

Third Party Access Update

Presentation and Discussion with IESO's Stakeholder Advisory Committee

October 17th, 2018

Today's Discussions

- This presentation will provide an update on the progress to date on the Third Party Access project since our last discussions on April 27th and look for SAC's input to refine next steps, specifically related to the proposed monetization model for third party access to the de-identified electricity consumption data in the MDM/R and its implementation
- Key questions for SAC to consider:
 - What other considerations, opportunities and/or risks & mitigations do the SAC members see with the proposed monetization concept for the data in the MDM/R and its implementation plan?

BACKGROUND AND KEY PROJECT UPDATES

Background

- Following the 2016 OEB Orders (EB-2015-0297 and EB-2016-0284), the SME's licence was amended with the following requirements:
 1. To start collecting into the MDM/R, as of Jan 1st, 2017 additional smart meter information from LDCs, specifically Postal Code, Distributor Rate Class (DRC), Commodity Rate Class (CRC) and Occupant Change Date, in a manner that is compliant with privacy requirements – *this requirement is now fully met.*
 2. To prepare an Implementation Plan with respect to Third Party Access to this enhanced MDM/R data. The SME submitted that in following the Third Party Access Roadmap¹ recommendations (developed in 2017), the implementation specifics will be defined in 2018, including a costing & valuation model to help determine *how will this be paid for.*

Key Project Updates

Since the last SAC discussions, the SME has been focusing on the following key areas of the project:

- Finalizing Data Pilots and collecting learnings²
- Developing the building blocks of the data requests fulfillment process, from intake to post-delivery
- Development of a Financial Model and Data Products Catalogue
- Terms and Principles upon which access is granted
- Ongoing consultations (Data Strategy Advisory Council - DSAC, Stakeholder Advisory Committee - SAC, Information and Privacy Commissioner - IPC, Ontario Energy Board - OEB, Ministry, industry experts)

2 – please see Appendix for a summary of the pilots and some interesting applications



DISCUSSION AREA: PROPOSED MONETIZATION MODEL

A Phased OEB Submission

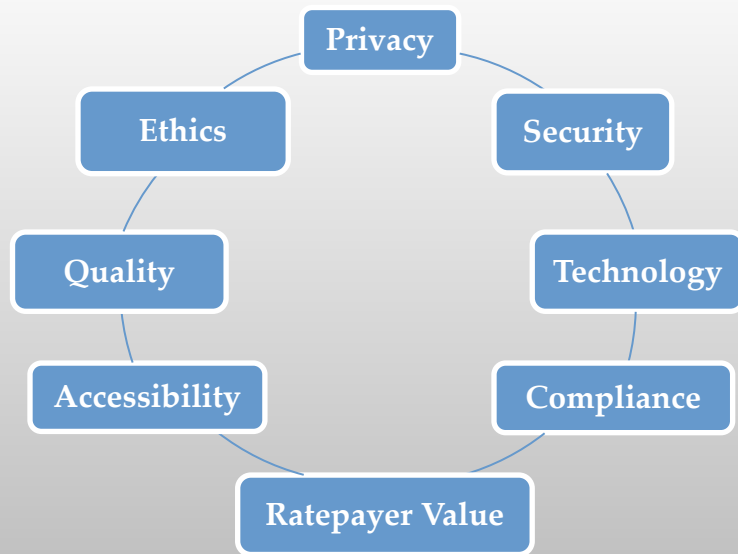
The SME is proposing a phased approach to the OEB submission later this year, as follows:

Phase 1 (2018): Submit for approval of a basic monetization model, with full cost recovery that also allows charging for amounts beyond cost recovery to create a net Ratepayer Benefit

Phase 2 (tbd): Return to the OEB with an assessment of the program's results and an application reflecting this experience. This could include a more refined monetization model that may further optimize the Ratepayer Benefit through various other market-driven mechanisms

Foundational Pillars

I. Terms of Access



II. Ratepayer Value Creation

- ✓ No Financial Risk for Ratepayer = Cost Recovery
- ✓ Capture Data Value = Surplus / Benefit for Ratepayer

