanced Metering Infrastructure (AMI) Related Issues CMEP based technologies:
- Advanced Metering Infrastructure (AMI) Related Issues – Elster technology
- Master Data and Billing System "CIS" Interfaces (not specific to any CIS system)

Timelines

The Technical Workshops will be offered over approximately 2 days.

Recommended Attendees

Technical IT system & network administration staff of LDCs and their authorized agents.

1 MDM/R Training

MDM/R Graphical User Interface (GUI) Training

This workshop provides hands on training on how to use the MDM/R GUI. In this course you will learn how to:

- Navigate through various screens; create and execute queries; and view and edit metering data.

Timelines

The MDM/R Graphical User Interface Workshop is covered in 1 day.

Offered monthly at the IESO Offices and site visits can be coordinated.

http://www.smi-ieso.ca/MDMR_Training/index.asp

Recommended Attendees

LDCs and their agents participating in Unit/Enrolment Testing as part of the MDM/R Registration and Enrolment Process.

8 LDC Business Readiness Activities

LDC Business Readiness Activities include the following tasks:

- Evaluation and documentation of existing business processes.
- Updates to existing and development of new business processes.

<u>Important to note:</u>

- Business processes can touch an LDC's entire organization.
- Foundation for preparing testing strategy (scripts and scenarios)

8 LDC Business Readiness Activities

Timelines

LDCs will require approximately 2 – 3 months of analysis, updates and development of business processes.

Resources

LDC Project Team with representation from all business units.

8 LDC Business Readiness Activities

LDC Business Readiness Activities also include:

- Development of training materials.
- Prepare for staff training.
- Creation of a Training Strategy that will determine the exact purpose of your training (what will be trained, when, how, who is responsible)
- Training Strategy considerations:
  - New business processes and changes to existing
  - Number of training classes required and timing with cutover strategy
  - Classroom, online, handouts, job aid materials
  - Train the trainer

13 AMCC Implementation

Advanced Metering Control Computer (AMCC) Implementation consists of the following components:

- AMCC Procurement
- AMCC Deployment
- AMCC – MDM/R Interface build and test

13 AMCC Implementation

AMCC Procurement

- A list of the current MDM/R supported technologies can be found in the Technical Interface Specifications (TIS).

- Selected AMI technology conform to both:
  - Provincial regulation "Criteria and Requirements for Meters and Metering Equipment, Systems and Technology (Ontario Regulation 440/07)"
  - Various Measurement Canada federal regulations

- Critical that the contract with the AMI vendor conforms the AMCC interface with the MDM/R with the TIS and any changes to the interface software in the AMCC must be coordinated with the Smart Metering Entity both in terms of content and timing of rollout

13 AMCC Implementation

Timeline

The AMCC procurement process is LDC specific.

Resources

LDC Management and Metering groups.

13 AMCC Implementation

AMCC Deployment

- Smart Meter deployment
- AMCC Procurement is a pre-requisite

Timeline

- The AMCC (Smart Meter) deployment is LDC specific
- Can take upwards of a year to complete, depending on the size of the LDC and number of Smart Meters involved

Resources

LDC Management, Metering groups and agents.

13 AMCC Implementation

AMCC – MDM/R interface build and test

- Completion of the detailed design, build and internal testing of the LDC interfaces to/from the MDM/R and the systems to support the interfaces.

- The TIS outlines the AMCC interfaces supported by the MDM/R

- New technologies require support from the IESO
  - Contact IESO at least 9–12 months before testing begins
  - Provide detailed specifications and a sample interface file via e-mail.
  - Verification that the Meter Read files are produced in the correct file format as defined in the TIS.

- LDCs are responsible for managing their Agents

13 AMCC Implementation

Timeline

The AMCC – MDM/R interface build and test is LDC specific.

Resources

LDC Management, Metering groups and agents.

20 CIS Implementation

CIS Implementation

- Identify required modifications.
- Build and test CIS - MDM/R interfaces based on the TIS.
- Build and test other CIS interfaces as required
  - AMCC, Workforce Management, Operational Data Store (ODS) etc.

20 CIS Implementation

Identification of required modifications

- Address the activities around design and development of the CIS system based on the Detailed Design Document (DDD) and the TIS

- MDM/R technical documentation review is a recommended pre-requisite

Timeline

The AMCC – MDM/R interface build and test is LDC specific.

Resources

LDC (Billing, Metering, IT) and their authorized agents.

20 CIS Implementation

Build & test the following CIS – MDM/R interfaces based on the TIS

- Universal Service Delivery Point Identification
- Periodic Audit Synchronization &Incremental Synchronization
- Billing Quantity Request/Response
- Billing Cycle Schedule
- Webservices

Attending the Technical Workshops is a pre-requisite

Timeline

The CIS Implementation is LDC specific.

Resources

LDC (Billing, Metering, IT) and their authorized agents.

20 CIS Implementation

Build and test other interfaces as required

- Addresses the design and development work of other systems that the LDC needs to interface with their CIS to enable the transmission of meter reads and ultimately the production of customer bills.
  - AMCC
  - Workforce Management
  - Operational Data Store (ODS)

Timeline

- The CIS Implementation is LDC specific, however may require additional time for integration testing between their CIS and other internal systems.

