

IESO Stakeholder Engagement Foundation Working Group (FWG)

Meeting #2 Summary

Date held: May 20, 2015	Time held: 8:30 AM – 4:00 PM	Location held: IESO Adelaide Offices Toronto, ON
Working Group Members and Observers	Company Name	Attendance Status (A)tended; (R)egrets; (S)ubstitute; (P) Phone Participant
Adam White	Aitia Analytics	R
Jeff Evenson	Canadian Urban Institute	A
Rob Kerr	City of Guelph	R
Sarah Griffiths	EnerNOC, Inc.	A
Jennifer Gordon	Halton Hills Hydro	A
Brian Lennie	Horizon Utilities	A
Sally Barakat	Hydro Ottawa	A
Stuart Smith	London Hydro	A
Karen Carter	Ministry of Education	A
Guy Newsham	National Research Council	A
Jessica Webster	National Resources Canada	A
Marisa Uchin	Opower	P
Adriana Gliga-Belavic	PricewaterhouseCoopers LLP	S
Gord Ellis	Soft Grid Analytics Corporation	P
Kevin Myers	Veridian	A
Brian Byrnes (Observer)	Ministry of Energy	R
Janet Gore (Observer)	Information & Privacy Commissioner	A
Renee Barrette (Observer)	Information & Privacy Commissioner	R
Foundation Project Team	Company Name	Attendance Status (A)tended; (R)egrets; (S)ubstitute; (P) Phone Participant
Lisa Barnet	IESO	A
David Barrett	IESO	R
Simon Geraghty	IESO	A
Bob Guberman	IESO	A
Ryan King	IESO	A
Julia McNally	IESO	R
Przemek Tomczak	IESO	A
Chris Tuff	IESO	A
Doug Thomas	IESO	A

External Attendees	Company Name	Attendance Status (A)tended; (R)egrets; (S)ubstitute; (P) Phone Participant
Gary Michor	Screaming Solutions	A
Mark Simpson	Brantford Power	P
David Young	David Young Law	P
Ric Forster	Direct Energy	P
Drew Sloan	Opower	P
Terri Robertson	Municipal Property Assessment Corp	A
Mark Tinkler	Customized Energy Solution	A
Jeff Forrest	Ecotagious	A
Christine Dade	Horizon Utilities	A
Ian Crookston	Sobeys Inc.	A
Samira Viswanathan	Bruce Power	A
Lloyd Chee	Ontario Power Generation	A
Unidentified #'s 1 thru 5	Unidentified	P
Please report any corrections, additions or deletions to: stakeholder.engagement@ieso.ca		

Please note that the views represented in the summary below reflect the diverse views of members of the FWG and not necessarily those of the IESO. Links to the presentation materials are provided with each item.

Item 1 Foundation Project Orientation & Summary of FWG Meeting #1

<http://www.ieso.ca/Documents/consult/Foundation/Foundation-20150520-Recap-of-Meeting.pdf>

The IESO gave a presentation summarizing the material that was covered in the first Foundation Working Group Meeting.

Item 2 Introduction/Opening Remarks for FWG Meeting #2

The IESO provided opening remarks for FWG Meeting #2.

Item 3 Group Discussion: Data Elements/Data Sets Needed for Electricity Analysis

<http://www.ieso.ca/Documents/consult/Foundation/Foundation-20150520-Geolocation.pdf>

The Purpose of the group discussion was to determine which data elements in addition to electricity consumption information, are to be included in the MDM/R as part of the Foundation project.

The IESO presented initial lists of geo-location and customer data elements thought necessary to enable the useful analysis of electricity consumption information. The meeting attendees

reviewed the lists and added other elements to each. The final lists are below, with those added during review and discussion shown in italics.

Geo-location Data Elements:

- Address (SDP)
- GIS coordinate
- Square footage
- Building classification/type
- Land parcel
- Transmission/distribution grid
- *SQFT qualifier (e.g. unit type)*
- *Building age*
- *Heating types*
- *Schools & portable types*
- *Firmographic*
- *NAICs*
- *Land parcel matching*
- *Standard building archetypes*
- *End-uses external to the building*
- *Additions / renovations*
- *Utility I.D.*

Customer Identification Information Data Elements:

- Customer account number or key
- Move-in/Move-out status
- Demographic information
- Customer name
- Customer telephone number
- *Utility I.D.*
- *Email*
- *NAICs code*
- *Structure property ownership*
- *Firmographic*
- *Disconnect / Reconnect*

A similar process was followed to establish a set of guiding principles to use in determining the subset of geo-location and customer information that should be part of the MDM/R. The full list is follows, with those added during review and discussion shown in italics.

Guiding Principles:

- Ease of administration
- Generally collected by most LDCs
- Fields already exist in MDM/R
- Necessary to enable matching to other data sets
- *Necessary to enable analysis*
- *Consistent format already used by LDCs*
- *Consideration with other data initiatives (MDAP)*

The following summarizes discussions that ultimately arrived at which geo-location and customer information elements would best be part of the MDM/R under the scope of the Foundation project.