I. Terms of Access Principles

Subject to the SME's legal and regulatory requirements, the SME will provide access based on these underlying principles:

Privacy, Security and Ethical Use of Data

- The SME will provide information where risk of re-identification, security controls and uses of data are appropriate – thresholds established as per IPC's Guidelines and with support from Ethics Committee, as required

Compliance & Accessibility

- The SME will provide information in compliance with applicable legislative and regulatory requirements, including terms of license, and terms of its data use agreement
- The SME will adhere to accessibility standards for public data uses

Ratepayer Value

- The products the SME will offer, will provide ratepayer value through their public benefit or financial return

Quality

- The SME will provide information where it meets high quality standards – when quality issues are identified alternatives will be sought with clients

Technology

- The SME will provide information to requestors who can demonstrate that they are technologically able to use the data, and meet their obligations as set in a data use agreement

II. Ratepayer Value Creation

A universal formula that applies to all types of data requests:

Pricing =

Cost Recovery

+

Ratepayer Benefit

All costs incurred by the SME to fulfill a data request (internal at \$/hr and external) are fully recovered³

Charging an amount beyond cost recovery, that reflects the value of the data through its granularity (\$/volumes), and for additional services such as visualizations or analysis (\$/hr)

SURPLUS FUNDS ARE CREDITED TO RATEPAYERS

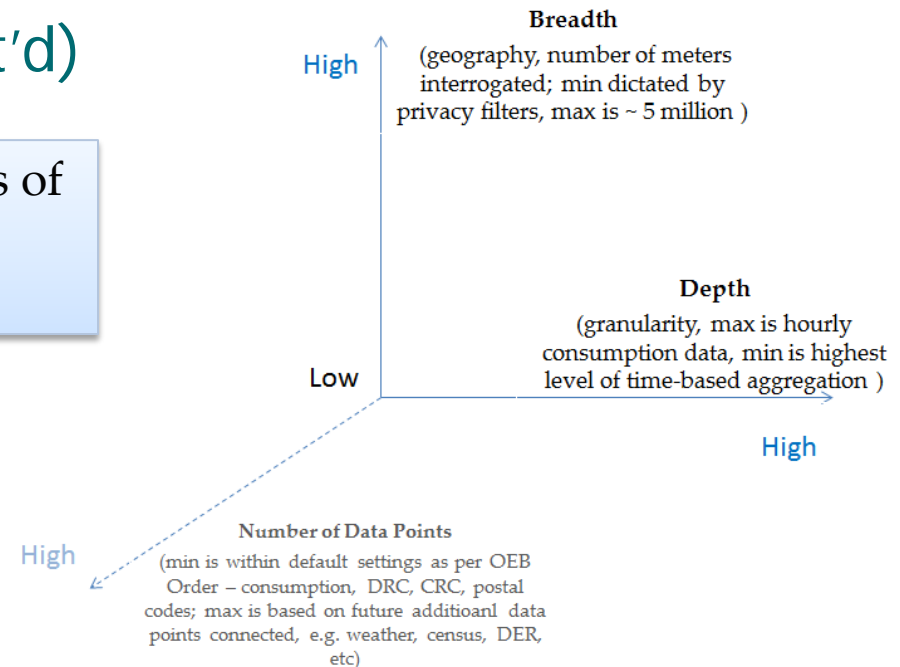
3 - There are entities that may have a statutory or regulatory right to the data which may not pay costs

Ratepayer Value Creation (cont'd)

A data request will be valued on the basis of its *depth* (\$/records), its *breadth* (\$/meters) and *no. of data points*⁴ (\$/data points).

Example of a Potential Data Request

A client requesting two years of hourly consumption data for residential customers in a medium sized city. The request includes the data extract and some extra analysis to support visualization (e.g. maps).