Resources

- LDC (Metering, IT) and authorized agents

32 MDM/R Registration

MDM/R Registration

- The MDM/R Registration process ensures that both the IESO, as the SME, and the LDCs comply with all of their obligations under the MDM/R Terms of Service and associated policies, standards and procedures.

- Involves submission of various forms, project plans and incumbency letter

- MDM/R Registration process occurs throughout the duration of the project

- Smart Metering Start-Up Guide and the MDM/R Guide to Registration Forms should be utilized by all LDCs

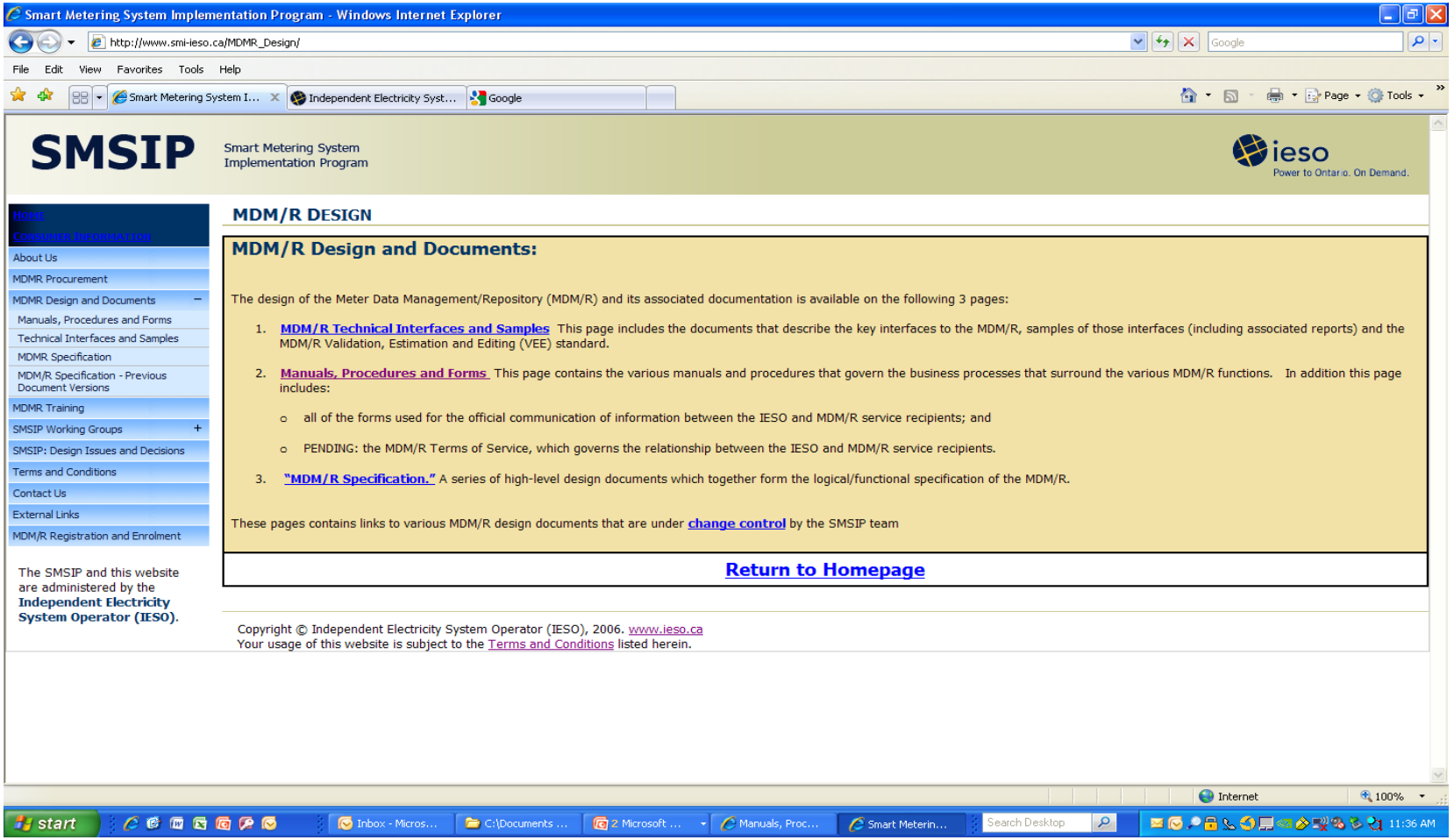
32 MDM/R Registration

Below is a snapshot of registration forms and who submits them:

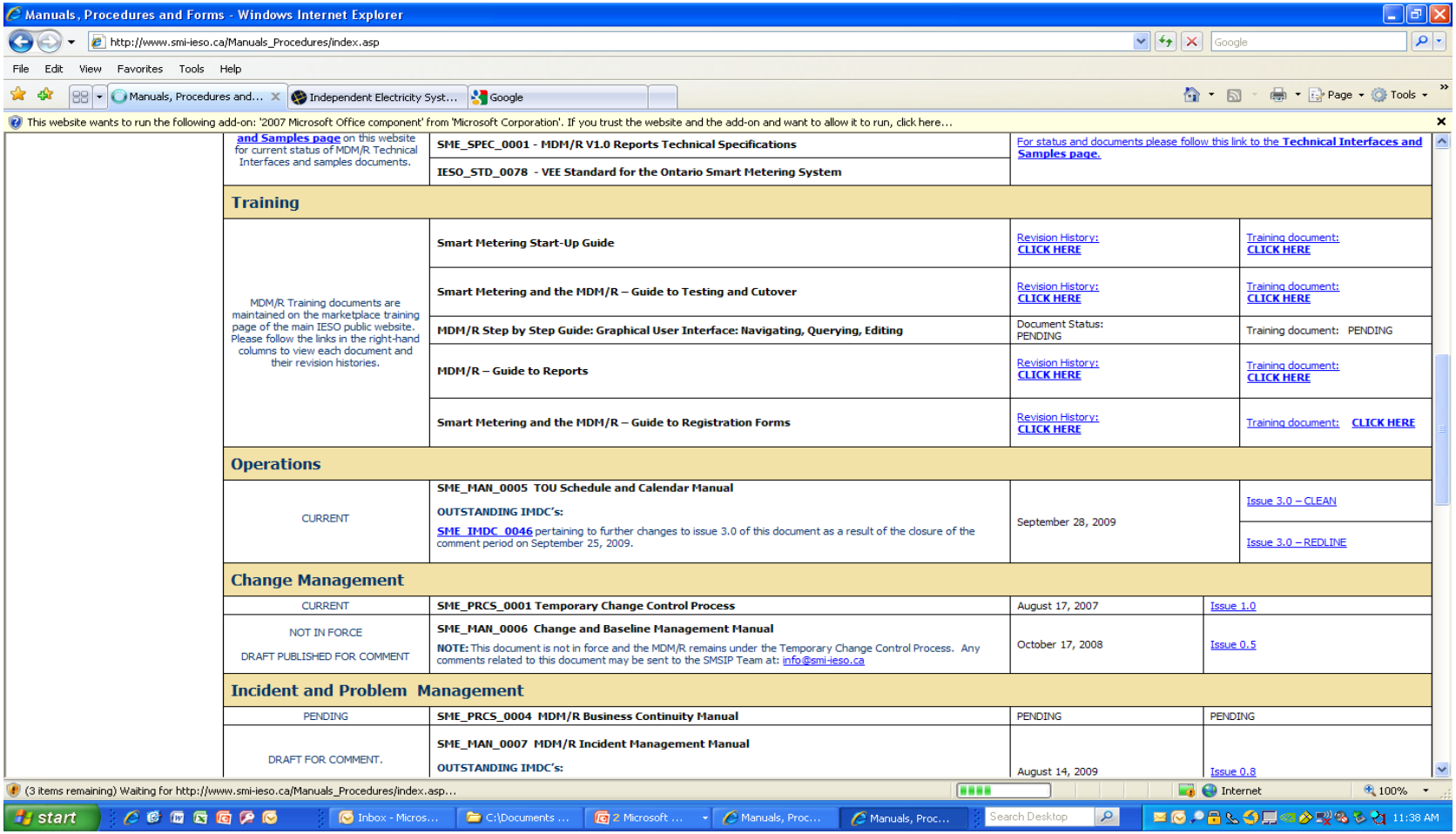
Form	LDC	Billing Agent	AMI Operator
LDC Information and Progress Report **(SME_FORM_0001)**	yes	no	no
MDM/R Registration Application **(SME_FORM_0003)**	yes	yes	yes
MDM/R Implementation **Project Plan**	yes	no	no
LDC Organizational Relationships and Authority Delegation Form **(SME_FORM_0006)**	yes	no	no
System Access Incumbency **Letter**	yes	no	no
Organization Contacts **(SME_FORM_0004)**	yes	yes	yes
FTS and Web Services Configuration Form **(SME_FORM_0014)**	yes	yes	yes
User Access Request Form **(SME_FORM_0013)**	yes	yes	yes
Self-Certification for Enrolment Testing **(SME_FORM_0007)**	yes	no	no
Self-Certification for Cutover Readiness **(SME_FORM_0008)**	yes	no	no
SME-LDC Agreement **(SME_AGR_0001)**	yes	no	no

32 MDM/R Registration

32 MDM/R Registration



32 MDM/R Registration



32 MDM/R Registration

MDM/R Registration

The Smart Metering and the MDM/R Guide to Registration Forms can be accessed at :

RegistrationForms.pdf

From Connectivity to Cut-over

From Connectivity to Cut over

	CONNECTIVITY	UNIT	SIT	QT	CUT-OVER
PREP	1 day	1-3 months	2 weeks	26 days	1-2 weeks
	Prep for Unit : •Business Process •Test Strategy/Plan	Prep for SIT: •Scripts •Data Prep	Prep for QT: •Scripts	Prep for Cut-over: •Cut over Strategy •Self Certification •Cut-over Plan	Prep for TOU Billing
	•Connectivity for Web Services		Cut-over Strategy Draft		
	Prep for SIT/QT		**Prep for Cutover/TOU**		

