

**DECEMBER 2, 2020**

# IESO York Region Non-Wires Alternatives Demonstration Project

**Jennifer Hiscock**  
Natural Resources Canada



# Introduction – Panel Members

**Jennifer Hiscock** - Assistant Program Director/Smart Grid & Energy Storage, NRCan

Jen leads the Smart Grid & Energy Storage portfolio for NRCan's Office of Energy R&D. Her prior work with the CanmetENERGY research labs on smart grid development and the integration of renewable and distributed energy resources has given her a comprehensive understanding of smart grid technology development in Canada. She represented Canada as a national expert in the IEA - International Smart Grid Action Network (ISGAN) and facilitated knowledge exchange and collaboration on smart grid projects in Canada as Manager of the Canada Smart Grid Action Network.

# Introduction – Panel Members

## **Patrick Lo** - Senior Manager of Partnerships - IESO

Patrick has more than 14 years of experience in the electricity sector and is currently the Senior Manager of Partnerships in Innovation, Research, and Development at the Independent Electricity System Operator (IESO). He oversees the IESO's Grid Innovation Fund – and the associated portfolio of projects – which provides financial support to innovative projects with significant potential to enable ratepayer cost savings and improved reliability. Prior to joining the IESO, Patrick held various positions at Hydro One, including leading its 10-year distribution strategy and advising on grid modernization through SCADA technologies to improve system reliability.

# Introduction – Panel Members

**Geri Yin** – Head, Grid Innovation, Green Energy & Technology Centre, Alectra

Geri is the Head of Grid Innovation group at GRE&T Centre, a dedicated innovation hub at Alectra focused on identifying, developing and accelerating the commercialization of emerging clean energy solutions to build sustainable value for customers and local communities. In her current role, Geri oversees innovation projects and Alectra's grid modernization initiatives that leverage emerging technologies and help shape the future of electricity distribution grid and utility business model. Previously, Geri served as Director, Business Development and Sales supporting Alectra Energy Solution's business strategy development, economic evaluation on commercial investments and stakeholder engagement.

# Demonstration Overview

- Canada's first local electricity market at the distribution system level
- Funded with \$5M from the IESO's Grid Innovation Fund and NRCan respectively
- Delivery partner: Alectra Utilities
  - Software Platform ([www.YRDemo.com](http://www.YRDemo.com))
- Focused on Southern York Region
  - Vaughan, Markham and Richmond Hill
  - Fast growing with extensive urbanization
  - Peak demand of about 1,350 MW
  - Existing stations reach limits in mid- to late-2020s
- Direct Participants and Aggregators eligible
- DER Capacity between 100 kW and 3 MW
- Permitted Resources: demand response, gas-fired, and storage resources
- 2020 Local Market Auction:
  - Capacity Auction: November 18-19, 2020
  - Target Capacity: 10 MW
  - Commitment Period: May 1-October 31, 2021
- 2021 Local Market Auction:
  - Capacity Auction: Fall 2021
  - Target Capacity: 15 MW
  - Commitment Period: May 1-October 31, 2022

