May 28th 2020

Energy Transformation Network of Ontario (ETNO) Meeting 3 Support Materials



Welcome and Introduction Agenda Item 1

1.Recap of meeting 1

2. Intended outcomes of this meeting

Determine focus of first work sprint

Determine timing of first work sprint

Provide guidance to working group to inform solution development



Framing Consumer Intelligence Briefing Agenda Item 2

Understanding consumer preferences for energy and energy services will help inform how and why specific issues should be addressed by ETNO

Questions to keep in mind

What do consumer needs tell us about their changing preferences for energy and energy services?

Are customer needs being effectively met?

What prevents the energy sector from better meeting consumer needs?

What questions are unanswered/need more information?



IESO Consumer Preferences Surveying

IESO conducting surveying of residential, small business, commercial and industrial consumers to inform a white paper on evolving consumer preferences

Purpose of this paper is to better understand consumer preferences and behaviours with the potential to impact electricity supply and demand in Ontario, especially those related to the adoption and use of distributed energy resources

ETNO Members and Working Group will have the opportunity to provide input into the questions asked in the survey

Expect to be able to share draft surveys for ETNO review week of June

ng Today, Powering Tomorrow



Consumer Intelligence Briefing

Agenda Items 3 - 7 Cynthia Hansen, Enbridge

Neetika Sathe, Alectra

Paul McMullen & Josh Cherun, S&C Electric

Sarah Bertollo, Bullfrog Power

Questions



Options for First Work Sprint

Agenda Item 8 Feedback from Working Group

Agreed with ETNO that Role of LDCs is a broader topic with more challenges to address – even with a targeted topic it could be difficult to reach agreement in the short-term

Agreed that first work sprint should deal with some aspect of providing better Access to Data with the goal of enabling the energy sector to better serve consumers

While the recommendation is to address a sub-topic within Access to Data for the first work sprint, other sub-topics could be dealt with in subsequent work sprints if desired

or Today, Powering Tomorrow

Access to Data

Why this issue matters to electricity customers: improving access to data and transparency of information is a keystone of enhancing sector competition, innovation, and creating a level playing field amongst participants

Access to data is an ongoing issue within Ontario's electricity sector and has not been effectively resolved by the existing policy/regulatory/market frameworks

Gaps exist in terms of the types of data available, the process for accessing data, the utility of the data that is accessible, and interoperability of LDC data collection methodologies

Access to Data - continued

Providing better access to data could provide tangible benefits related to the creation of new products and services, achieving conservation and energy efficiency targets, visibility of resources, system reliability, planning and forecasting, and the costs of electricity supply

Maintaining customer privacy and system security will be critical



Potential Access to Data Topics

Access to data is a large topic – ETNO would likely be better positioned to address a portion of this issue for the first work sprint

Four main areas identified:

Customer data

Distribution system data

Distributed energy resource data

Bulk system data



Customer Data

Involves providing better access to customer electricity or energy usage data (quantities, time periods, customer class)

Ability to better access customer data could support:

Development new products and services, including actionable insights

Better targeting of solutions (DERs, EE, controls)

DER aggregations participating in wholesale markets (or future distribution level markets) Enabling larger customers to meet reporting requirements

Enabling customers to earn revenues from already installed equipment Support municipalities in green recovery initiatives



Customer Data - continued

Current approach involves entities or customers making individual requests to LDCs for customer data sets

Current approach is inefficient and lacks standardization across data sets and LDCs



Customer Data – continued (2)

Main challenges to address:

Fragmented approach to requesting and securing data

Standardization of the data (e.g. granularity, frequency, format)

Ensuring customer privacy and consent

Maintaining cyber security

After sharing data with third parties, losing control over data use, retention, disclosure and disposal

Incentivizing owners of data to make it available/cost recovery for solutions developed/deployed to provide access (e.g. rollout of Green Button or changes to the Smart Metering Entity)

Distribution System Data

Involves providing better access (or any access) to information about the distribution system (connection capacity, congestion, load growth, load shapes, local power quality etc.)