Pricing	=	<div style="background-color: #4f81bd; color: white; padding: 10px; text-align: center;"> Cost Recovery (internal /external) <i>x hrs x \$x/hr</i> </div>	+	<div style="background-color: #fde725; padding: 10px;"> 2.Data Extract <i>\$/'000 records</i> <i>\$/# meters</i> <i>\$/# data points</i> </div>	<div style="background-color: #fde725; padding: 10px;"> 3. Additional Services* <i>y hrs x \$y/hr</i> </div>

SURPLUS FOR RATEPAYERS = 2 + 3*

(*Net Ratepayer Benefit – excludes cost recovery portion)

4 – this is a future adder dimension, as the SME may start incorporating additional data sets (e.g. weather data)

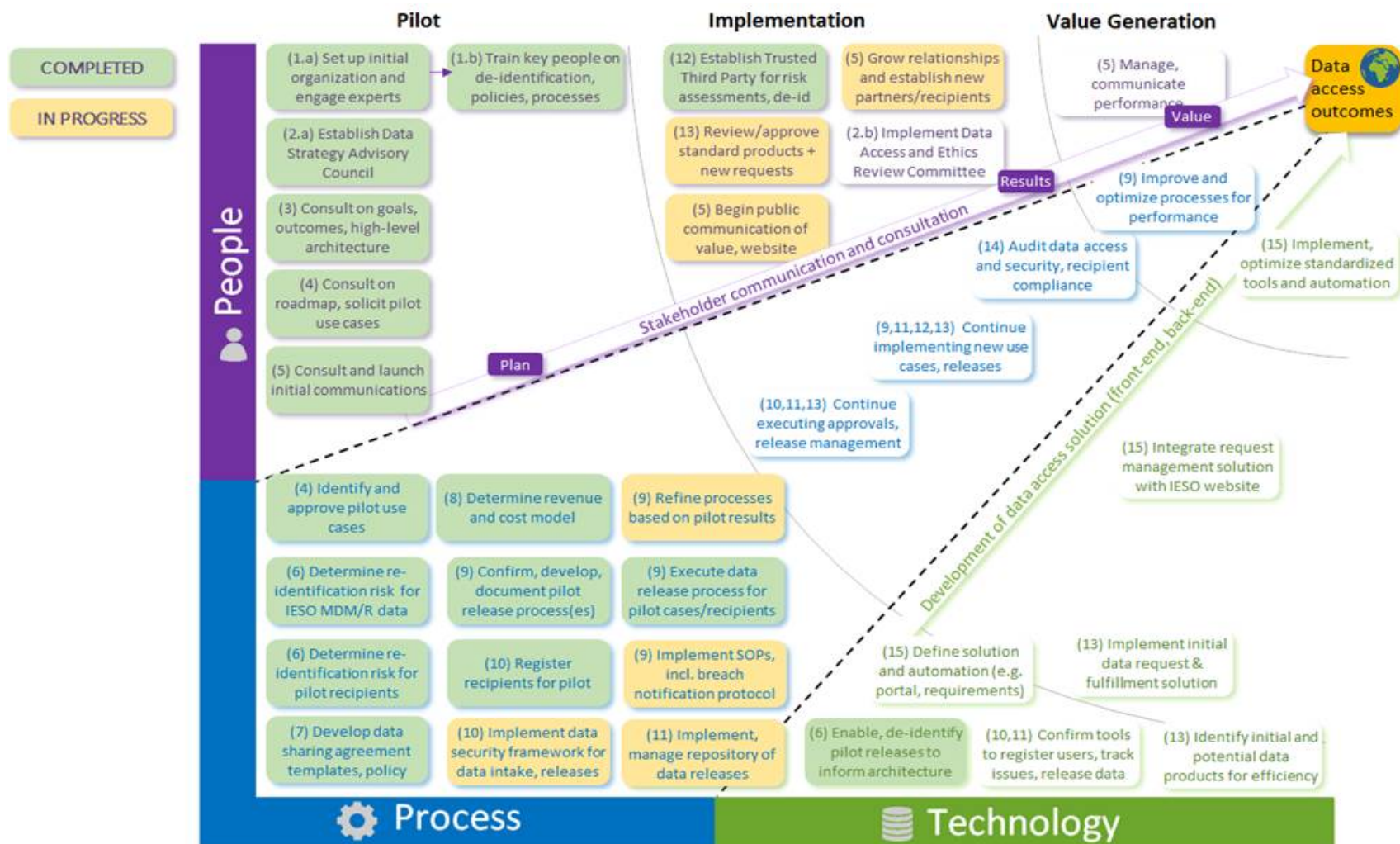
Risks & Mitigation

- Uncertainty as to scope of the market (number / types of requests, price the market will bear)
 - *Pilots assessed with understanding of interest, nature of requests*
 - *Undertake a phased-in approach to monetization*
- Possibility for those with legislative or regulatory authority to obtain access to the data for free; without any IESO controls on their use of the data
 - *Work on developing our relationships with those entities to maintain control over the data*
- Security breaches, other parties' disclosure of the data resulting in reduction in its value
 - *Robust security and privacy measures to prevent unauthorized access*
 - *Data Use Agreements ("DUA") limiting the use of the data for the purpose specified*
 - *Audit rights to assess compliance with DUA*

Next Steps and Questions for SAC Input

1. Further discussions with the IPC, OEB, DSAC, SAC and broader stakeholders on the proposed monetization model
 2. Submit for approval to the OEB by end of 2018
 3. Roll out phased-in implementation upon OEB approval
- Key questions for SAC to consider:
 - What other considerations, opportunities and/or risks & mitigations do the SAC members see with the proposed monetization concept for the data in the MDM/R and its implementation plan?

Appendix A. – Third Party Access Roadmap



Appendix B. – DSAC Pilots Summary

User	Objective	Details/Status
Oxford County	To create an accurate electricity baseline for improving energy efficiency, and aiding in the transition to renewable energy.	<ul style="list-style-type: none"> Four years of Hourly Electricity Consumption Data for consumers in Oxford County (54 million records, 480Mb)
City of Guelph	To identify priority areas for energy efficiency/ distributed generation programs via energy mapping; support GHG targets with an emissions inventory.	<ul style="list-style-type: none"> Four years of Daily Electricity Consumption grouped by Postal Code and by Distributor Rate Class for all Guelph postal codes (3.2 million records, 115Mb)
OEB	To better understand small commercial energy use patterns and to make more informed pricing decisions.	<ul style="list-style-type: none"> Four years of hourly consumption data for Small General Service customers, for the entire province (400 million records 17Gb)
IESO (outside SME)	To improve short- & long-term demand forecasting through better system modelling.	<ul style="list-style-type: none"> Hourly consumption data for all Consumers in Ontario by DRC, for the period January 1st 2014 to December 31st 2017 (140,256 records, 8Mb)
Enbridge Gas	To establish load profiles to help predict the GHG impact of the power system and support emission reduction.	<ul style="list-style-type: none"> Four years of aggregated hourly consumption data for residential customers for postal codes L4C, L4B, L1G, L6S, and L5M with commodity rate class (2.3 billion records, 1.4 Gb compressed)

