



ELECTRICITY DISTRIBUTORS ASSOCIATION



EDA's 'Vision': Local Distribution Utilities' Future Role in Building the Sustainable Communities of Tomorrow

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- Recap of Project Background & Objective

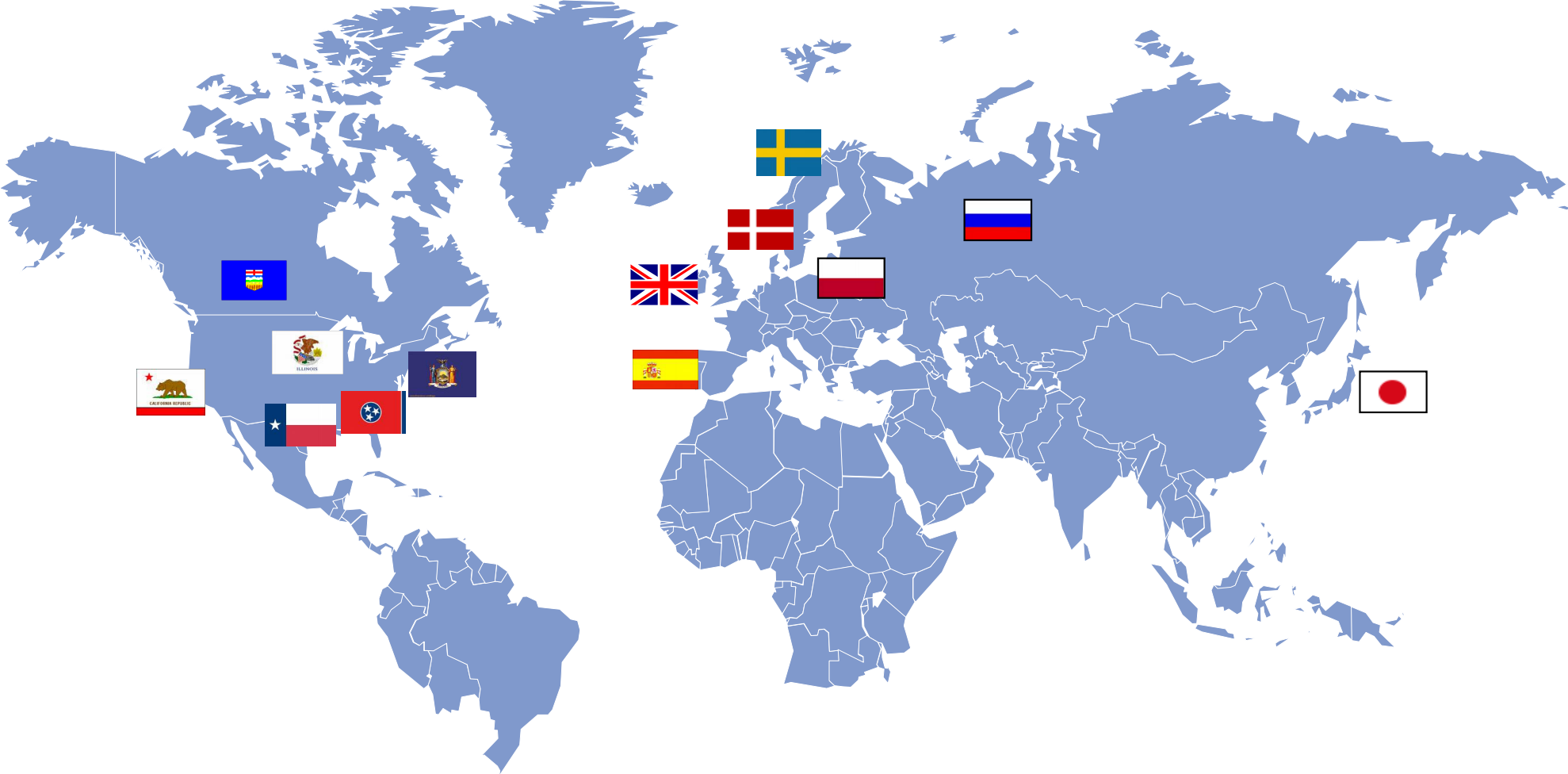
EDA's 'Vision': The Ontario Electricity Distributor of the Future

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EDA's 'Vision' Project: Background & Objectives

- The past decade has brought dramatic change to Ontario's electricity system, and LDCs' role within it
- Change is continuing to be driven by many fundamental factors; Industry participants' challenge is to understand and productively harness these change drivers
- To help meet this challenge, the EDA's Board initiated a 'Visioning' exercise in the fall of 2007
- A Vision Committee of EDA Board members was established with the following mandate:
 - *to develop a Vision for the future of the distribution sector, in the face of the changes that had taken place in the electricity market in Ontario over the past ten years, and those expected to come over the next decade and beyond.*
- The primary goal of the EDA 'Vision' is to position LDCs to best meet our customers' electricity needs, with the objective of *Building the Sustainable Communities of Tomorrow*
- The advancement of this 'Vision' will permit LDCs to better engage with government and agencies in discussions about their role, to ensure the achievement of our common goals.

