

Smart Metering Entity (SME) Licence Order Working Group

Status Update Webinar

May 5th, 2016

Agenda

- Background
- Review of Preliminary Feedback from LDCs
- Update on the contract with a Privacy Consultant
- Update on the research related to Postal Codes
- Review of EDA survey results
- Review of the draft Technical Specifications
- Technical Specifications Deployment Schedule
- Review of Communications Plan and Project Timelines
- Open Discussion and Q&A

Background – The OEB Order

The Smart Metering Entity (SME) Licence Order Working Group was initiated to respond to the Ontario Energy Board's (OEB) January 26, 2016 Order (File Number EB-2015-0297 – Licence Renewal and LDC Agreement – FINAL Order). The Order extended the SME's licence and the SME/LDC Agreement to December 31, 2016 and requires the SME to file a plan to implement the following details with its next licence renewal application:

“Effective January 1, 2017, the SME shall collect the following information associated with each meter (modified where necessary to sufficiently render it non-personal information):

- a. The postal code;*
- b. The distributor rate class;*
- c. The commodity rate class;*
- d. Occupant change data.*

Background – The Working Group

- The Working Group consists of 13 Local Distribution Companies and Observers (including Ontario Energy Board, Ministry of Energy, Electricity Distributors Association, Enbridge and Union Gas), with the Information and Privacy Commissioner (IPC) also closely involved in the project in a consultative capacity.
- The SME Licence Order Working Group has had three meetings to date.
- Terms of Reference have been established, reviewed and approved:
<http://www.ieso.ca/Documents/consult/SME/SME-Terms-of-Reference.pdf>
- A web page has been established for posting the meeting materials:
<http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Working-Groups/Smart-Metering-Entity-SME-Licence-Order-Working-Group.aspx>

Review of the Preliminary Feedback from LDCs

Highlights of initial feedback gathered through a joint call of the Smart Metering Steering Committee (SSC) and the MDM/R Technical Panel members on February 8th:

Privacy

- Points raised around the collection of Postal Codes
- LDCs are authorized to collect their customers' data; however they expressed concerns regarding their ability to share it with the SME
- Any initiative that involves the collection of personal information must be properly managed and communicated to consumers
- Agreement that privacy considerations and analysis may take a longer than expected or anticipated period of time

Review of the Preliminary Feedback from LDCs

Timelines

- The timelines in the Order are ambitious and will require a concerted effort among multiple stakeholders

Data Gathered – Postal Code

- Advised that Postal Codes are not necessarily associated to the service location where the energy consumption occurs, but rather can be the billing address or a Post Office box address.
- Not all LDCs have a validation process for Postal Codes for their customers
- Many advised that GPS Coordinates are used within their CIS systems to identify service location

Review of the Preliminary Feedback from LDCs

Data Gathered – Distributor Rate & Commodity Rate Class

- There isn't common nomenclature being used by all LDCs and would need to be defined throughout the province for consistency
- Potential for a single customer being coded to a specific Distributor Rate Class

Data Gathered – Occupant Change Data

- Require verification that “Occupant Change Data” is equivalent to “Move-in/Move-out Data”
- Move-in/Move-out Data can be captured but does not determine if there has actually been an occupancy change

Review of the Preliminary Feedback from LDCs

Third Party Access

- Clarification is required around what is meant by Third Party Access
 - Direct access to the system?
 - Ability to request information?