Ability to better access distribution system data could support: Allow deployment of DERs to provide grid benefits or avoid problem areas Facilitate Non-Wires Alternative procurement by LDCs Facilitate the development of energy/capacity markets at the distribution level Broaden market access for energy solution providers

Current approach is fragmented across LDCs for data that does exist (e.g. connection capacity), released in difficult formats (e.g. rate filings) or does not exist (for certain kinds of data)



Distribution System Data - continued

Main challenges to address:

Determining the most valuable types of data to release balanced with what is feasible

Ensuring security of the distribution system

Data security and safeguards to ensure third party receiving data is using it appropriately

Maintaining cyber security

Cost recovery for making this data available and keeping it up to date



Distributed Energy Resource Data

Involves providing better access to data about/from DERs (e.g. location, technology, capacity, real-time operations)

Ability to better access data from DERs could support: Improving the effectiveness of bulk and distribution system planning Improving efficiency of wholesale markets (e.g. dispatch of resources, /products and services procured) (and distribution level markets if they emerge in the future) Provide a "quid-pro-quo" opportunity to balance customer and third party need for access to customer and distribution system data



Distributed Energy Resource Data - continued

Main challenges to address:

Fragmentation of data that would be provided in the absence of a provincial standard

Cost of providing this data to the IESO/LDCs

Cost of IESO/LDCs enabling investments to be able to accept and use this data from DERs



Bulk System Data

Involves providing better access to data about the bulk system and bulk system planning (e.g. hosting capacity, loading on transmission nodes, zonal demand forecasts, geolocation of transmission assets)

Ability better access bulk system data could support:

Improved business planning for market participants

Improved project siting decisions

Enhanced ability to evaluate planning decisions being made by the IESO

Current approach is robust, but does not include all data requested by stakeholders – frameworks exist for the release of data (e.g. regular operability reports, market reports, regional plans)



Bulk System Data - continued

Main challenges to address:

Ensuring security of the bulk system

Maintaining customer privacy (e.g. economic concerns of releasing transmission node loading for large customers)

Cost of making this additional data available and keeping up to date through regular processes



Discussion Questions

Which sub-topic should be addressed by ETNO in the first work sprint?

Which sub-topic would provide the most benefits to consumers?

Which sub-topic would be most feasible to address?

Are there additional challenges not identified in this presentation that would need to be addressed?

Are there potential solutions or approaches to solutions that could solve more than one of the challenges identified?



Timing of First Work Sprint Agenda Item 9

Meeting #	Date	Time	Туре	Purpose of meeting
1	February 26, 2020	8:00 – 10:30 AM	In-Person	 Discuss DRAFT 2020 Work Plan Discuss any Member proposals for additional Work Plan topics
2	April 15, 2020	8:00 – 10:30 AM	In-Person	Cancelled due to COVID-19 restrictions
3	May 28, 2020	8:00 – 9:30 AM	Webex	 Review consumer intelligence from ETNO Members Discuss sub-topics as set out by Working Group Discuss recommended first sub-topic as recommended by Working Group and rationale Determine sub-topic and provide guidance to Working Group on solution/recommendation development
4	June 25, 2020	8:00 – 10:30 AM	Webex	Review and discuss solution optionsProvide guidance for finalizing options
5 (new)	TBD	TBD	Webex	 Review and discuss recommendations Provide guidance for finalizing recommendations



Role of LDCs Agenda Item 10 The role of LDCs is a complex topic with many unanswered questions

ETNO opportunities

Develop problem statements to establish scope and provide direction the Working Group for future sprints

Frame the structure/content of successful outcomes

Initial discussions at ETNO can focus on the questions that need to be answered



Role of LDCs – Examples of Scoping Questions

What role should LDCs have regarding DERs that will provide the greatest benefits for consumers?

Should LDCs be permitted to own DERs, and if so, for what purposes?

Should LDCs be permitted to participate in wholesale markets (or distribution level markets in the future) with DERs that they own?

Should LDCs be permitted to control customer/third party owned DERs for reliability purposes?

Should LDCs be permitted to operate distribution level markets or should this role be performed by an independent entity?

Should LDCs take on responsibility for serving customer load?



Next Steps & Adjourn

Agenda Item 11

IESO to distribute meeting summary notes with discussion outcomes and meeting scheduling workbook

ETNO Members to review meeting summary notes/propose any suggested changes and complete meeting scheduling workbook

Working Group to develop options to address topic chosen for first work sprint

IESO to distribute draft consumer surveys for ETNO Member review and feedback