Deloitte's Global Research Study: Jurisdictions Examined



Historical Context

Post 2004: LDCs' Unique Positioning Gradually Becoming Recognized

- Pre-1998: local utilities operated under Public Utilities Act (pwr delivery/customer care + CDM + generation, etc...)
- 1998's Electricity Competition Act (Bill 35) view of LDCs' commercialized role was very narrow:
 - poles & wires + customer care (but even retailer-consolidated billing was envisioned)
- 2004's Bill 100 dispensation of the “wires-only” view of LDCs was a positive milestone:
 - Recognized LDCs' ownership and operation of local distribution systems + LDCs' direct relationships with customers were unique and tremendously valuable assets in ensuring the efficient and cost-effective use of electricity via utility-designed CDM activities
- 2005's clarification by the Ontario government that LDCs would retain ownership & operation of smart meters and customer care was a second positive milestone:
 - Recognized LDCs' local grids and consumer interfaces have a value beyond just power delivery and billing mechanisms, are actually vital communications networks with the capability to foster information production and exchange, and thus are unique and critically-important assets to be harnessed to ensure optimally-efficient usage (and, in future, production?) of electricity
- 2006's Bill 21 (ECLA) + Ministerial Conservation Directive to OPA were 3rd and 4th positive milestones:
 - Bill 21: Recognized that for conservation to be truly effective, energy management planning needed to take place not just at the provincial level, but at the local community level as well (Community Energy Plans by Municipalities)
 - Ministerial Directive: OPA to directly contract 3rd parties “only where LDCs are unable....” (i.e. LDCs as the primary CDM vehicle)
- **A New Recognition Appears to be Gradually Emerging**
 - **LDCs' local grids are uniquely positioned, inimitable assets with fundamental transformative potential, provided deliberate efforts (regulatory, investment, management/operation, etc...) are consciously made to harness their potential**

Forces of Change Now Driving the Evolution of Ontario's LDCs

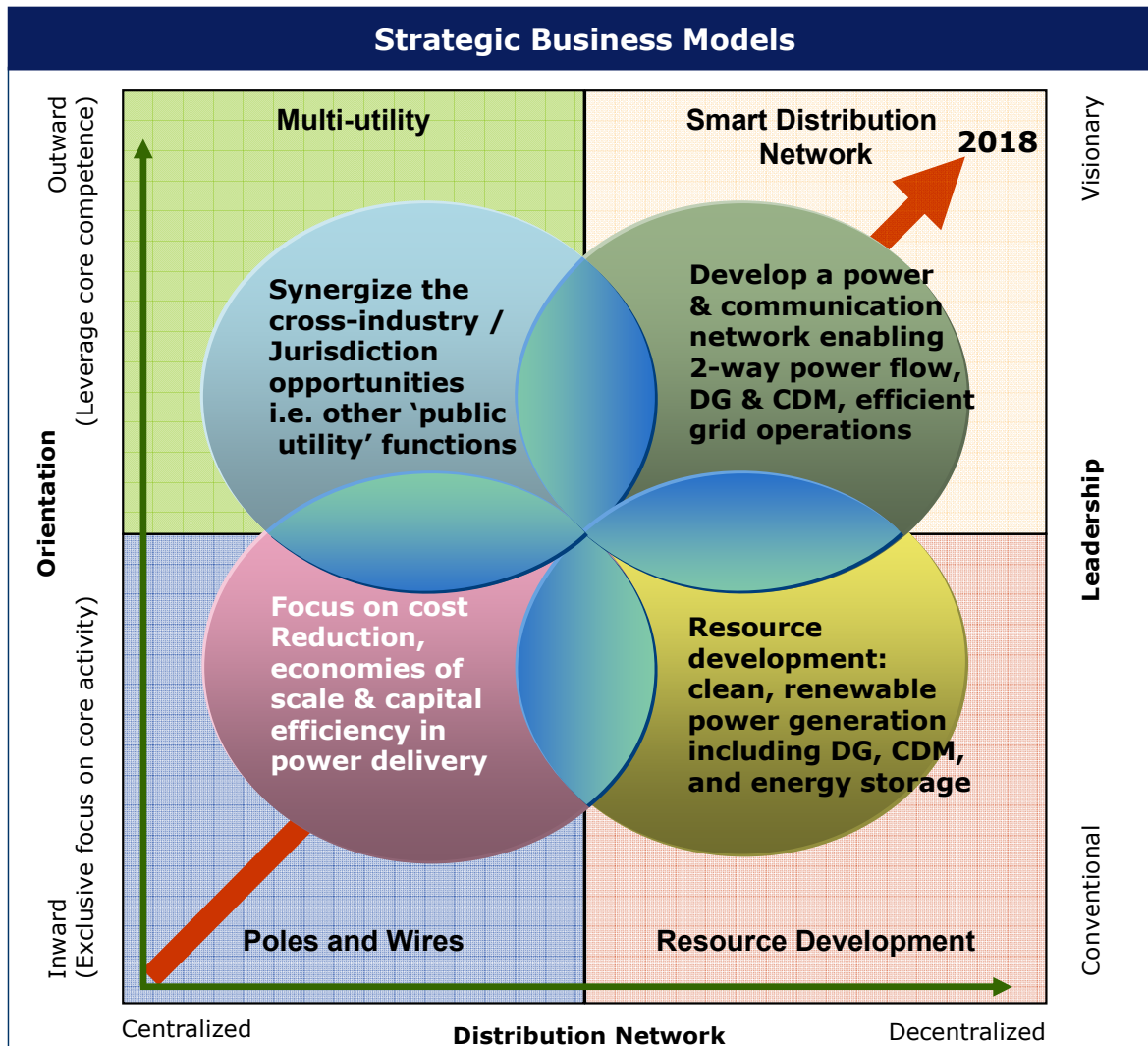
There are many forces influencing the future of LDCs, and affecting the strategic choices available to enable us to achieve our full potential



