The Power to Connect

Advancing Customer-Driven Solutions for Ontario

Presentation to the
IESO SAC

May 10, 2017

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The Voice of Ontario's Electricity Distributors

The Vision

- This is about preparing Ontario's electricity industry today for tomorrow's consumer.
- This vision by the Electricity Distributors Association (EDA) and its member local utilities proposes a new way forward for Ontario's electricity system that recognizes consumers as drivers of change and leverages new technologies to deliver high-quality electricity services.
- The EDA's vision is that the integration of local, small-scale power generation and storage technology, known as distributed energy resources (DERs), will be key to achieving a more resilient system that can alleviate cost pressures.

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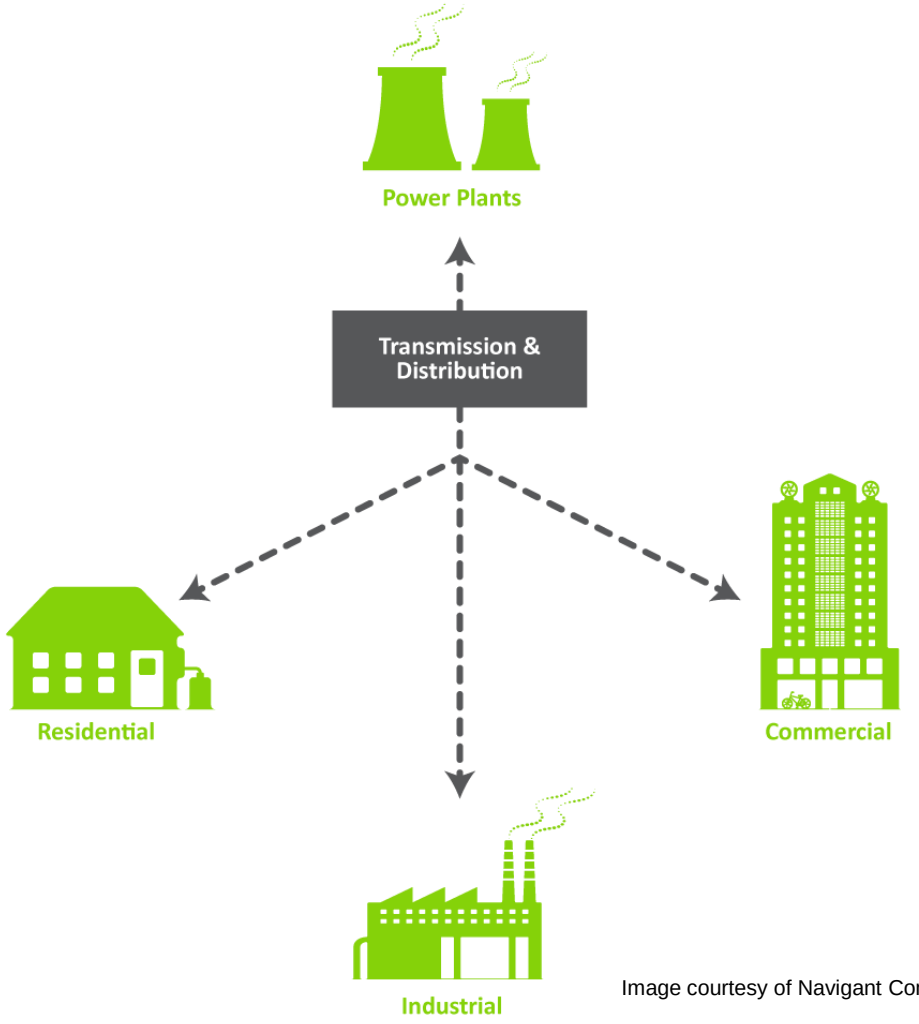
Changing energy landscape

- Currently, LDCs manage one-way energy flow and have an obligation to connect customers and accommodate for distributed generation.
- The energy landscape in Ontario is changing and that brings threats and opportunities which will require transformation of the utility business model.
- Utilities will succeed going forward by adopting stronger customer-centric thinking.
- Over the next decade innovative LDCs will advance from primarily one-way deliverers of power to two-way, networked generators, distributors, and managers of electricity – all in support of customer demands.
- The leadership of local distribution companies (LDCs) will be needed to manage the integrated power flows and digitally enabled grid.



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An Ecosystem of Integrated Power Flows

- The transformation reflects an accelerated transition towards a cleaner, more distributed and intelligent energy system.
- The increase of DERs (including energy efficiency, demand response, distributed storage, distributed generation, and electric vehicles) is fueled by an increased customer desire for control over energy usage.