- It was discussed and noted that the desire to include all data elements that would enhance electricity analysis in the MDM/R needs to be balanced relative to the available resources and cost to LDCs. “Cost of implementation” is included under the guiding principle “ease of administration”. The FWG assessed the value of each option and made recommendations of what should be mandatory and what is optional.

- It is important to determine what data elements are essential for analysis versus data elements that are essential for matching to other datasets (i.e. what do we think is essential to analyze this information at minimum?). It is important to ensure that whatever data elements are included as part of the Foundation Project, that these same data elements support the development of the MDM/R Data Access Platform (MDAP). The initial data collection may focus on LDCs providing a minimal set of required data elements to the MDM/R, with other data elements added over time.
- Not all LDCs collect data in the same way, and that it is desirable to have consistency and standards to enable analysis. There are existing processes (e.g. energy audits) that already enable data collection by LDCs but it is important to collect and store it consistently for a centralized data source. It is also important not to be limited by the “lowest common denominator” i.e. according to the smallest set of data that the LDC(s) collect and manage (e.g. customer segmentation and/or demographic information). Moreover, all such information, even if collected by LDCs, may not be in the LDC Customer Information System (CIS) or synchronized with MDM/R.
- Address is an essential data element that is already collected by all LDCs. Under the guiding principle “ease of administration,” the FWG discussed whether address information could be used to link other data elements outside of the MDM/R. There are two ways to look at this: include geo-location information so that other data can be matched, or include all relevant information in the MDM/R so that data does not have to be matched outside of the MDM/R. The FWG discussed and noted that most demographic information can be linked via street address or postal code and can be considered a component of geo-location.
- In other words, address is the key data element, and all other geo-location data can be derived from address as part of MDAP. For example, requiring all LDCs to include latitude and longitude (i.e. GIS/GPS coordinates) could add a large cost to LDCs, whereas the coordinates can be derived from the address information. If MDAP implementation proceeds, other geo-location data may be captured as part of that project. Otherwise, these data elements could be prioritized and added as a second phase to the Foundation Project.
- Sometimes the billing address, building address, Service Delivery Point (SDP) address are all different; however to facilitate the electricity analysis, the SDP address is the most useful one.
- In terms of address standards, it is important to have a parsed address. It was also noted that it is important to look beyond the energy sector, such as the real estate business that uses Multiple Listing Service (MLS) and the Canada Post address naming conventions. Standards for required data elements will be discussed at future meetings.

- Customer account, customer name (excluding business name), customer phone number, customer email and move-in/move-out status are currently collected by some LDCs. For some LDCs, it may not be possible to determine move-in/move-out status if a landlord is paying the bill on behalf of tenants or if this information is collected separately from disconnect/reconnect status. For residential customers, name, telephone and email address are not necessary for electricity analysis. However, a business's name and telephone number, which are not considered personal information, may be useful as contact information for business customers.
- The other data elements of land parcel and building archetype were identified as critical to electricity data analysis, but could be matched outside of the MDM/R. Building type data elements should be aligned with building archetypes from other data sources (e.g. NRCan, energy models, portfolio manager) and energy use associated with building types should be defined the same way (e.g. excluding exterior lights, including common space energy use, etc.).
- Data elements that are not to be included in the MDM/R as part of Foundation but were deemed essential for electricity data analysis have been captured by the FWG and communicated to the MDAP team for consideration in their business case development project.
- The FWG agreed that, based on the guiding principles, SDP address is the only geo-location element that is to be included in the MDM/R as part of Foundation.
- From the Time of Use (TOU) and targeted conservation use-cases it was identified that customer account and move-in/move-out status would be useful for electricity analysis, but the absolute need for customer account identifier is not clear. It was noted that a utility identifier would need to be coupled with the customer account identifier to ensure there are no duplicates across multiple LDCs.
- Other miscellaneous data issues were discussed:
 - All data that goes into the MDM/R will also be available in the MDM/R Data Mart.
 - The FWG heard a concern about the data staying in Canada. While the MDM/R data resides in Canada, each LDC has its own requirements regarding data storage and some may be experimenting with US cloud technology providers.
 - The FWG confirmed that the IESO is bound by the Freedom of Information and Protection of Privacy Act (FIPPA).

Item 4 Development of Use Cases for Electricity Data

The purpose of the “Deep Dive” activity was to identify and discuss possible use cases involving data in the MDM/R. The FWG considered 11 candidate use cases for the Deep Dive. The list was narrowed to eight and similar topics were paired up. Meeting attendees separated into three groups to further develop the use cases in accordance with an outline template provided.

Four use cases were analyzed in depth by the groups and the results were presented and discussed with all attendees. The results of this activity (outlined below) will continue to be used to inform the approach to information de-identification and third party access.