The Distributor of the Future

Future Outlook for LDCs' Business Models

LDCs' business models must evolve to leverage the smart local distribution grid of the future, to build the sustainable communities of tomorrow



Opportunities

LDCs to make strategic investments in distribution system technology to support the "intelligent network": advanced smart meters, real-time system monitoring and control, load management tools, automatically balanced demand, grid-friendly appliance controllers, and localized storage of energy.

LDCs to develop resources via DG and CDM programs based on local energy plans, leveraging strong customer relationships and a "smart local grid".

LDCs to leverage distribution assets and customer information to offer a portfolio of value-added products and services: energy management, power quality, equipment, financing, pricing flexibility, smart meters.

LDCs to leverage distribution/network mgmt expertise and IT / communication assets with sophisticated customer service to provide multi-utility services including billing, metering, mgmt

The 'Vision' sees LDCs producing benefits beyond just delivery (i.e. the pure poles and wires approach) & thus will require strategic policy changes & investments

Future Vision of the LDC a Decade from Now

Vision

Ontario's LDCs will play a leadership role in the smart use of electricity to develop the sustainable communities of tomorrow.

The LDC of the future:

- Provides a broad array of power services to increasingly demanding and sophisticated customers e.g. customized rate plans, innovative C&DM programs, green power supply
- Develops local sustainable energy solutions by engaging in local energy planning with Municipal, Regional and Provincial stakeholders, in support of province-wide plans
- Promotes the development, and owns and manages a portfolio of clean, renewable, small-scale distributed power generation to optimize the operation of the local distribution network, and to also help meet overall system resource needs
- Owns, operates and manages an intelligent local distribution network (“smart grid”) with:
 - 2-way power flows, from both the transmission grid AND distribution-connected generators
 - Advanced meter, sensor and communications technology providing real-time information on power consumption/quality, enabling innovative CDM programs, improving reliability & system security, automated system management/diagnostics and self-healing capability
- Leverages its expertise and assets to grow the business by owning and providing other utility-related services
- Finances investments for existing and new infrastructure by raising new capital from a variety of sources
- Works within a policy and regulatory framework that supports and rewards value creation and innovation
- Participates in research and development with universities, colleges and other partners to help advance the state of the art, drive innovation and engage the work force of future
- Facilitates the emergence of new transformative technologies e.g. electric-powered transportation, micro-scale generation, etc....

Benefits to be Realized from Vision Implementation

Vision Implementation will Deliver Positive, Valuable Outcomes

- Comprehensive and tailored local energy management planning and investment will *facilitate the building of sustainable communities, in support of provincial objectives (“conservation culture”, provincial-level planning in IPSP, development of energy mgmt plans by “public agencies”)*
- CDM programs tailored to unique local community needs will *contribute toward the Province’s conservation goals and the development of a true conservation culture*
- Development of distribution-connected generation (renewable wherever possible) will *cost-effectively optimize the operation of local distribution systems, and contribute to the Province’s clean/renewable energy goals, including by assisting local community-based generation proponents*
- Smart local grids will not only *facilitate the most cost-effective and reliable operation of the local distribution systems (thru ‘smart-grid-enabled’ CDM and DG management), but also will produce valuable information for use in province-wide energy system planning and CDM programming*
- Consumers’ rapidly evolving needs for *reliable, high-quality power (esp. high-tech manufacturing employers) and robust conservation options* will be satisfied

Thank you for your interest!

Q & A

Discussion of Next Steps....