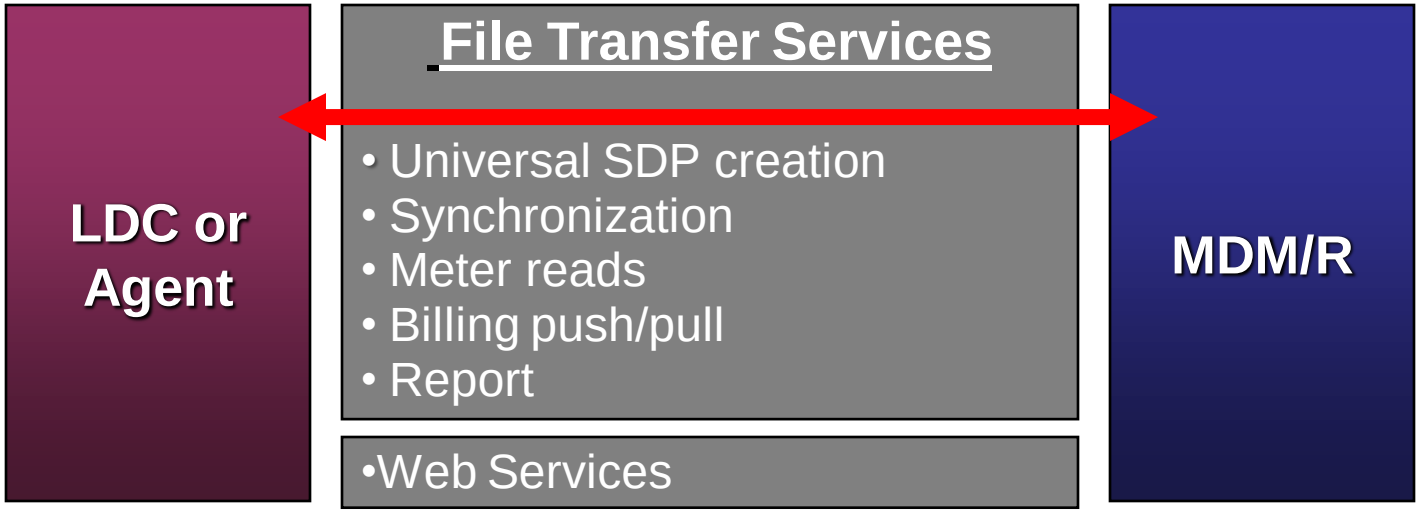
≈ 4-5 months

48 AS2 Server Connectivity

- **What is it?**
- **Are we ready?**
- **Activities**
- **Who? When?**

48 AS2 Server Connectivity

- Connectivity ensures that files can be successfully passed between the MDM/R and the service recipient's AS2 client



48 AS2 Server Connectivity

Pre-conditions

- Define your System Architecture. Who is sending what? Role of your AMI Operator, Billing Agent, or your role in respect to other LDCs
- If in doubt, review your plans with the IESO
- Review MDM/R File Transfer Services and Web Services Configuration Workbook

48 AS2 Server Connectivity

Pre-conditions:

- Select, purchase and install AS2 communications software
- Test AS2 client / server connection within LDC network
- Submission of :
  - MDM/R Registration Application Form
  - First Draft of Project Plan
  - LDC Organizational Relationships and Authority Delegation Form
  - AS2 Configuration Form and your digital certificates
- Receipt of MDM/R AS2 configuration information and digital certificates
- Configure network to allow MDM/R communications

48 AS2 Server Connectivity

Activities:

- Schedule Connectivity testing with MDM/R ***at least one month prior to your expected execution date*****.**
  - When do you plan to commence Unit Testing?
- LDC is responsible for coordinating testing with the AMI Operator or Billing Agents
- Prepare files according to the file naming conventions specified in the TIS
- Execution of Connectivity Testing
- Coordinated with IBM