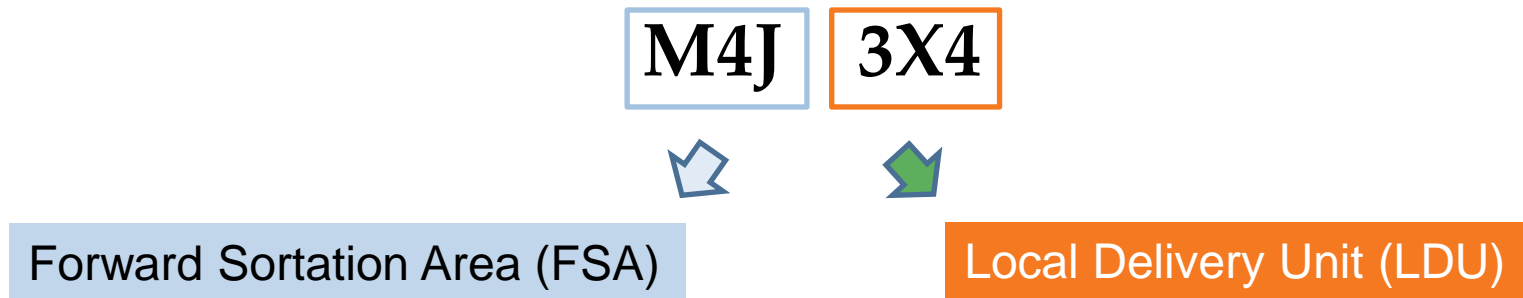
Implementation Considerations

- Implementation Plan should not compromise the billing operations of the LDCs and options should be investigated to minimize any costs

Update on the research related to Postal Codes

What are Postal Codes?

- Six-character alphanumeric string that forms part of a postal address in Canada



- Created by Canada Post to manage the sorting and delivery of mail
- Postal Codes do not correspond to census geography

Postal Code make-up

- A postal code may consist of
 - a single address - an apartment building
 - one or more address ranges - residential neighbourhood
 - PO Box, Lock Boxes and Rural Routes
- Residential & business (includes government and large volume receivers)
- Residential postal codes have approximately 20 households in them (average across Canada)
- Urban (>99%) or rural (<1%)
- Active and retired

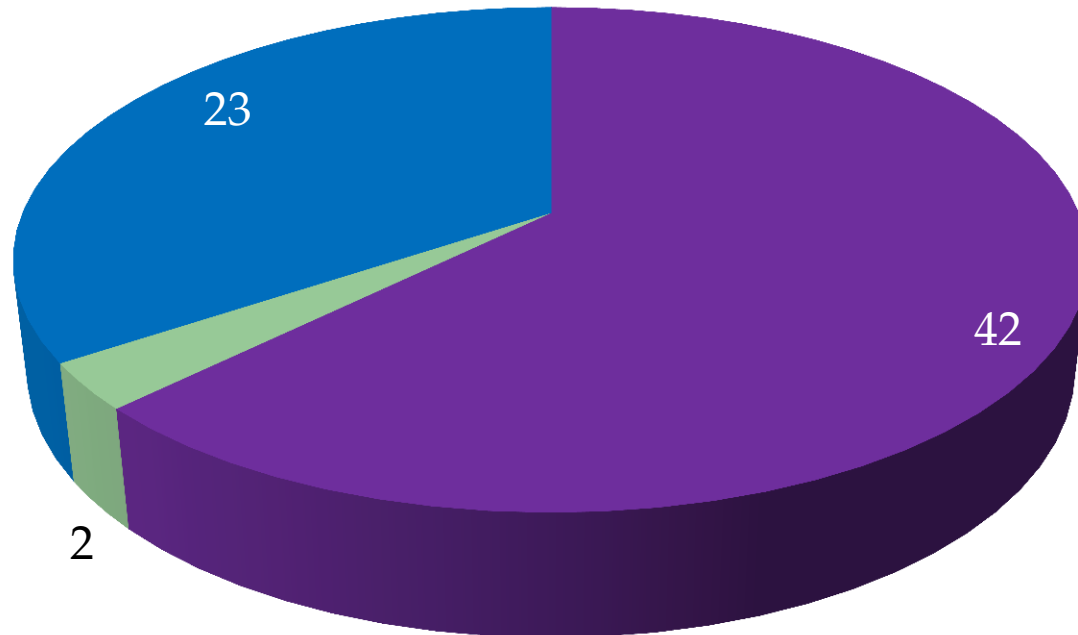
Conclusions

- Canada Post and other Vendors offer a for-fee service to translate Lat/Long coordinates to Postal Codes
 - Canada Post and another Vendor are willing to perform a Test Pilot Project with LDCs.
- This can be setup as a recurring service, however the changes may be infrequent depending on the LDC's service area
- Google Maps has several APIs and one is for GeoCoding that includes Reverse Geocoding. However full matching with 6 digits may not be possible for some locations
- The IESO enlisted the help of the EDA to survey LDCs to identify those LDCs that currently only store the GPS coordinates of the service delivery location to ensure they are aware of such services

Review of the EDA Survey Results

Results of the EDA Survey

LDCs' Responses (EDA Members)