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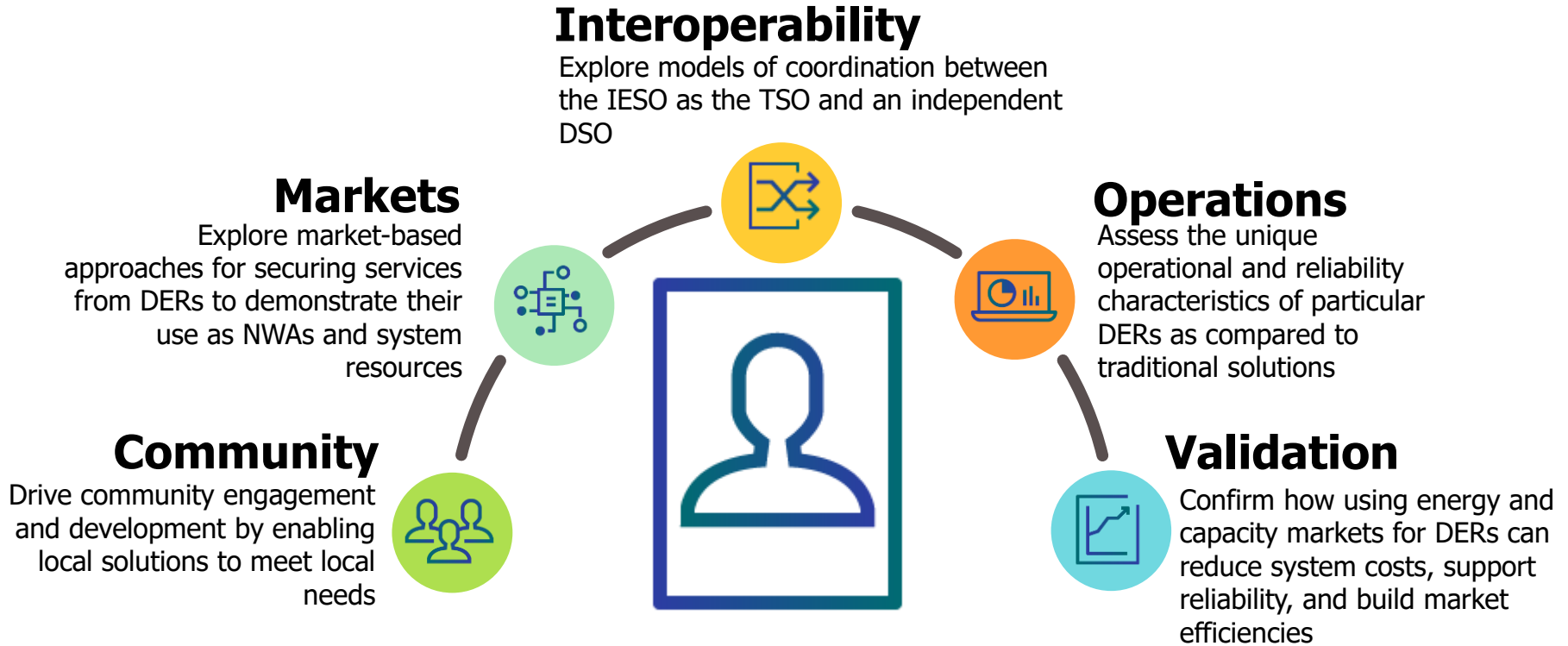
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**Patrick Lo**

Innovation, Research and Development, IESO



# Demonstration Objectives



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GRE&T Centre, Alectra



# Demonstration – Local Capacity Auction Results

- **Registered Capacity:** 34.3 MW
- **Participants:** aggregated residential customers, supermarket operators, manufacturers, district energy utility, other local companies
- **DER Types:** BTM CHP, C&I Load Curtailment, Residential DR (Smart Thermostats), BTM Gas-fired Generation

Successful Participants		2021 Commitment Period Local Capacity Obligation (kW)*
<b>Zone 1 (Vaughan)</b>	EGDECOM ENERGY INC.	2,200
	ENERGYHUB CANADA ULC	420
	LONGOS BROTHERS FRUIT MARKETS INC.	1,000
	NRG CURTAILMENT SOLUTIONS CANADA INC.	400
	TYCHO POLY INC.	500
<b>Zone 1 Total</b>		<b>4,520</b>
<b>Zone 2 (Markham, Richmond Hill)</b>	EGDECOM ENERGY INC.	800
	ENERGYHUB CANADA ULC	780
	GC PROJECT LP	1,000
	MARKHAM DISTRICT ENERGY INC.	2,900
<b>Zone 2 Total</b>		<b>5,480</b>
<b>Demonstration Total</b>		<b>10,000</b>

\*Local capacity auction clearing price: \$0.64/kilowatt-day

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# Thank You

[ieso.ca](http://ieso.ca)

1.888.448.7777

[customer.relations@ieso.ca](mailto:customer.relations@ieso.ca)

[engagement@ieso.ca](mailto:engagement@ieso.ca)



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