

ENERGY INTEGRATION AND CONSOLIDATION



Presented by: Ron Clark



Ontario Energy Association
ENERGYCONFERENCE19
OCTOBER 7, 2019

AIRD BERLIS



The Ontario Context

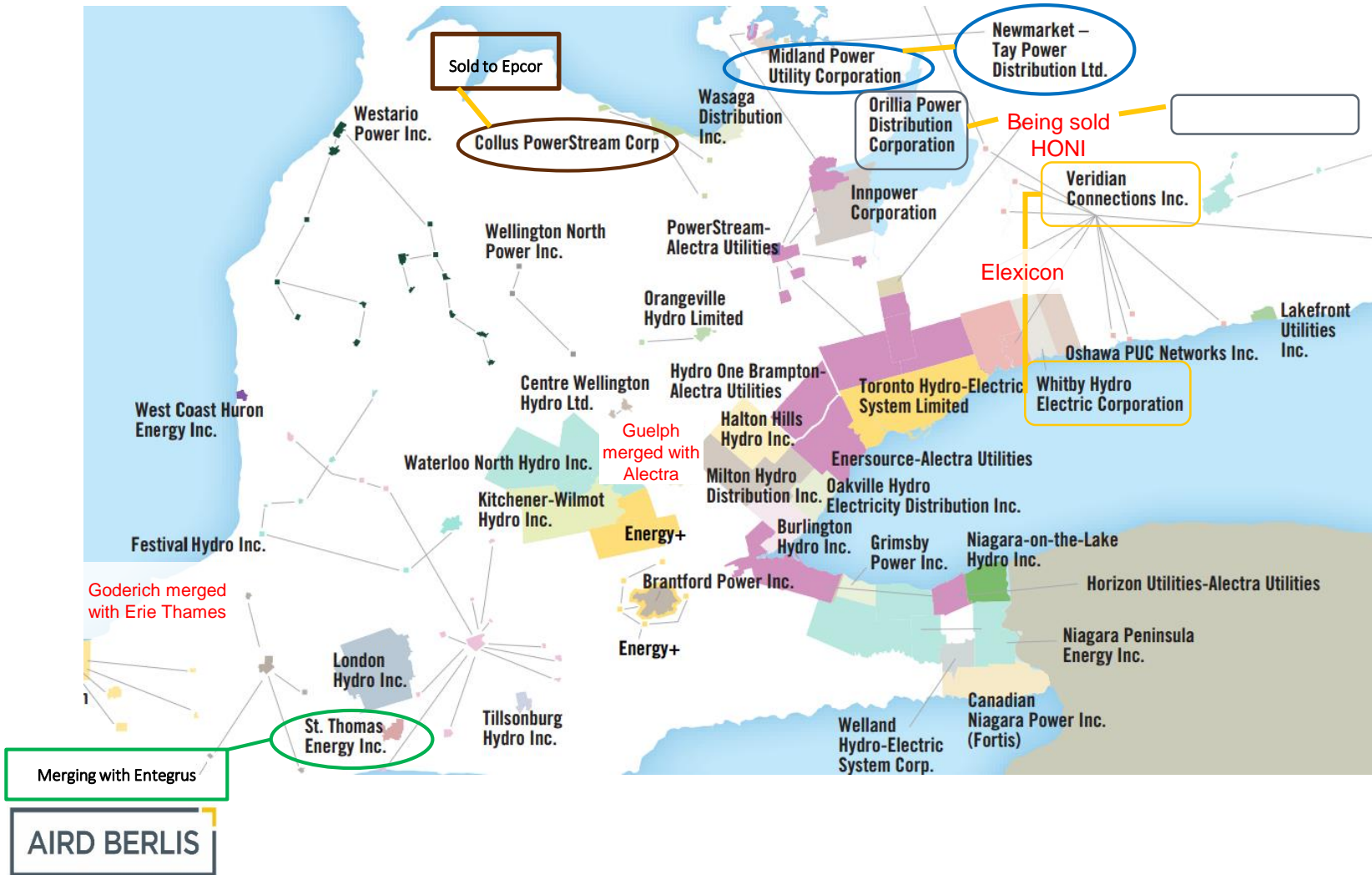
- Market Mechanisms vs. Market Forces
- Energy Policy vs. Industrial Policy
- Political vs. System Timeframes
- Politics vs. Economics