■ Postal Code ■ GPS ■ No response

Non-EDA Members

- Hydro One
 - Will translate Lat-Long to Postal Codes through the assistance of a vendor
- Toronto Hydro
 - Has the service location Postal Codes
- Niagara-on-the-Lake Hydro
 - SME contacted NOTL Hydro and is awaiting for confirmation

Update on the contract with a Privacy Consultant

Methodology

- **The conceptual Re-identification Risk Determination includes the following:**
 - Documentation of the data flow
 - Assessment of the data release/sharing context. This assessment is completed using a series of checklists that help define an acceptable threshold for the risk of re-identification
 - The classification of each field in the dataset as a Direct Identifier (DI), Quasi-Identifier (QI), or non-identifier
 - A re-identification risk estimate for the QIs
 - An evaluation of the risk produced by the DIs

QIs Re-identification Risk Estimate Approach

- The estimate of the risk of re-identification will be produced by analyzing the QIs in the data and estimating the identifying power for each.
- The identifying power is estimated using the range of possible values, the level of generalization applied to the values and any known distributions.
- Using information about collection procedures, inclusion/exclusion criteria, context /application of the data flow, population sampling, publicly available information, and the identifying power of information, an estimate of the average risk of re-identification is calculated.

Third Party Classifications

POTENTIAL CATEGORIES FOR THIRD PARTY ORGANIZATIONS		
USER GROUP A	USER GROUP B	USER GROUP C
<i>Criteria: Organizations that currently have access to this information or have/would have the legal right to collect/use it for their mandate.</i>	<i>Criteria: Federal, Provincial or Municipal organizations requiring this information to better carry their activities and/or with non-for-profit interest for the data and/or with low risk of data re-identification.</i>	<i>Criteria: Organizations with commercial interest for the data set or with access to other data that elevates the risk of re-identification or represents a significant un-known risk.</i>
Ontario Energy Board	Crown Corporations (e.g. Statistics Canada)	Vendors
Ministry of Energy	Academia/Research Institutions	Retailers
IESO (for areas outside of the SME)	Municipalities	International Organizations
LDCs (Regulated) for information pertaining to their existing customers	Regional Planners	Generators
	Municipal Property Assessment Corporation - MPAC	Transmitters
		Other Market Participants
		Other Private Organizations
		LDCs for information pertaining to other LDC's data
		Conservation Authorities

Project Scope and Status Update

- Contract with Privacy Analytics Inc. has been ratified on April 14th, 2016
- Initial kick-off call held on April 18th, 2016
- A weekly call has been established to ensure progress is made
- IESO will provide the data schema and if available, the current dataset sampling, or similar documentation that explains the relationships between the fields and the nature of each field
- For 3rd party profiles, assumptions will be made with respect to the security maturity and translated into requirements

Project Scope and Status Update

- Privacy Analytics will review and assess four profiles:
 - IESO
 - Third Parties – Group A
 - Third Parties – Group B
 - Third Parties – Group C
- Deliverable is a Conceptual Re-identification Risk Determination Report
- The Consultant will deliver a draft of the Phase 1 Conceptual Re-identification Risk Determination Report by early/mid June, with the first priority being the assessment of the IESO profile.

Review of the draft Technical Specifications for the new fields

Definitions

- **Distributor Rate Class:** This defines the market segment to which the customer, associated to the SDP, belongs
- **Commodity Rate Class:** This defines the price plan for the customer associated to the SDP
- **Occupancy Change:** The dates associated with this parameter define the move-in/move-out dates of the premise's occupant
- **Postal Code:** This is the Postal Code associated with the SDP, i.e. Service Location, where the meter is installed
- LDCs should use the same classification that they currently use for their RRR Reports (Yearbook) for the Distributor Rate Class and the Commodity Rate Class

Distributor Rate Class Specification

SDP Parameter for 'Distributor Rate Class':

- The Parameter Name (Param Name) will be 'Distributor Rate Class'
- The parameter will be related to the Service Delivery Point – Universal_SDP_ID
- The parameter will be date-effective records (Start Date Time and End Date Time midnight aligned)
- The Parameter Value (Param Value) will be in the form of a code (refer to next slide for values)