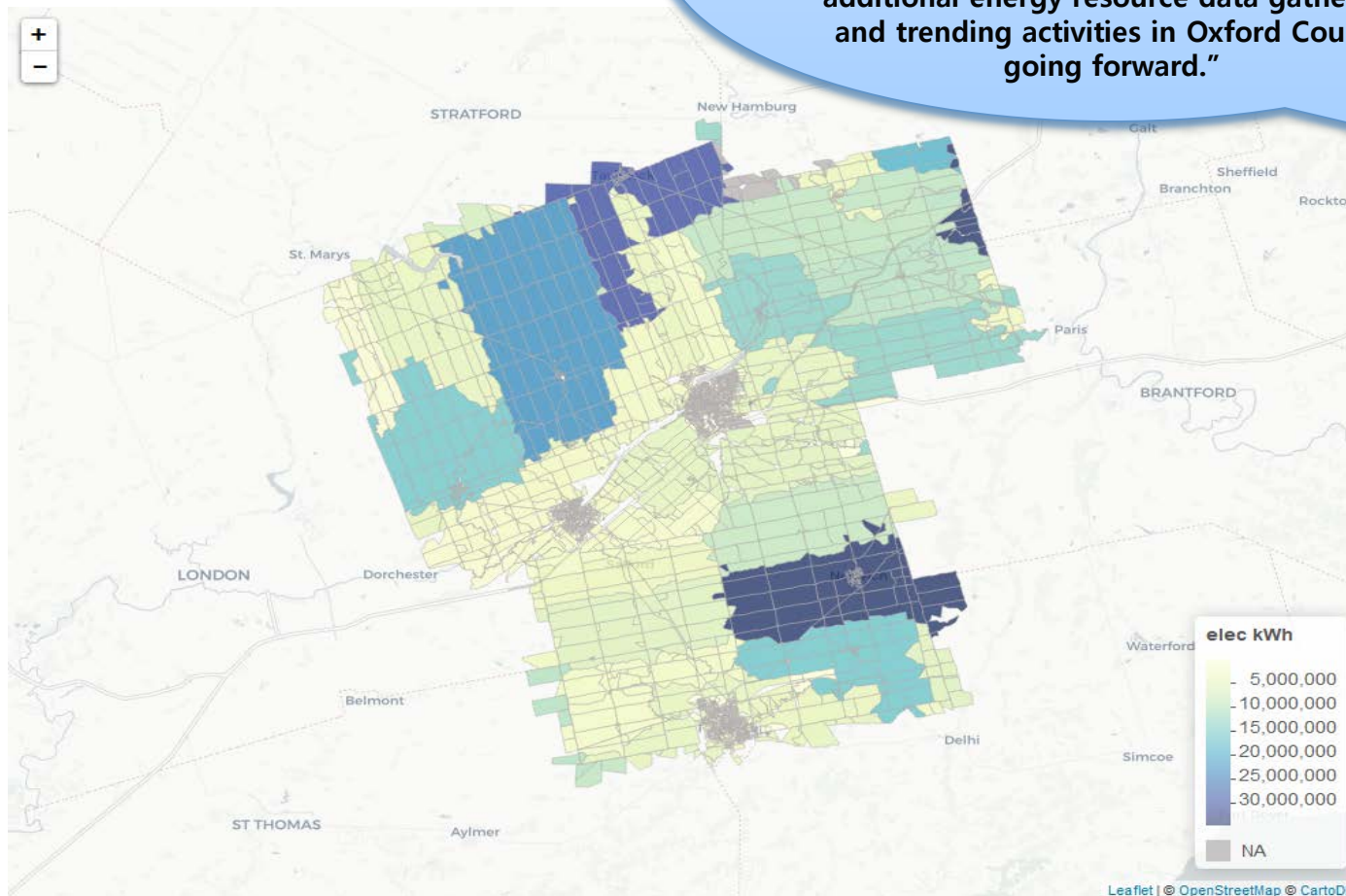
Pilot Extracts - Oxford County

Smart Meter Data – Annual Consumption 2017

"Creating an accurate and timely reflection of community-wide energy use is essential to the success of our 100% renewable energy campaign.

