

The Smart Metering Lifecycle

Stage 1		Stage 2		Stage 3	Stage 4		TOU Billing
Preparation	Technology Procurement & Deployment	System Development	Testing Readiness	Unit Testing	Enrolment Wave: SIT, QT	Enrolment Wave: Cutover	Time-Of-Use (TOU) Enabled Customers
An LDC team must prepare and assess what it will need to do to achieve Smart Metering Initiative (SMI) objectives and implement time-of-use.	Procurement consists of a number of LDC acquisitions, including their Advanced Metering Control Computer (AMCC), web presentment and Applicability Statement 2 (AS2) software. Deployment of smart meters may continue throughout the remaining lifecycle stages. Procurement activities may be completed before preparation activities.	During System Development, LDCs research, modify, reengineer and procure the software or tools that interface with the MDM/R and support their smart metering initiative.	During this period, LDCs ensure their systems are ready for testing. They also arrange Applicability Statement 2 (AS2) connectivity testing with the MDM/R through the Smart Metering Entity (SME).	During unit testing, LDCs test their systems (Advanced Metering Infrastructure, Customer Information Systems, etc) with the Meter Data Management and Repository (MDM/R) and ensure all required interfaces with the MDM/R are developed and functional: <ul style="list-style-type: none"> It is an opportunity to test end-to-end business processes. It simplifies MDM/R integration efforts and provides the basis for documentation. 	Enrolment involves an LDC's formal testing with the MDM/R: <ul style="list-style-type: none"> System Integration Testing (SIT) ensures that all system information exchanges required for the meter to bill process can be fulfilled through testing of MDM/R interfaces (10 business days). Qualification Testing (QT) occurs when SIT is completed and focuses on the impact on business processes. QT mimics four billing cycles but compresses them into a shortened time frame (26 consecutive days). An LDC should also prepare for cutover to the MDM/R production system as it progresses through QT. 	An LDC "cuts over," to the MDM/R production system once it completes formal testing with the MDM/R. After cutover, the LDC's enrolled smart meters can transmit data to the MDM/R.	LDCs can now bill customers on TOU through the MDM/R based on their TOU rollout strategy.
ACTIVITY: INFRASTRUCTURE ROLE: LDC	<ul style="list-style-type: none"> Advanced Metering Infrastructure (AMI) selection AS2 client selection Begin meter deployment 	Procure and install new systems. Initiate internal system modifications and upgrades (for example, CIS).	Complete system installations and upgrades.	Continue with internal system modifications and enhancements.			Execute rollout strategy.
ACTIVITY: REGISTRATION FORMS ROLE: LDC PROJECT LEAD	<ul style="list-style-type: none"> Project Plan (draft) MDM/R Registration Application Form (SME_FORM_0003) 	<ul style="list-style-type: none"> Initial project plan submission System Access Incumbency Letter (optional) 	<ul style="list-style-type: none"> MDM/R Organization Contacts (SME_FORM_0004) LDC Organizational Relationships and Authority Delegation Form (SME_FORM_0006) MDM/R File Transfer Services (FTS) Configuration Form (SME_FORM_0014) Provide LDC digital certificates to SME 	<ul style="list-style-type: none"> Submit updated project plan MDM/R User Access Request Form (SME_FORM_0013) Self-Certification for Enrolment Testing Form (SME_FORM_0007) 	<ul style="list-style-type: none"> Smart Metering Entity SME-LDC Agreement Cutover Strategy Self-Certification – Cutover Readiness Self-Assessment Form (SME_FORM_0008) 	<ul style="list-style-type: none"> MDM/R User Access Request Form (SME_FORM_0013) MDM/R Organization Contacts (SME_FORM_0004) 	
ACTIVITY: TESTING ROLE: LDC & SME	<ul style="list-style-type: none"> LDC AMI internal testing: meter read data files, network stability 	<ul style="list-style-type: none"> LDC CIS internal testing: output and return files LDC AS2, firewall configuration and internal testing 	<ul style="list-style-type: none"> LDC AS2 and firewall configuration and internal testing Schedule MDM/R connectivity tests 	<ul style="list-style-type: none"> Connectivity testing Unit testing 	<ul style="list-style-type: none"> SIT and QT testing 	<ul style="list-style-type: none"> Cutover to MDM/R production system 	

The Smart Metering Lifecycle continued...

