



MAY 2019

UTILITY INTEGRATION PHASE 2

DUNSKY ENERGY CONSULTING

TEAM

Dunsky is comprised of nearly **30** clean energy professionals.

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Electricity Sector Players and Roles

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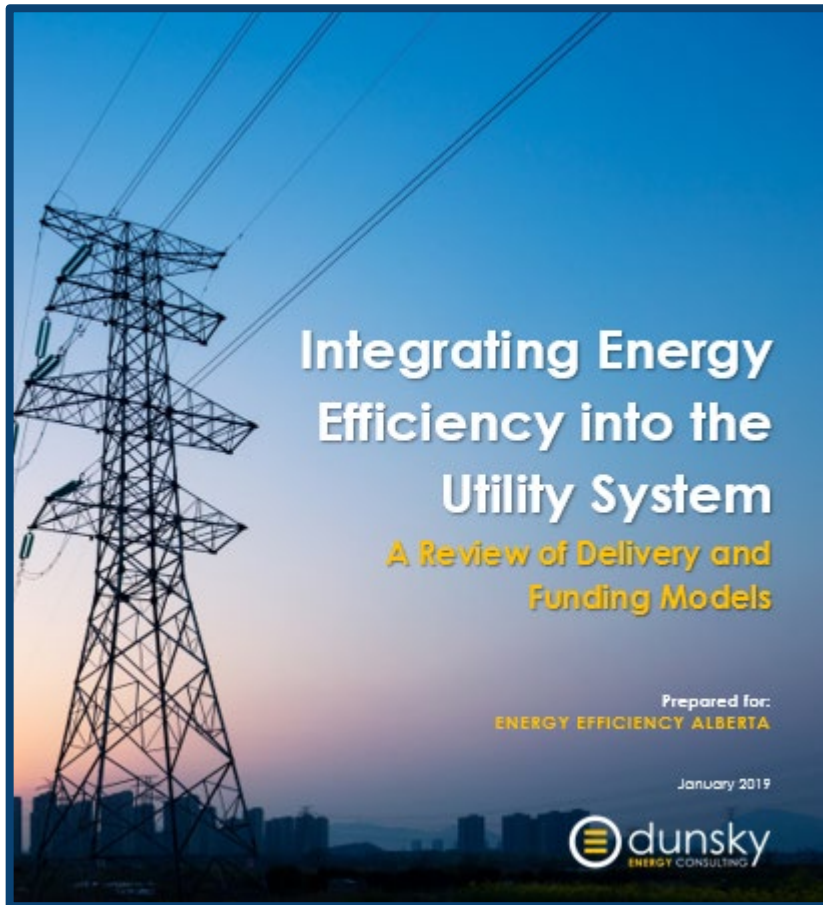
Preliminary Considerations for Made-in-Alberta Model

Section 5

Board of Directors' Discussion Questions

SECTION 1

Mandate



Phase 1 (2018):

EEA: Initial exploration of opportunities to more fully integrate energy efficiency and community energy activities into the provincial utility and broader utility systems.