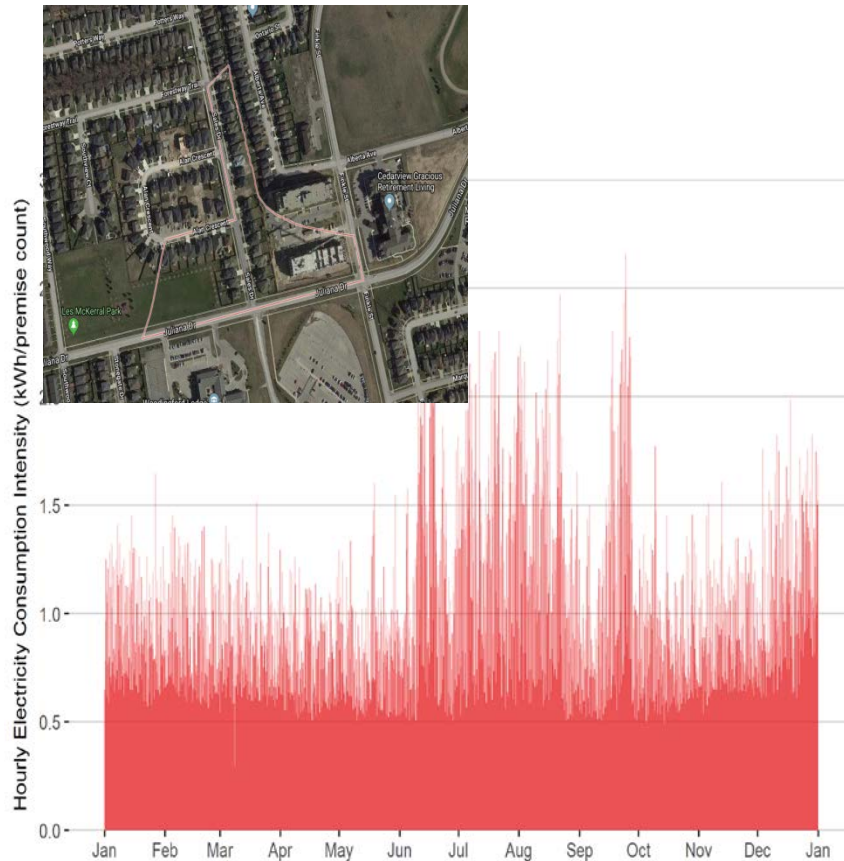
This project promises to set the bar for additional energy resource data gathering and trending activities in Oxford County going forward."

Jay Heaman,
Oxford County,
DSAC Member

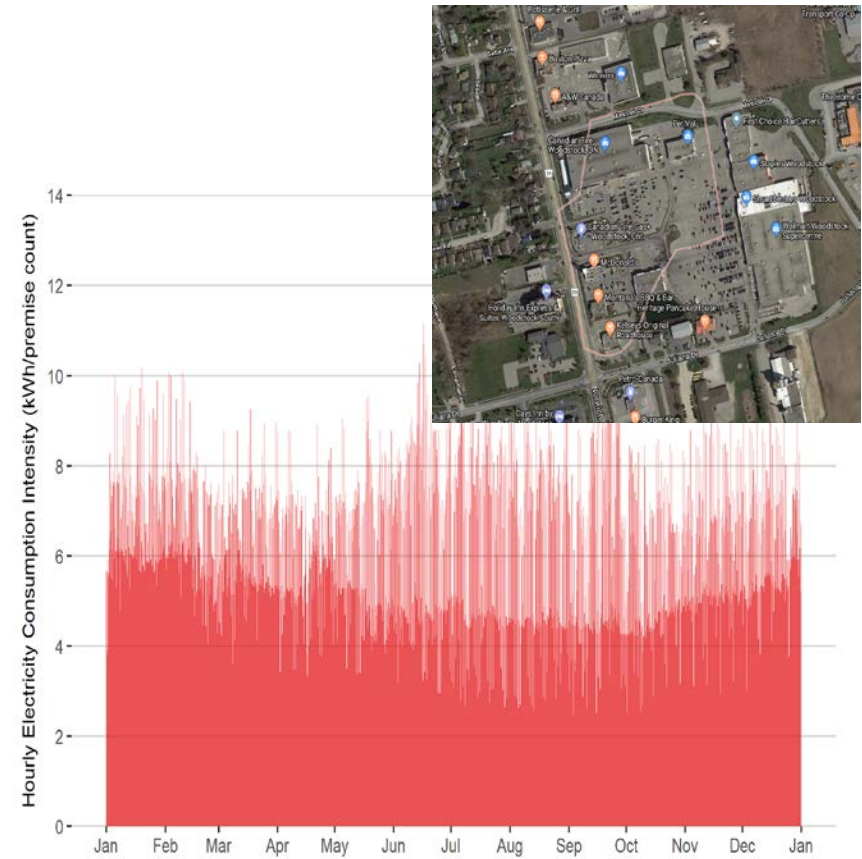


Oxford County Pilot (cont'd)

- Hourly electrical consumption intensity for 2017 for a residential postal code in Oxford territory



- Hourly electrical consumption intensity for 2017 for a small general service postal code in Oxford territory



Samples of Public Reports