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ACTIVITY: TRAINING ROLE: LDC & AGENTS <ul style="list-style-type: none"> MDM/R Introductory Workshop session Peer learning opportunities Business Process Workshop 	Project Plan Workshop	Technical Workshops: <ul style="list-style-type: none"> IT Connectivity, Infrastructure and File Transfer AMI Billing System (CIS) Interfaces 	<ul style="list-style-type: none"> MDM/R Graphical User Interface (GUI) Training, including online simulations 		<ul style="list-style-type: none"> MDM/R GUI Training, including online simulations 		
ACTIVITY: BUS PROCESS DEV'T ROLE: LDC PROJECT TEAM <p>Review existing business processes and identify where new processes will be needed.</p>		Reengineer and document existing business processes. Develop and document new business processes.	Continue with business process development and reengineering.	Test new and modified business processes. Make modifications and update documentation if necessary.	Test new and modified business processes before MDM/R production and make final adjustments. Develop missing processes that might be identified through testing.		
ACTIVITY: REPORTING ROLE: LDC PROJECT LEAD <ul style="list-style-type: none"> Smart meter deployment and TOU quarterly report (OEB) LDC Information and Progress Report (submit using OEB e-filing services) 	<ul style="list-style-type: none"> Identify relationships with third party consultants (if required) LDC Information and Progress report (submit using OEB e-filing services) Smart meter deployment and TOU quarterly report (OEB) Communicate progress internally 	<ul style="list-style-type: none"> LDC Information and Progress Report (submit using OEB e-filing services) Smart meter deployment and TOU quarterly report (OEB) Communicate progress internally 	<ul style="list-style-type: none"> LDC Information and Progress Report (submit using OEB e-filing services) Periodic SME status updates Smart meter deployment and TOU quarterly report (OEB) Communicate progress internally 	<ul style="list-style-type: none"> LDC Information and Progress Report (submit using OEB e-filing services) Biweekly SME conference calls Smart meter deployment and TOU quarterly report (OEB) Communicate progress internally 	<ul style="list-style-type: none"> LDC Information and Progress Report (submit using OEB e-filing services) Participate in daily conference calls with SME test teams Smart meter deployment and TOU quarterly report (OEB) Communicate progress internally 	<ul style="list-style-type: none"> LDC Information and Progress Report (submit using OEB e-filing services) Customer communications and notification Smart meter deployment and TOU quarterly report (OEB) Communicate progress internally 	<ul style="list-style-type: none"> Customers enabled for TOU as per LDC plan Customer communications and notification Smart meter deployment and TOU quarterly report (OEB) Communicate progress internally
ACTIVITY: COMMUNICATIONS ROLE: SME PROJECT LEAD <p>The SME will send the LDC its MDM/R ORG ID along with the registration confirmation.</p>	<ul style="list-style-type: none"> Periodic LDC status updates 	SME will confirm wave assignment based on a review of the LDC's project plan.	SME will confirm that telecommunications and MDM/R configurations are enabled in preparation for connectivity and unit testing.	<ul style="list-style-type: none"> Biweekly conference calls (for LDC status updates) Provide technical support as required 	Conduct daily conference calls with LDC test teams and coordinate technical assistance.	Transfer LDC from SME Registration and Enrolment team to MDM/R Production System Support team.	Continue to monitor meter registrations and TOU rollout.
ACTIVITY: DOCUMENTS ROLE: SME <ul style="list-style-type: none"> Smart Metering Start-Up Guide Smart Metering and the MDM/R - Guide to Registration Forms Preparation Registration and Enrolment Manual (SME_MAN_0001) LDC Project Plan template and activity descriptions 	<ul style="list-style-type: none"> MDM/R File Transfer Services and Web Services Configuration Workbook (SME_MAN_9001) 	<ul style="list-style-type: none"> MDM/R - Guide to Reports MDM/R Technical Interface Specifications (IESO_SPEC_9027) MDM/R Detailed Design Document (SME_DES_9001) MDM/R Reports Technical Specifications (SME_SPEC_0001) Validation, Estimation and Editing (VEE) Standards MDM/R Specification MDM/R Technical Interface and Reports Sample Files 	<ul style="list-style-type: none"> Smart Metering and the MDM/R - Guide to Testing and Cutover MDM/R Step by Step Guide to the GUI: Navigating Querying and Editing 	<ul style="list-style-type: none"> Guide to Testing and Cutover SME-LDC Agreement 	<ul style="list-style-type: none"> MDM/R Baseline SIT Scripts MDM/R Baseline QT Scripts Cutover Strategy Template VEE Standard (IESO_STD_0078) MDM/R Reports Technical Specifications (SME_SPEC_0001) Smart Metering and the MDM/R - Guide to Reports Technical Interface and Reports Samples 		<ul style="list-style-type: none"> TOU Schedule and Calendar Manual (SME_MAN_0005) MDM/R Business Continuity Manual (SME_MAN_008) MDM/R Incident Management Manual (SME_MAN_0007) Change and Baseline Management Manual (SME_MAN_0006)