Distributor Rate Class Valid Values

Parameter Value	Distributor Rate Class	Definition
201	Residential – Regular	Applies to a consumer account taking electricity at 750 volts or less where the electricity is used exclusively in a separate metered living accommodation (for domestic household and personal residency use).
202	Residential – Condo	Applies to a consumer account with a distributor, if the account relates to: <ul style="list-style-type: none"> - A property as defined in the Condominium Act, 1998 - A residential complex as defined in the Residential Tenancies Act, 2006, or - A property that includes one or more dwellings and that is owned or leased by a cooperative as defined in the Co-operative Corporations Act.
203	Residential – Seasonal	Applies to a consumer account with a distributor, if the account relates to: a residential dwelling that is not a year-round residence as defined by the LDC, and cannot be classified in the residential categories described above or as small general service less than 50 kW, e.g. cottages, chalets and camps.
301	Small General Service (<less than 50kW)	Applies to a non-residential account taking electricity at 750 volts or less whose average monthly maximum demand is less than, or is forecast to be less than 50 kW

Commodity Rate Class Specification

SDP Parameter for 'Commodity Rate Class':

- The Parameter Name (Param Name) will be 'Commodity Rate Class'
- The parameter will be related to the Service Delivery Point – Universal_SDP_ID
- The parameter will be date-effective records (Start Date Time and End Date Time midnight aligned)
- The Parameter Value (Param Value) will be in the form of a code (refer to next slide for values)

Commodity Rate Class Valid Values

Parameter Value	Commodity Rate Class	Definition
101	Time-of-Use (TOU)	Price option with three time-of-use price periods: off-peak, mid-peak, and on-peak; developed as part of the Regulated Price Plan (RPP) for those with smart meters
102	Tiered	Price option in which consumers can use a certain amount of energy each month at a lower price; when they pass that level, the rate goes up for all additional electricity
103	Retailer	Applicable to consumers who have signed a contract with a licensed active energy retailer and pay a fixed rate that replaces the time-of-use and tiered pricing RPP options. These consumers have chosen to no longer be under the Regulated Price Plan (RPP).
104	Spot Market Pricing	Price option in which consumers pay, for a given hour, the Hourly Ontario Energy Price established by the IESO for that hour. These consumers are not considered to be under the Regulated Price Plan (RPP).
105	Net Metered	Billing option that allows customers to generate renewable energy onsite for their own use, and receive bill credits for any surplus electricity sent to the grid.

Occupant Change Specification

SDP Parameter for 'Occupant Change':

- The Parameter Name (Param Name) will be 'Occupant Change'
- The parameter will be related to the Service Delivery Point – Universal_SDP_ID
- The parameter will be date-effective (Start Date Time and End Date Time)
- The Parameter Value (Param Value) will always be provided as 'X'. **The important aspect of the Occupant Change is the date of the change.**

Note: the Occupant Change parameter does not impact the meter read data Validation and Estimation functionality or the Billing functionality within the MDM/R.

Postal Code Specification

- The length of the postal code value must match the configured length defined in the Technical Specifications
- The postal code value must conform to the prescribed format mask (**ALPHA-number-ALPHA-number-ALPHA-number**)
- No blank spaces allowed
- Any of the ALPHA characters must be upper case
- The first character of the postal code value must match one of the regions for Ontario as defined by Canada Post
 - The Postal Code Regions in Ontario start with: K, L, M, N, P
 - This list will be adjusted if Canada Post adds regions in Ontario
- Synchronization will report the exception of the Postal Code

Postal Code Specification

- The SME will publish a unique Postal Code for all LDCs to use, temporarily, in cases where they need more time to assign a valid Postal Code to a certain service location

New SDP Parameters – Synchronization Impact

- The new SDP Parameters will be verified for valid values (please refer to the previous slides)
- Synchronization will reject the synchronization file set:
 - If the value for Distributor Rate Class and Commodity Rate Class does not match one of the pre-defined values
 - If the value for Occupant Change is not “X “
 - If the Postal Code does not conform with the specified requirements
- Existing synchronization effective dating rules will apply
- The IR14, the IR07 and the IR06 reports will be updated to report exceptions and successful updates as required

Technical Specifications Deployment Schedule

- The current Synchronization process will be updated such that this information can be stored in the MDM/R as effective-dated SDP Parameter data
 - Effective **October 1, 2016*** the MDM/R changes to receive, validate and report on Commodity Rate Class, Distributor Rate Class and Occupant Change will be deployed to the MDM/R Production environment (available for LDCs who will be ready to populate those fields ahead of January 1, 2017)
 - Effective **October 1, 2016*** the MDM/R changes to receive and report on Postal Code in the new standard format will be deployed to the MDM/R Production environment
 - Effective **January 1, 2017*** the MDM/R changes to validate Postal Code will be enabled in the MDM/R Production environment