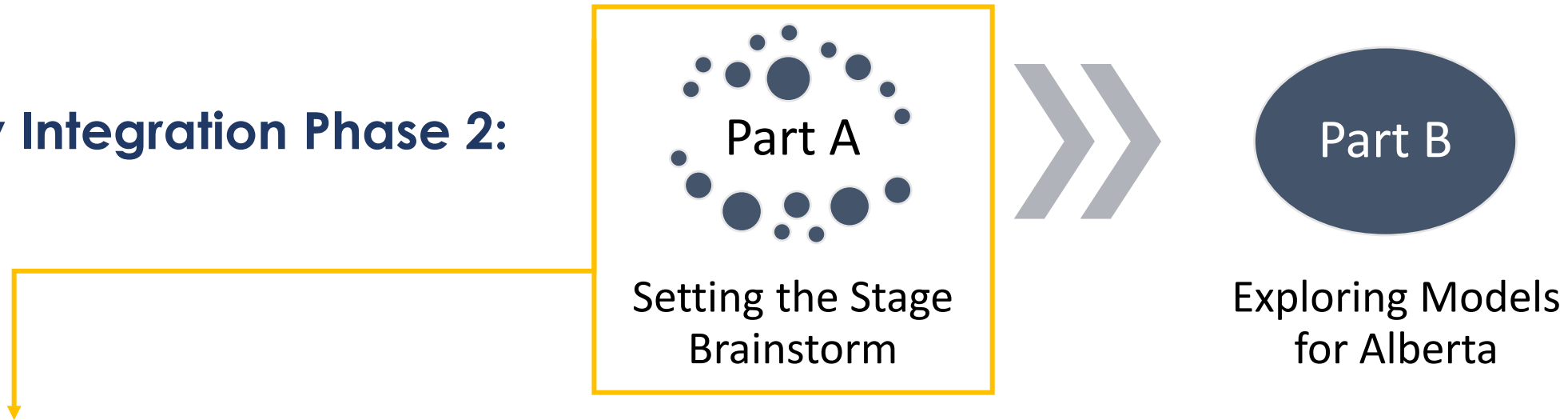
Dunsky: Initial scan for EEA of program administration and delivery models, funding sources, and other key issues.

Phase 2 (2019):

EEA: Exploration of potential models for Alberta's unique context.

Dunsky: Research to support discussion of the optimal model for Alberta going forward.

Utility Integration Phase 2:





In this report:

- **Defining Success** – Develop an objective definition and criteria for successful energy efficiency program administration in the Alberta context.
- **Players & Their Roles** – Identify current players in Alberta and their roles related to EE, summarize AB-specific electricity system characteristics, and compare and contrast roles of players in other jurisdictions in their energy efficiency ecosystems.
- **Preliminary Considerations for a Made-in-Alberta Model** – Identify the value proposition of different players/roles and provide initial considerations linked to definition/factors of success.
- **Discussion Questions for the EEA Board of Directors** – Suggested topics for the BOD strategic discussion to help EEA guide Dunsky's work for Part B.

SECTION 2

Defining Success in EE Administration & Delivery in Alberta

What **outcomes** will define a successful energy efficiency program administration and delivery model in Alberta?

-  **Alignment** – The **role** an entity has within the energy efficiency program administration and/or delivery process has a direct link to the **value** it can provide.
-  **Consistency** – There is standardization and availability across the market that allows the administrator/programs to effectively influence and ultimately transform the market.

In turn, these outcomes support an effective and efficient system from the perspective of impact, cost, streamlined administration, and regulatory burden.

Why is it important to have a clear and common understanding of success from the beginning?

This approach provides stakeholders with an objective means by which to consider competing options.

What **factors** will help achieve a successful outcome in Alberta?