48 AS2 Server Connectivity

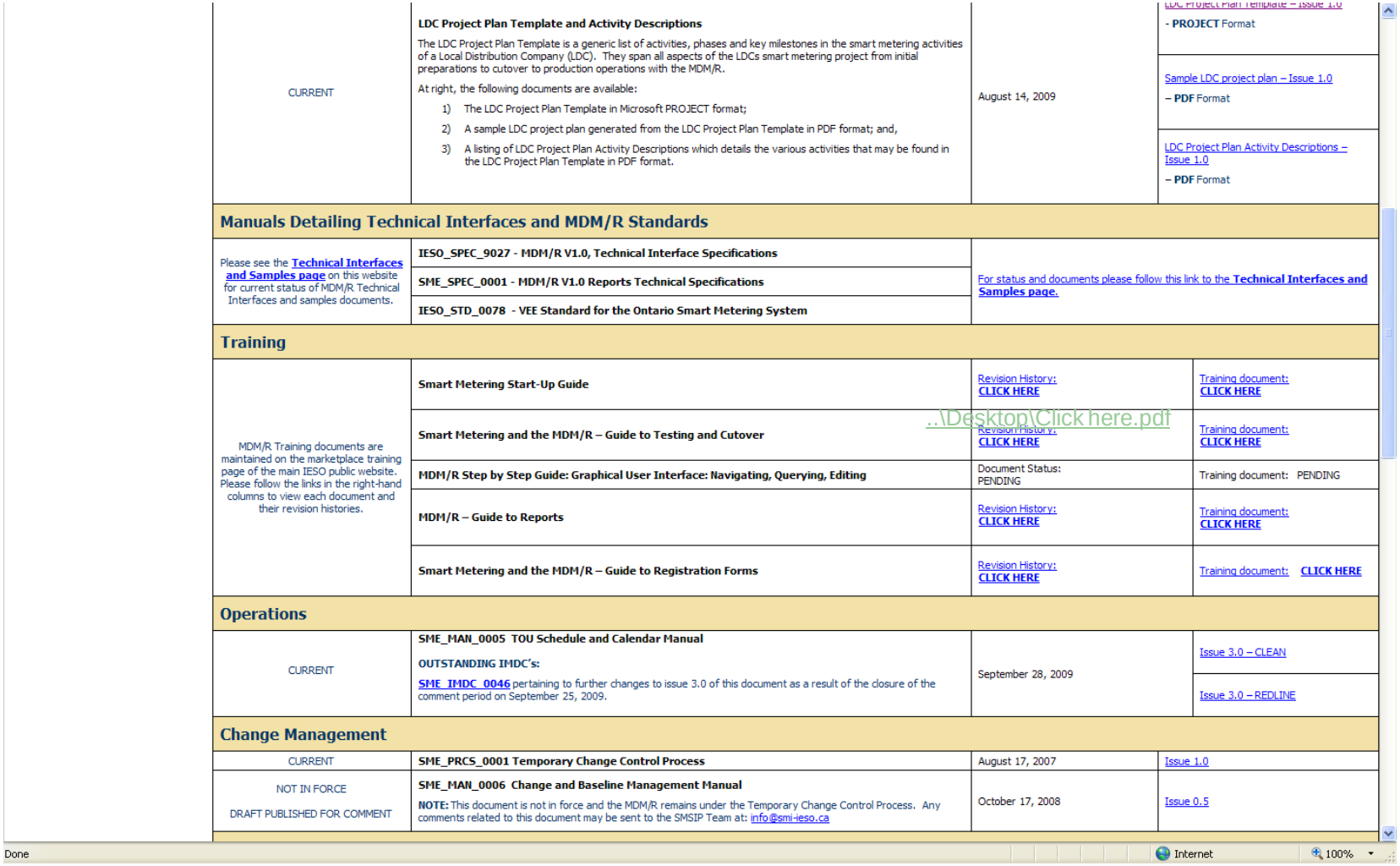
Roles

- Technical Support Staff (LDC and Agents) for installation and testing
- Project Lead, to schedule testing and ensure pre-conditions have been fulfilled

Timeline

- To be completed successfully, at least one week prior to Unit Testing
- Verified at least two weeks before SIT
- Verified at least two weeks before Cutover
- Execution to be completed in one day, however may require additional connectivity testing sessions if unsuccessful

48 -AS2 Server Connectivity



CURRENT	**LDC Project Plan Template and Activity Descriptions** The LDC Project Plan Template is a generic list of activities, phases and key milestones in the smart metering activities of a Local Distribution Company (LDC). They span all aspects of the LDCs smart metering project from initial preparations to cutover to production operations with the MDM/R. At right, the following documents are available: 1) The LDC Project Plan Template in Microsoft PROJECT format; 2) A sample LDC project plan generated from the LDC Project Plan Template in PDF format; and, 3) A listing of LDC Project Plan Activity Descriptions which details the various activities that may be found in the LDC Project Plan Template in PDF format.	August 14, 2009	LDC Project Plan Template – Issue 1.0 – **PROJECT** Format Sample LDC project plan – Issue 1.0 – **PDF** Format LDC Project Plan Activity Descriptions – Issue 1.0 – **PDF** Format
Manuals Detailing Technical Interfaces and MDM/R Standards			
Please see the **Technical Interfaces and Samples page** on this website for current status of MDM/R Technical Interfaces and samples documents.	**IESO_SPEC_9027 - MDM/R V1.0, Technical Interface Specifications** **SME_SPEC_0001 - MDM/R V1.0 Reports Technical Specifications** **IESO_STD_0078 - VEE Standard for the Ontario Smart Metering System**	For status and documents please follow this link to the **Technical Interfaces and Samples page.**	
Training			
MDM/R Training documents are maintained on the marketplace training page of the main IESO public website. Please follow the links in the right-hand columns to view each document and their revision histories.	**Smart Metering Start-Up Guide**	Revision History: **CLICK HERE**	Training document: **CLICK HERE**
	Smart Metering and the MDM/R – Guide to Testing and Cutover	Revision History: **CLICK HERE**	Training document: **CLICK HERE**
	MDM/R Step by Step Guide: Graphical User Interface: Navigating, Querying, Editing	Document Status: PENDING	Training document: PENDING
	MDM/R – Guide to Reports	Revision History: **CLICK HERE**	Training document: **CLICK HERE**
	Smart Metering and the MDM/R – Guide to Registration Forms	Revision History: **CLICK HERE**	Training document: **CLICK HERE**
Operations			
CURRENT	**SME_MAN_0005 TOU Schedule and Calendar Manual** **OUTSTANDING IMDC's:** **SME_IMDC_0046** pertaining to further changes to issue 3.0 of this document as a result of the closure of the comment period on September 25, 2009.	September 28, 2009	Issue 3.0 – CLEAN Issue 3.0 – REDLINE
Change Management			
CURRENT	**SME_PRCS_0001 Temporary Change Control Process**	August 17, 2007	Issue 1.0
NOT IN FORCE DRAFT PUBLISHED FOR COMMENT	**SME_MAN_0006 Change and Baseline Management Manual** **NOTE:** This document is not in force and the MDM/R remains under the Temporary Change Control Process. Any comments related to this document may be sent to the SMSIP Team at: info@smi-ieso.ca	October 17, 2008	Issue 0.5