* Tentative dates that are subject to change based on the overall project schedule

Technical Specifications Deployment Schedule

- The MDM/R Synchronization TIS has been updated with the new SDP Parameters
- A Request for Change (RFC0020693) ticket has been created by the SME and will have both the OEB Order EB2015-0297 and a redlined version of the MDM/R Synchronization TIS attached
- The SME will publish the redline version of the TIS as well as make the RFC global during the week of May 2nd, 2016
- The SME will support the phased transition of LDCs to comply with the new requirements
 - SME will provide, on request, data governance reports
 - SME will publish Quick Takes

Summary of Deployment Schedule

- Based on input from the OEB:

Functionality	Effective	Enabled	Validated
Commodity Rate Class	January 1, 2016	October 1, 2016*	October 1, 2016*
Distributor Rate Class	January 1, 2016	October 1, 2016*	October 1, 2016*
Occupancy Change Flag	January 1, 2017	October 1, 2016*	October 1, 2016*
Postal Code	January 1, 2017	October 1, 2016*	January 1, 2017*

* Tentative dates that are subject to change based on the overall project schedule

Review of Communications Plan and Project Timelines

Communications Plan

The Communication Plan is to ensure the SME License Order Working Group and the broader LDC community are aware of the OEB Order initiative and are kept apprised of the targeted milestones, decisions, functional specifications changes, testing requirements and the implementation date via various communication channels.

Communications Plan

Communications Type	Target Audience	Frequency
IESO WatchDox Tool (post the meeting materials, and draft minutes of the meetings)	Working Group members	Ongoing until implementation
IESO Stakeholder Engagement Website (post the approved minutes of the meetings)	All Stakeholders	Ongoing until implementation
IESO Stakeholder Advisory Committee (brief updates on accomplishments to date)	All Stakeholders	IESO SAC meetings: <ul style="list-style-type: none"> • May, August and October
IESO Webinars	LDC Community	Webinars to be scheduled: <ul style="list-style-type: none"> • May, July, September and November

Communications Plan

Communications Type	Target Audience	Frequency
EDA Website / eBlast (post the approved minutes of the meetings)	LDC Community	Ongoing until implementation
EDA LDC Surveys	LDC Community	April 2016 and as needed
SSC Meetings and LDC Open Calls	LDC Community	Meetings are scheduled for: <ul style="list-style-type: none"> • June 21, 2016 • September 20, 2016 • November 22, 2016
MDM/R Technical Panel Meetings	Technical Panel Members	Ongoing until implementation

Communications Calendar of Events

Communications Type	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
IESO Stakeholder Engagement Website	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
IESO Stakeholder Advisory Committee		Red			Red		Red			
IESO Webinars		Purple		Purple		Purple		Purple		
EDA Website / eBlast	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
EDA LDC Surveys	Green									
SSC Meetings and LDC Open Calls			Red			Red		Red		
MDM/R Technical Panel Meetings				Blue			Blue			
GO LIVE Communication									Red	Red

Updated Project Timeline*

Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
Early meetings with various groups	Working Group Formed and Kick off Meeting	Ongoing Working Group Meetings									
Privacy vendor selection and contract negotiations		Conceptual Re-Identification Risk Determination Analysis Draft report expected by May 31, 2016	SME Assessment of 3 rd Party Access Development of draft 3 rd Party agreements			SME License Application & 3 rd Party Access Plan		Documentation & Training		Go Live	
Technical Scoping & Requirements		Development and SME internal testing of the new MDM/R code			New MDM/R code deployed to MDM/R Sandbox environment LDCs' testing		New MDM/R code deployed to MDM/R Production environment with Validation for new SDP Parameters excluding Postal Code				
Regulatory Activities											

* Tentative dates that are subject to change based on the overall project schedule

Communication Next Steps

- The EDA will follow up with the remaining LDCs who have not responded to the survey
- The SME is happy to discuss with LDCs' CIS vendors technical aspects of the changes to the TIS
- The SME will share with LDCs the public version of the privacy assessment report
- Next SME Licence Order Working Group meeting scheduled for May 17th, 2016

Open Discussion and Q&A