Recent Developments



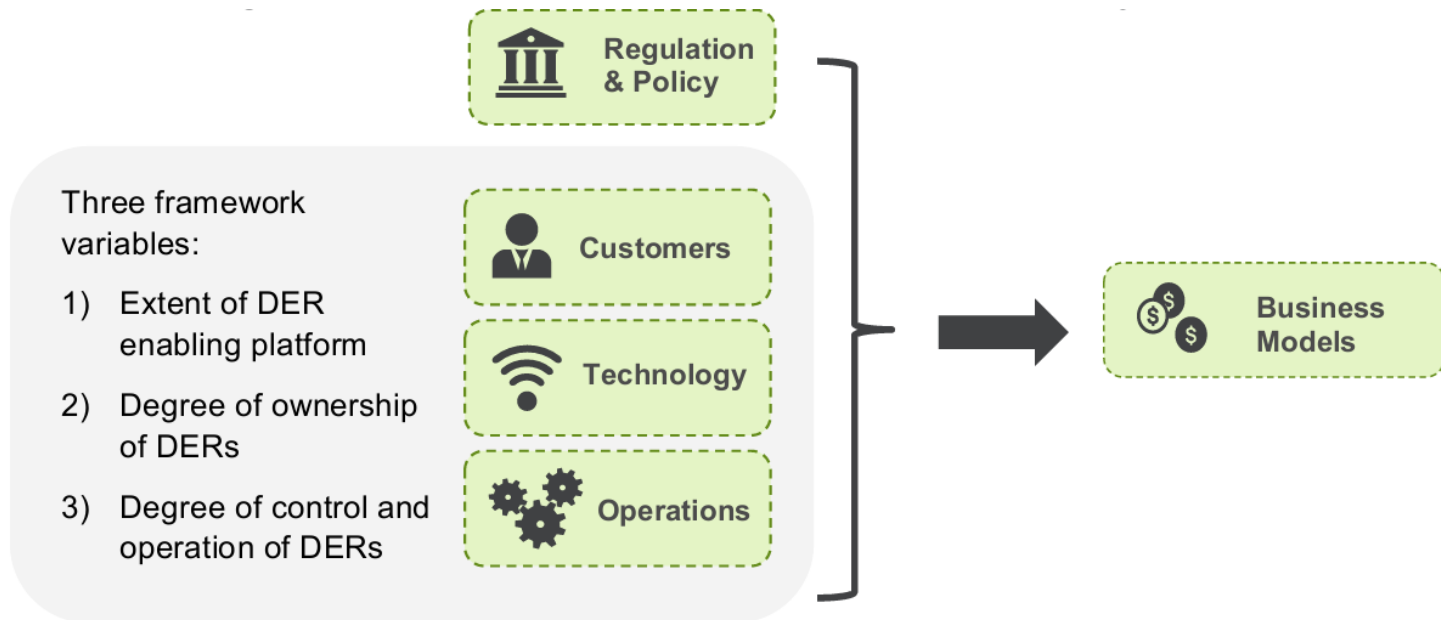
- Further Consolidation of Distribution Sector (Electric and Gas)
- Customer empowerment/Technology
- Political developments
- Climate change
- OEB/Regulatory Developments
- Market Renewal
- What has not changed