56 Unit Testing

- **What is it?**
- **Are we ready?**
- **Activities**
- **Who? When?**

56 Unit Testing

In the context of the MDM/R integration, Unit Testing is the LDCs opportunity to:

- Validate that the CIS/AMI meets the functional requirements for its application/business processes
- Ensure operation of AS2, FTS
- Vetting of Business Process/Training documents

56 Unit Testing

In the context of the MDM/R integration Unit Testing is the LDC's opportunity to:

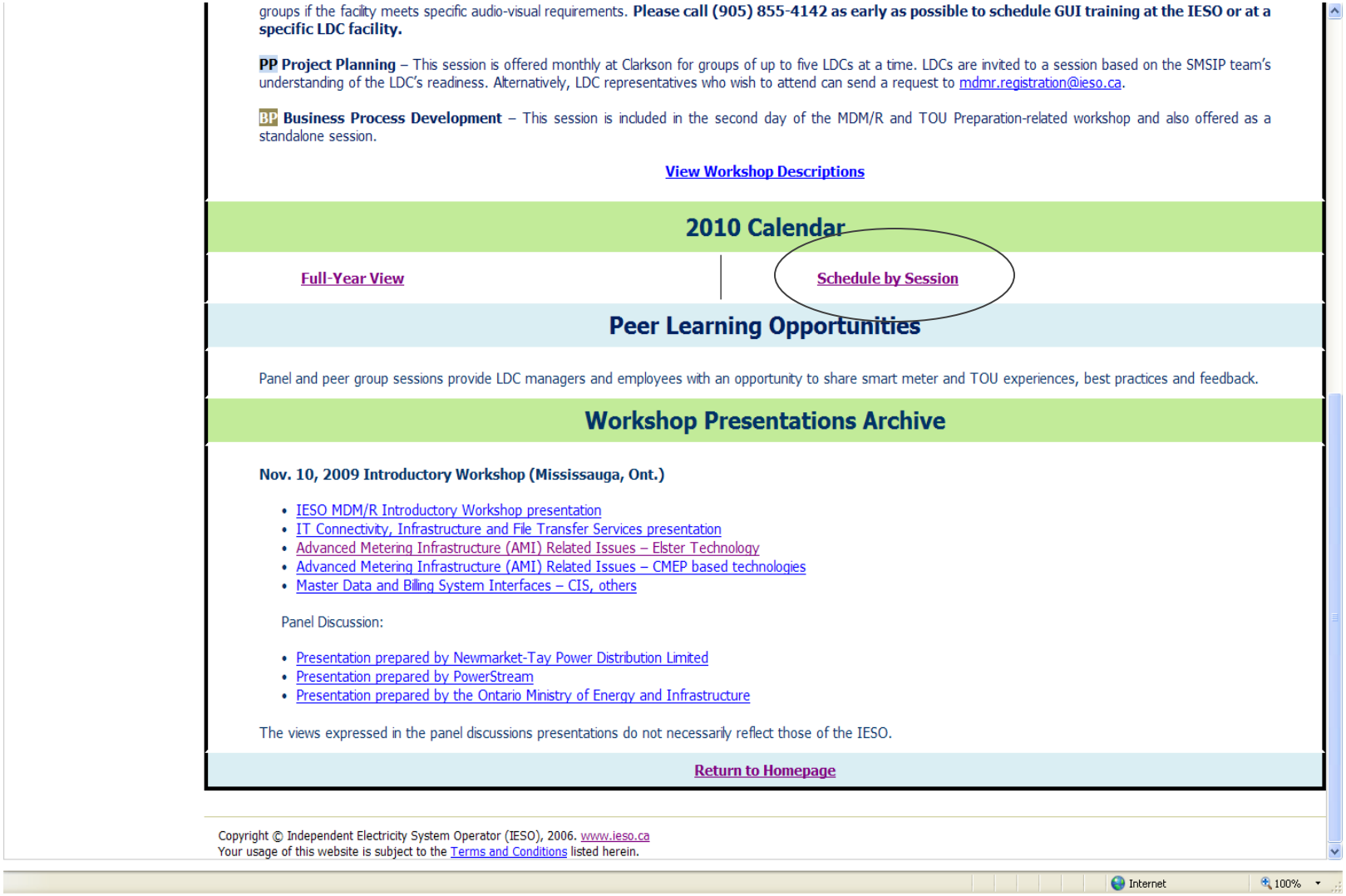
- Allow users to understand the impact of their role, learn the role and/or support training of other users
- Test to determine the need for additional tools to facilitate operations
- Ensure LDC readiness for formal enrolment wave (SIT, QT and Cutover)

56 Unit Testing

Pre-conditions:

- LDC must have completed connectivity testing
- System interfaces (CIS, AMI, ODS if applicable) developed according to the MDM/R technical interface specifications
- GUI training. Check internet for scheduled training sessions.
- IESO provides a shared GUI user account for Unit Testing purposes

GUI Training- Testing



groups if the facility meets specific audio-visual requirements. **Please call (905) 855-4142 as early as possible to schedule GUI training at the IESO or at a specific LDC facility.**

PP Project Planning – This session is offered monthly at Clarkson for groups of up to five LDCs at a time. LDCs are invited to a session based on the SMSIP team's understanding of the LDC's readiness. Alternatively, LDC representatives who wish to attend can send a request to mdmr.registration@ieso.ca.