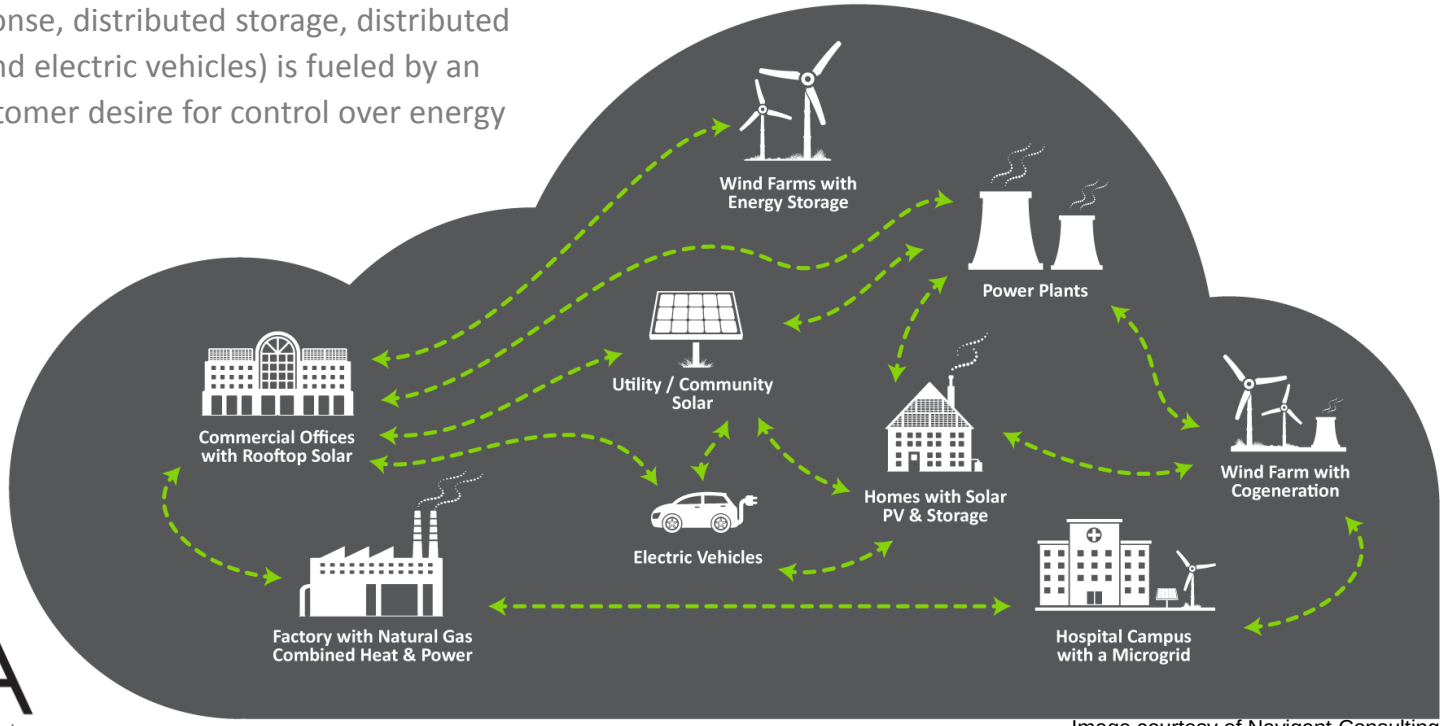

Image courtesy of Navigant Consulting Inc.

LDCs remain central and uniquely positioned to lead transition

- Ontario's LDCs continue to expand their ability to provide leading edge technologies and to build their capacity in connecting DERs across their network.
- Ontario shares common goals with other Canadian and American jurisdictions in addressing climate change and facilitating the penetration of cost-effective DER.
- Ontario is committed to pursuing conservation, energy efficiency and fuel switching through its Climate Change Action Plan to reduce the use of fossil fuels and boost clean electricity and clean fuels.
- LDCs are critical to enabling DERs in the province's energy system and to cost effectively satisfy increased demand for clean electricity through the electrification of transportation and fuel switching.

Enabling DERs

Tomorrow's LDCs will evolve within three key dimensions:

DER Enabling Platform:

The LDC of the future will be key to enabling DERs; LDCs will provide an integrated network where DER third-party providers and customers can "plug-n'-play."
LDCs must be central to enabling DERs due to operational and planning responsibilities.

DER Integration:

The future will see LDCs expand their business beyond traditional poles/wires to DERs. Strategic use of such resources could improve efficiencies, result in infrastructure savings, and empower LDCs to focus on new energy solutions, ideas and services.

DER Control and Operation:

The ability of LDCs to act as fully integrated network orchestrators is valuable to the provincial system and to all customers.

However, there are three key challenges: Customer & stakeholder; Operations; and Regulatory.

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Overcoming key barriers

Regulatory

Customer and Stakeholder

Operations

Customer & Stakeholder

- A key challenge for transitioning to a clean, distributed and intelligent energy grid is managing the pace of investments to mitigate rates and support customer needs.
- LDCs should prioritize opportunities and gain an understanding of what capabilities are vital to maximize customer value.
- LDCs can also consider which areas of the business would benefit from a shared services model with other LDCs.

Operations

- Introducing new technologies into an organization presents challenges.
- New policies and procedures will need to be developed.
- Leadership and support for innovation are necessary to allow for time to make changes, adjust, and gain understanding of the technology.
- LDCs will need new competencies and skills in data analytics, communications, cyber security, and digital asset management.

Regulatory

- The regulatory structure in Ontario will need to be flexible to allow LDCs to adapt.
- A regulatory framework should reward LDCs that build their capacity as orchestrators and enablers of DERs.
- A potential solution - for example - could be to adopt Earnings Impact Mechanisms (EIMs) tied to performance as a platform provider, facilitating the market, and advancing policy goals.

The Path Forward

- While LDCs are at the forefront of the grid transformation, the path forward requires careful and constructive coordination with government, IESO, OEB and stakeholders.
- There are a number of intersecting initiatives that will shape the modernization of the grid:
  - **OEB:** Rate Design for Commercial and Industrial Customers
  - **IESO:** Market Renewal; Grid-LDC Interoperability
  - **MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE:** Climate Change Action Plan
  - **MINISTRY OF ENERGY:** Long-Term Energy Plan
- The EDA has encouraged the government to use the 2017 Long-Term Energy Plan to outline a path forward for the modernization of the grid and integration of DERs.
- The EDA looks forward to working with government and stakeholders to turn this vision into reality.
- For further discussion please contact: Justin Rangooni, Vice President, Policy & Government Affairs (jrangooni@eda-on.ca).

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Thank you

Electricity Distributors Association (EDA)
3700 Steeles Ave W, Suite 1100
Vaughan, ON L4L 8K8
Main: 905.265.5300 Fax: 905.265.5301
Read the vision on the EDA Website at: www.eda-on.ca

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