Defining our terms: Consolidation



Defining our terms: Integration

- Roles of Utilities
- Regulated and Unregulated

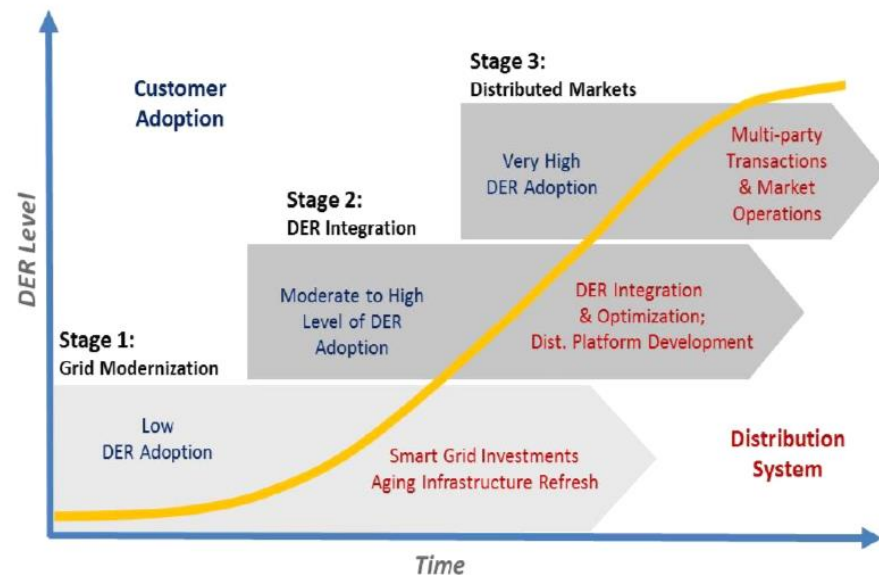


Source: Navigant Consulting

“Structural Options in a High DER Future” Energy Transformation Network of Ontario (ETNO) Report

- Development of Distribution Level Electricity Markets
- The Distribution System Operator Role
- Load Serving Entities
- Community Choice Aggregators
- “All Encompassing” LDCs
- Open DER markets

Figure 1: Three stages of DER-related sector transformation¹



Source: De Martini, P., Kristov, L. (2015, October). Distribution Systems in a High Distributed Energy Resources Future: Planning, Market Design, Operation and Oversight. Lawrence Berkeley National Laboratory, 8.



Functions and Competencies of the LDC of the Future

- Network connections
- Grid integrity
- Traditional asset operation and management
- System operator
- Real-time load visibility and management
- Advanced data analytics
- Two-way communications and power flow
- Digital asset management
- Commercial operations
- System planning

Potential Benefits of Load Serving Entities

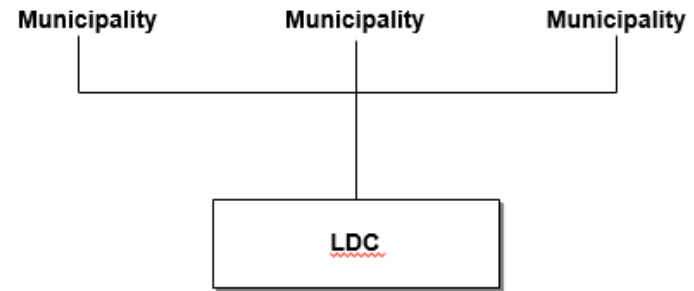
Potential benefits	Pass-Through Billing	Default Service Provider	Vertically Integrated Utility	Competitive Retailer	Community Choice Aggregator
Hedging		Yes	Yes	Yes	Yes
Green power			Maybe	Yes	Maybe
Competitive investments	Yes	Maybe		Yes	Maybe
Enabling DERs	Maybe	Maybe	Maybe	Maybe	Maybe
Value-added services			Maybe	Maybe	Maybe
Customer preferences		Maybe		Yes	Maybe

Source: Kathleen Spees, The Brattle Group, *Load Serving Entities: What could transition toward a load serving entity model mean for Ontario?* Presented to Electricity Marketplace of the Future IESO Stakeholder Summit (June 2019).

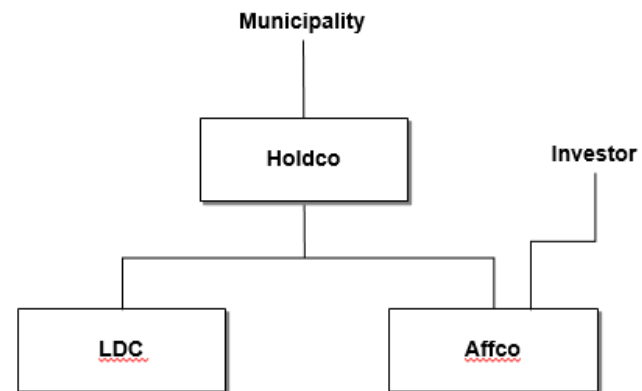
Governance Structures

- Municipal vs. Private ownership
- Regulated vs. Unregulated Activities and Affiliates
- OEB Act requirements
- Independent vs. Political Boards
- Private vs. Public Actor models of behaviour