BP Business Process Development – This session is included in the second day of the MDM/R and TOU Preparation-related workshop and also offered as a standalone session.

View Workshop Descriptions

2010 Calendar

Full-Year View | Schedule by Session

Peer Learning Opportunities

Panel and peer group sessions provide LDC managers and employees with an opportunity to share smart meter and TOU experiences, best practices and feedback.

Workshop Presentations Archive

Nov. 10, 2009 Introductory Workshop (Mississauga, Ont.)

- IESO MDM/R Introductory Workshop presentation
- IT Connectivity, Infrastructure and File Transfer Services presentation
- Advanced Metering Infrastructure (AMI) Related Issues – Elster Technology
- Advanced Metering Infrastructure (AMI) Related Issues – CMEP based technologies
- Master Data and Billing System Interfaces – CIS, others

Panel Discussion:

- Presentation prepared by Newmarket-Tay Power Distribution Limited
- Presentation prepared by PowerStream
- Presentation prepared by the Ontario Ministry of Energy and Infrastructure

The views expressed in the panel discussions presentations do not necessarily reflect those of the IESO.

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56 Unit Testing

Activities:

Creating a Testing Strategy

- Determine the exact purpose of your testing: what will be tested, when, how, who is responsible.
  - Data Preparation
  - Creating Scenarios, Scripts or Cases
  - Ensure systems are ready

56 Unit Testing

Activities:

Creating a Testing Strategy

- Determine the exact purpose of your testing: what will be tested, when, how, who is responsible.
  - How are you logging and tracking status of errors, issues, tickets? How are you reporting on the progress of testing?
  - How will changes be communicated (system, business processes, training materials)?
  - Determine entry and exit criteria

56 Unit Testing

Preparing a test plan (line 56)

- Confirm functionality of your CIS, and consider test cases associated to your CIS and internal processes
- Consider AMI internal testing, other systems (ODS, Workforce Management Tools)
- Consider testing associated to the MDM/R Integration

56 Unit Testing

Considerations to prepare a test plan and assess testing duration

- Determine number of test scenarios/cases, cycles?
- Document test scenarios (include expected and actual results)
- How many times will you execute each test scenario?

56 Unit Testing

Consideration to prepare a test plan and assess testing duration

- How many SDPs to use per test scenario?
- Consider time required for Data preparation purposes, Documentation and Execution
- Close attention to the Reports produced by the MDM/R, allocate time for resources to understand their content, impacts, required actions, possible volumes, need to redesign processes to prevent exceptions
- Tracking your results

56 Unit Testing

Roles

- Hands-on Project Lead to develop or coordinate the development and execution of the test strategy and plan
- Resources for Data preparation (account data, meter read data, ensure data integrity)
- Resource(s) for Test Execution: execute test scenarios, review reports, track results, communicate issues

Timeline

- Varies, average of 2-3 months for medium size LDC
- Depends on maturity of CIS, AMI, other systems and personnel experience with testing & business processes

56 Unit Testing

IESO Role:

- Coordinate opening production for USDP request (permanent USDPs)
- Receive and review test plans as required
- Comment on Test plans as requested by the LDC
- Provide support by addressing LDC questions, concerns on a best effort basis - formal enrolment testing takes precedence

Enrolment Testing:

72 Enrolment Testing Self Certification
77 SIT System Integration Testing
83 QT Qualification Testing

- **What is it?**
- **Are we ready?**
- **Activities**
- **Who? When?**

72 Enrolment Testing Self Certification

- Self-Assessment and statement of readiness to enter MDM/R formal Enrolment Testing
- SME may validate a filing. LDC expected to provide supporting documentation if selected for validation

Areas of self-certification :

- Registration, Training and Technical requirements (AS2)
- Business Processes readiness, Systems redesign and development
- Unit Testing

- Draft expected at least 1 month prior to SIT start date
- Final form at least 2 weeks prior to SIT start date
- Review and acceptance of the form

77 SIT System Integration Testing

- Test of the interfaces to ensure that your systems can operate with the MDM/R and handle the meter to bill
- Conducted on the enrolment system

83 QT Qualification Testing

- Testing phase designed to ensure that your business processes can support the meter to bill process, it is described as ‘end-to-end’ test.
- Conducted on the enrolment system following SIT

77 SIT System Integration Testing
83 QT Qualification Testing

Pre-conditions

- Connectivity with the MDM/R enrollment (QA) system completed
- GUI training. Check internet for scheduled training sessions.
- GUI User Access for individual account has been provided by the IESO . ***Provide SME_FORM_0013 MDM/R User Access Request Form at least 1 week prior to the scheduled start date.***

To commence SIT:

- Submit SME_FORM_0007 Self-Certification Enrolment Testing Form.
- Receive approval on the form to proceed to SIT

To continue to QT:

- Successfully complete SIT
- LDC submits draft of the cut-over strategy to the IESO (IESO provides sample template)

77 SIT: System Integration Testing

Activities

- SIT scripts: Review, walkthrough, final documents
- SIT Execution:
  - Prescribed test scripts are scheduled to run in 10 business days
  - IBM supports the execution of SIT
  - Daily meetings are scheduled to review activities for the day, status of issues or actions
- Final SIT review meeting to summarize results of the testing efforts and LDC preparedness to continue to QT

