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Energy Transformation Network of Ontario (ETNO)

David McFadden – Chair, ETNO
Ron Dizy – Vice Chair, ETNO

Summary

- ETNO has undergone a restructuring of focus and membership

- ETNO is currently wrapping up a six-month initiative to identify ways to improve access to data in Ontario's electricity sector to benefit customers

- Improving access to data can benefit consumers in a variety of ways – such as improved energy management products and services, more responsive rate structures and enhanced energy system planning and operations

- ETNO is considering four recommendations to improve data access:
  1. Implementing Green Button
  2. Setting standards for third parties on data use, retention, disclosure, disposal
  3. Using Smart Metering Entity to facilitate Demand Response in wholesale market
  4. Require provision of operational data from Distributed Energy Resources to LDCs

Questions for SAC

- Which of the potential future work topics is most critical to address in the short term? Why?

- Are there other topics SAC would advise ETNO to consider for future work?

Overview of ETNO

- The Energy Transformation Network of Ontario (formerly the Ontario Smart Grid Forum) is a group of senior leaders from across Ontario's utility, business and non-profit/government sectors working together to drive a more efficient, affordable electricity system in Ontario

- ETNO's primary objective is to guide the transformation taking place in Ontario's energy sector and to seek to optimize outcomes for the benefit of all Ontarians by influencing tangible policy, market and regulatory enhancements with near- and long-term benefits

ETNO Restructured

In 2020 ETNO was restructured by its members to better achieve the following:

- Refocus on the achievement of tangible, near-term outcomes via 6-month work sprints

- Provide actionable policy, regulatory & market recommendations to enable the integration of Distributed Energy Resources (DERs) and advance the effective implementation of a smart grid in Ontario

- Support coordination amongst Ontario's electricity policy, regulatory and market leaders

- Ensure ETNO membership reflects the diversity of ON's energy demand/supply chain

- Act as a platform for dialogue amongst key stakeholders, seeking consensus positions

ETNO Members

- David McFadden, ETNO Chair
- Ron Dizy, ETNO Vice-Chair
- Brad Carr, Mattamy Homes Canada
- Chris Carradine, Ecobee
- David Collie, Electrical Safety Authority
- Carlyle Coutinho, Enwave
- Mark Fernandes, Hydro Ottawa
- Paul Grod, Rodan Energy Solutions
- Anthony Haines, Toronto Hydro
- Tyler Hamilton, MaRS
- Cynthia Hansen, Enbridge Gas Distribution
- Chris Ireland, Ontario Teachers Pension Plan
- David Lebeter, Hydro One

- Jeff Lehman, City of Barrie
- William Milroy, London Hydro
- Steven Muzzo, Ozz Clean Energy
- Dr. Jatin Nathwani, University of Waterloo
- Nicholas Pender, Ontario Power Generation
- Alexandre Prieur, CanmetENERGY
- Mathew Sachs, Peak Power
- Neetika Sathe, Alectra
- Katherine Sparkes, IESO
- Linda Wainewright, TEAM *(Corporate Partners Committee Vice-Chair)*
- Brian Hewson, OEB *(Observer)*
- Mike Smith, Ministry of Energy, Northern Development and Mines *(Observer)*

ETNO's 2020 Focus: Improving Access to Data

- In Q2 2020 ETNO began to explore solutions to improve access to the abundance of data in the sector for the purpose of improving outcomes for consumers

- Data widely recognized as key resource supporting grid modernization efforts

- Value of data is, in part, a function of who has access to that data and the products/services they can provide

- Ontario's current framework for access to data in the energy sector has gaps

- Potential for customer benefits from deeper structural transformations of the energy sector would be undermined if gaps in the access to data framework remain unaddressed

ETNO's 2020 Focus: Improving Access to Data (cont'd)

Benefits of Access to Data

- New consumer applications and services

- Customized rate structures

- Facilitate the deployment and integration of smart building products

- Support building energy management

- Support deployment of Distributed Energy Resources (DERs)

- Encourage enhanced energy system planning and operations

- Enhanced customer choice

Recommendations Under Consideration

The Government of Ontario should enact regulation to require the implementation of the Green Button data standard by all local distribution companies (LDCs) and natural gas distributors