Multiple Municipal Shareholders, just LDC



Holdco Structure with Third-Party Investor



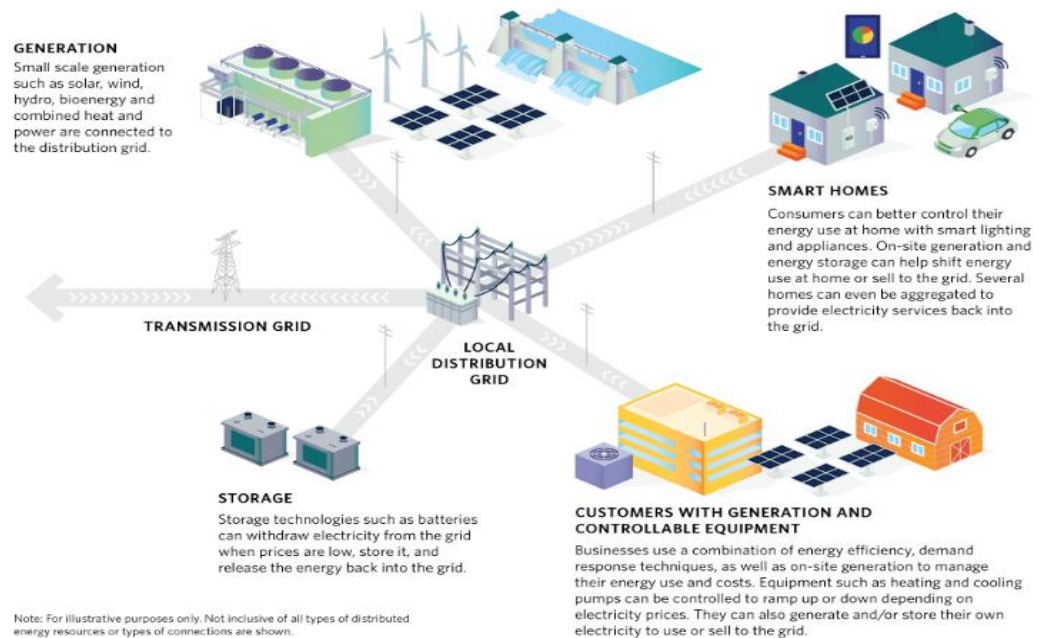


Rate-basing of DERs?

- Risk to ratepayer
- Compelling policy goal
- Integrated resource planning
- OEB approval

Risk Allocation

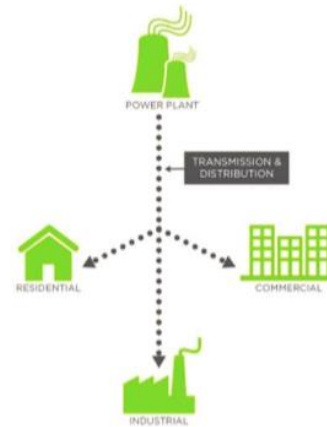
- Credit ratings
- Diversification
- Does size matter?
- Municipal ownership
- Ratepayer vs. Shareholder



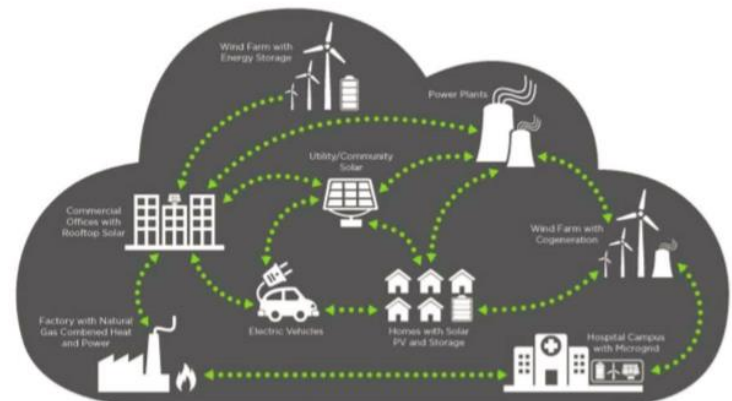
Future trends for Utilities

- Increased scale
- Embrace of new technologies
- EVs as a savior?
- Leveraging the customer relationship vs. a level playing field
- New business models
- Multiple paradigms

TODAY:
Central, One-Way Power System



EMERGING:
Distributed, Two-Way Power Flows



Source: Power Advisory LLC

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