77 SIT: System Integration Testing

Roles

- Coordination of activities, tracking of results, attend daily SIT meetings: Test Lead
- Execute test scenarios, attend daily SIT meeting: Testers (involve LDC personnel)
- AMI , CIS, other systems technical support
- IT support on standby (FTS, AS2)

Timeline

- 10 business days of testing, preparation activities can occur in parallel to Unit testing being executed
- Availability :
  - Daily meetings
  - Some LDC additional weekend work might be required

83 QT : Qualification Testing

Activities

- IESO provides generic scripts, which can be customized, to include activities in the meter to bill process:
  - Periodic Synchronization of USDPs
  - Meter Exchanges, Account Changes (e.g. Move in/out, disconnections,) and the associated Incremental Synchronizations
  - On Cycle and Off Cycle Billing Requests

83 QT : Qualification Testing

Activities

- Scripts are reviewed and customized to reflect LDC's business scenarios
- QT is scheduled for 26 calendar days, during which five short billing cycles run,, possible weekend work required
- Preparation : Data, P Sync on Day -4 of testing.

83 QT : Qualification Testing

Roles

- Design test scenarios LDC specific, Coordinate Data Preparation, execution of activities, tracking results, attend daily meeting: Test Lead & team
- Execute test scenarios, attend daily meeting: Testers (LDC personnel should be involved)
- AMI , CIS, other systems technical support
- IT support on standby (FTS, AS2)

83 QT : Qualification Testing

Timeline

- Testing scheduled for approximately 26 calendar days
- Schedule resources accordingly
- Some testing might be extended depending upon the development of QT (need to review scenarios results)
- Weekend work might be required

Testing Outcomes

- Each testing phase can result in CIS, AMI, ODS, Business Processes, Training Materials changes
- Use each phase to train personnel that will be directly involved in operations
- Availability of external agents to support resolution of issues and facilitate prompt completion of testing phase
- Clear knowledge of the impacts of Reports: their content, timelines, and processes associated to the exceptions produced should improve the business processes and training materials designed

90 Cut Over to Production

- **What is it?**
- **Are we ready?**
- **Activities**
- **Who? & When?**

90 Cut Over to Production

- Upon successful completion of QT, an LDC is ready to flow "live" data (Synchronization, Meter read data) to the MDM/R production environment.

- *It is expected that over time you will continue to build up the number of meters registered with the MDM/R until you transition your designated customer base*

- *Cut over to Production does not imply TOU billing to customers.*

90 Cut Over to Production

Pre-conditions

- Complete Qualification Testing
- GUI training. Check internet for scheduled training sessions.
- GUI User Access for individual account has been provided by the IESO . ***Provide SME_FORM_0013 MDM/R User Access Request Form at least 1 week prior to the scheduled start date.***
- Have IESO approval of the LDC Cut over strategy:
  - ***Cut over Strategy draft provided before the end of SIT***
  - ***Review and approval during QT***
- Submit SME_FORM_0008 Self-Certification – Cut over Readiness Self-Assessment Form . ***Provide to the IESO upon completion of QT***

90 Cut Over to Production

Activities

- Preparation :
  - Verification of Connectivity
  - Reports : enabling, confirming receipt
  - Update of Organizational relationships if applicable

90 Cut Over to Production

Cut over Strategy

- Educating your customers regarding the Smart Metering and TOU Billing changes is very important.

- Communication concepts that could be used:

  - Correspondence packages sent to or left at customer's premise;
  - Media outlets – TV, radio, magazines, newspapers;
  - Community Town Halls;
  - Customer Service Representatives; and/or
  - Web Services.

90 Cut Over to Production

Activities

- Preparation :
  - Confirm billing method, frequency and timing of billing requests, P Syncs, Meter Read files
  - Submission and processing of Organizational Contacts
  - Determine number of additional production USDPs required
  - Confirm loading of historical meter read data
- Cut over Execution & Post Cut over
- Sandbox continues to be available for testing

90 Cut Over to Production

Roles

- Cut over coordinator
- IT technical support (AS2, AMI, CIS, other systems)
- Business support staff (Synchronization, Meter Read data management)

Timeline

- Occurs after successful completion of QT
- 1 to 2 weeks

Beyond Cut Over activities

TOU Roll out:

- Strategy : Geographically? Volumes? Other marketing strategies?
- Bill Re-design?

Customer Communications

Customer Service support

- Call Centre Scripts (OEB)
- FAQs
- Tracking of calls
- Complaints Management

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LDC achieves capability to enroll individual customers in the MDM/R

TOU billing begins for this group of customers

SMART METERING Bill 21, 2006

PROJECT PLAN FOR MDM/R REGISTRATION & ENROLMENT PROCESS

Customer Group 1

Customer Group 2

PRODUCTION OPERATIONS & TOU ROLL OUT

AMI deployment and preparing to integrate with the MDM/R are parallel activities.

TOU roll-out activities

•LDC smart meter installation and preparation activities

•MDM/R registration and enrolment activities

• Groups of customer service delivery points enrolled in MDM/R production environment

• Education process for individual customers

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Organization-level Activities

Customer-level Activities

Next Steps

- Submit Registration Application
- Prepare/update/finalize your Project Plan
- Review Project Plan with your internal team followed by submission to your IESO Project Manager
- The IESO will confirm that we are able to honour the wave request upon receipt of your Registration Application and Project Plan
- Attend IESO Business Process Workshop
- Business Process development

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Thank You