1. Energy Modeling
2. Conservation and Demand Management (CDM) Targeting
3. Supply and Demand Matching of Renewables
4. Community Energy Plans

1. Energy Modeling

Purpose: Validation of building energy model for new school for the purpose of updating building energy codes (federal or provincial).

Users: Building energy modeler; May be federal or provincial employee or sub-contracted third party (private company, NGO or academic).

Beneficiaries: The codes committee – Direct beneficiary; Ratepayers – Ultimate beneficiary.

Statutory or Regulatory Requirement: Provincial building codes require building energy models. MDM/R data would improve these models.

Data Required and Granularity: Hourly or sub hourly data and address (at minimum) on an individual basis. Data for sample set if buildings most like archetypes of model. (Note there may be multiple accounts in one building).

Data Sets to be Matched/Compared: Building size and age are essential, heating and cooling, hours of operation nice to have.

Data Sets Matched by: The modeler would only need the data after it has been matched. The matching can be done by LDC or IESO.

Personal Information Necessary for Analysis: None

Reporting: Outputs of building modeling may be made public in the form and context of building codes. The building energy modeling outputs are not personal information.

Additional Notes: Linkage between building codes, CDM monitoring and validation would be useful.

2. CDM Targeting

Purpose: Evaluate impact of CDM on consumption, adoption rates, cost savings and energy savings.

Users: LDC, LDC's customer

Beneficiaries: LDC (to meet CDM targets), LDC's customer (to realize energy and cost savings)

Statutory or Regulatory Requirement: CDM targets are regulatory requirements

Data Required and Granularity: Consumption data, energy intensity, date, geospatial, address, postal code, MPAC data, building model, building type, building age. Highest granularity possible.

Data Sets to be Matched/Compared: Customer Information System (CIS), Geographic Information System (GIS), MDM/R, CDM Database

Data Sets Matched by: Could be matched by LDC. Third-party partnered with LDC may be better

Personal Information Necessary for Analysis: Address information necessary for data matching. A lot of this detail is already available to the users.

Reporting: Aggregate report delivered to the IESO by postal code. Detailed report to individual customer.

Additional Notes: This is personal information to facilitate LDC and CDM participant's collaboration (phone number, email, name etc.) While some of this is able to be done currently, customers across multiple LDC territories must get each set individually in whatever form is available.

3. Community Energy Plan

Purpose: Looking to establish baseline for planning for the future needs of the community.

Users: Municipality.

Beneficiaries: Beneficiary is municipality and community members. The data goes into social and growth planning.

Statutory or Regulatory Requirement: No regulations but there are incentives from province. Municipal Energy Plan (MEP) program , Community Energy Plan (CEP)

Data Required and Granularity: Aggregated consumption data based on sector is currently used. Granular data could allow more detailed/accurate analysis.

Data Sets to be Matched/Compared: Utility data (water, gas), growth, consumption.

Data Sets Matched by: Can be matched by another party and provided to the municipality in a dump aggregated by sector

Personal Information Necessary for Analysis: None. Meant for general community development purposes.

Reporting: Reported to community in the form of energy plans.

Additional Notes: More granular information could be useful for considerations of energy use in land use planning applications.

4. Supply and Demand Matching of Renewables

Purpose: Planning and siting of distributed energy resources. To help prevent mismatches between load and generation in planning and siting of distributed energy resources. Inform policy decisions. Rate setting based on broader set of best available data. Develop technically defensible information to support new generation and transmission planning.

Users: LDC, Government, IESO, generators, transmitters, third parties.

Beneficiaries: All customers, LDC, the province, federal government, OEB, generators, transmitters, third parties.

Statutory or Regulatory Requirement: Should help inform new transmission-build decisions, including cost/benefit of new generation/transmission. Statutes and regulations could be set from this information.

Data Required and Granularity: Some may require very granular, at least to match the data sets. Ultimately can aggregate to distribution transformer or something similar for analysis.

Data Sets to be Matched/Compared: Generation data, load data, geo-location.

Matched by Whom: Can be matched by another party.

Personal Information Necessary for Analysis: Address information necessary for data matching.

Reporting: Transparent to ratepayers and other levels of government. Public availability once de-identified.

Additional Notes: Important for end use load analysis, system planning, and rate setting. Need to use current information as demographics change.

Item 5 Framework for De-identifying Information for Disclosure to Third Parties
<http://www.ieso.ca/Documents/consult/Foundation/Foundation-20150520-De-identification.pdf>

The IESO presented an introduction to de-identification of personal information. Some items to consider for the next FWG Meeting include:

- What organization is requesting the data and is data de-identified of personal information adequate for the intended use?
- Are different levels of granularity required based on the user and the use of the information?

Item 6 Wrap-up and Next Steps

Action Item Summary					
#	Date	Action	Owner	Status	Comments