Considerations

• LDC cost recovery

• LDC resources focused on many priorities

• Benefits case in individual LDC service territories may differ from provincial business case

• Timelines for implementation

• Customer demand

• Moving away from standardization reduces value

Recommendations

The Government of Ontario should enact regulation to require the implementation of the Green Button data standard by all LDCs and natural gas distributors

The IESO should use smart meter data to perform measurement and verification for aggregated demand response resources participating in the IESO Administered Markets

The Government of Ontario should work with the Ontario Energy Board (OEB) to develop and enforce requirements on third parties regarding the use, retention, disclosure and disposal of customer data

The OEB should consult on and make amendments to the Distribution System Code to require the provision of operational data from DERs to LDCs

Potential Future Work Topics

ETNO is interested in further exploring the evolving role of local distribution companies (LDCs) in a high Distributed Energy Resource (DER) future

- Should LDCs be permitted to own and operate DERs within the regulated side of the business?

- What other non-distribution uses should LDCs be able to engage in?

- What potential distribution system structures hold the most promise in Ontario? (e.g. Distribution System Operators, Load Serving Entities)

- How would utility remuneration models need to change to respond?

Questions for SAC

- Which of the potential future work topics is most critical to address in the short term? Why?

- Are there other topics SAC would advise ETNO to consider for future work?

Thank You

http://www.ieso.ca/Learn/Ontario-Power-System/etno/Overview

Appendix: Background on Recommendations

Implementing Green Button

- The primary category of data to which energy sector stakeholders require better access is customer energy usage data

- The current framework for accessing this data involves individual requests to local distribution companies (LDCs) and distributors for data from a subset of customers. This process can be cumbersome, time consuming and, due to a lack of standardization across LDCs and distributors, the data is generally provided in different formats and at different levels of granularity

- ETNO believes that the implementation of a standardized approach to enable better access to customer energy usage data is a fundamental building block for future grid modernization efforts

- Energy data from the distributor's systems can be leveraged in a user-friendly format in an effort to both help customers better understand and manage their energy consumption, and to allow authorized third parties to access that data in a secure manner

Setting Standards for Third Parties on Data Use, Retention, Disclosure, Disposal

- As customer energy usage data becomes more integrated into system analysis and operations and is used more regularly by third party businesses, it will become more important to ensure that customers and their data are adequately protected once access to that data has been given

- ETNO believes that the legal framework surrounding a third party accessing customer energy usage data should be robust and in-line with the requirements placed on local distribution companies (LDCs)

- These requirements could take the form of minimum standards to which third parties accessing customer energy usage data will be held. Similar to LDCs, the third parties should be required to follow strict policies for data usage, ability to perform data mining and insights generation, data retention, disclosure of data or insights generated through the data, and appropriate disposal of data and or any information derived/generated through it

Using Smart Metering Entity to Facilitate Demand Response in the Wholesale Market

- A central requirement for demand response aggregators participating in the IESO Administered Markets (IAMs) is to be able to demonstrate that they reduced their demand when called upon to do so

- In order to demonstrate compliance, demand response aggregators must currently work with local distribution companies (LDCs) in whose service territories their contributor loads are located in order to get access to the meter data for each of their contributor loads

- Making these requests often come at a cost to the aggregator (and the LDC which must devote staff time to fulfilling the request). Absorbing these costs impedes the ability to scale demand response aggregation

- Data can sometimes be un-attainable leaving demand response aggregators unable to comply with the IESO's requirements to supply accurate meter data for the purposes of performing Measurement & Verification (M&V)

Require Provision of Operational Data from Distributed Energy Resources to LDCs

- In order for local distribution companies (LDCs) to plan, monitor and operate their distribution systems effectively, they need to be able to access data from Distributed Energy Resources (DERs) including their real-time operational behaviours

- Approaches to securing operational data are not standard across LDCs

- LDC access to DER data would yield greater efficiencies in system operations at both the distribution and bulk level. In turn, this would help contribute to lower system costs and support higher levels of DER penetration

- Codification of data requirements would yield the transparency and consistency that is needed by DER proponents and LDCs alike