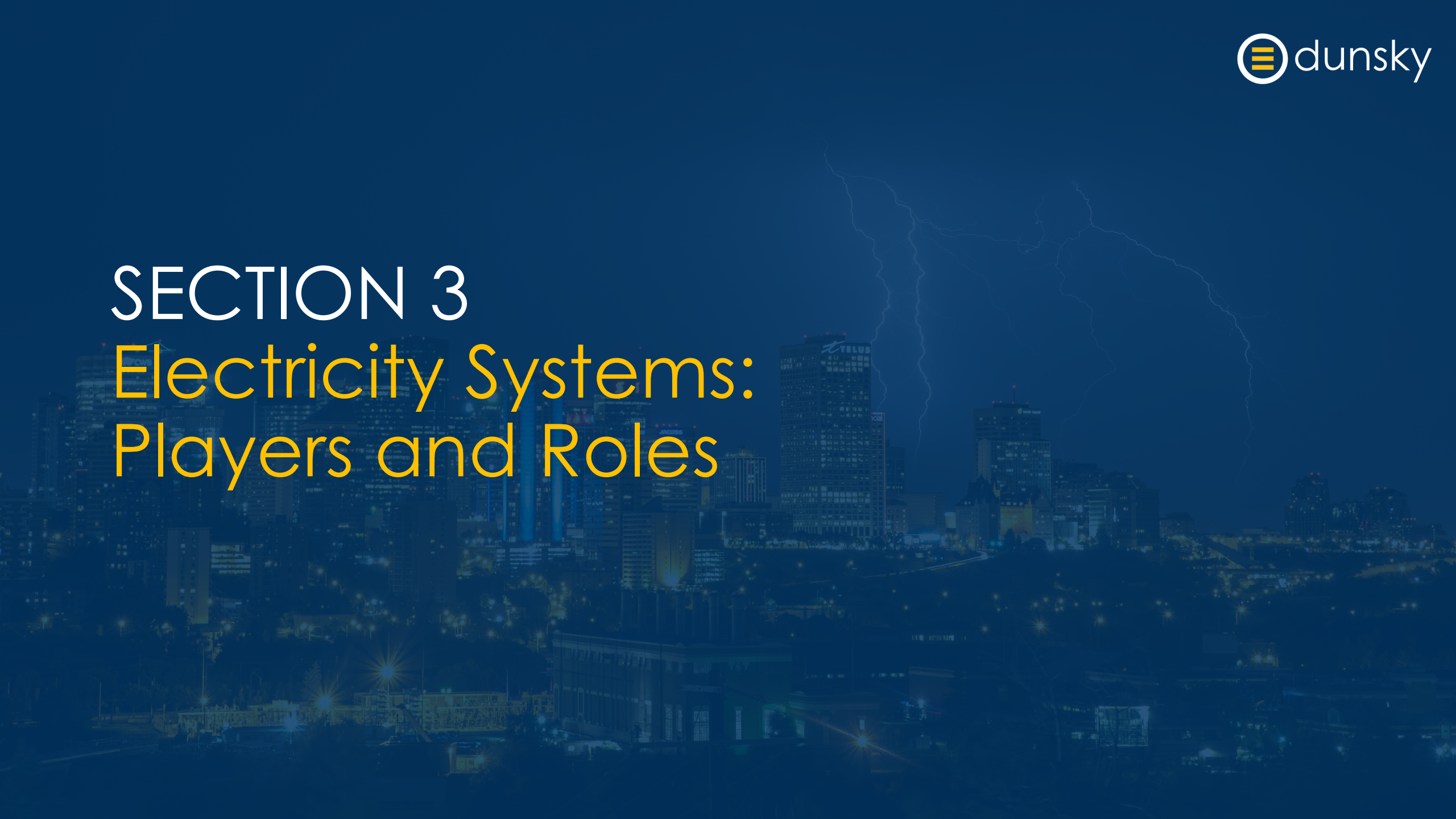
Industry best-practice factors (from Phase 1 report):

- Long-term planning capability
- Integration of a multi-fuel mandate
- Effective oversight/strong accountability
- Organizational focus on EE
- Long-term predictability
- Appropriate geographic scope
- Access to customers and customer data
- Flexibility and responsiveness
- Ability to innovate and take risk

Alberta-specific criterion:

- Open-market principles
- Fit with Alberta's unique power delivery models

These factors also help to identify partnership opportunities with different players in the province.

The background of the slide is a dark blue-tinted photograph of a city skyline at night. Numerous skyscrapers and buildings are illuminated with various lights, creating a bokeh effect. Several bright, jagged lightning bolts are visible in the dark sky above the city.

SECTION 3

Electricity Systems: Players and Roles

Important characteristics of the Alberta energy system include:

1. Market-Based Approach

- **Deregulated Electricity Market** – Restructured market that has separated generation, transmission, distribution and retail services. Rates for transmission and distribution remain regulated and customers have the option to choose a regulated rate option for their commodity service, while generation is competitively priced through a market administered by the Alberta Electric System Operator (AESO).
- **Robust Retail Competition** – Customer choice is a central tenet of the Alberta electricity market, and the retail electricity market in the province is one of the most active in North America.
- **Retail-led Customer Experience** – Alberta goes further than most other jurisdictions in terms of delivering a “retail-led” customer experience in which retailers – utility affiliates or competitive service providers – are the primary point of contact with customers (customer service, billing, etc.).

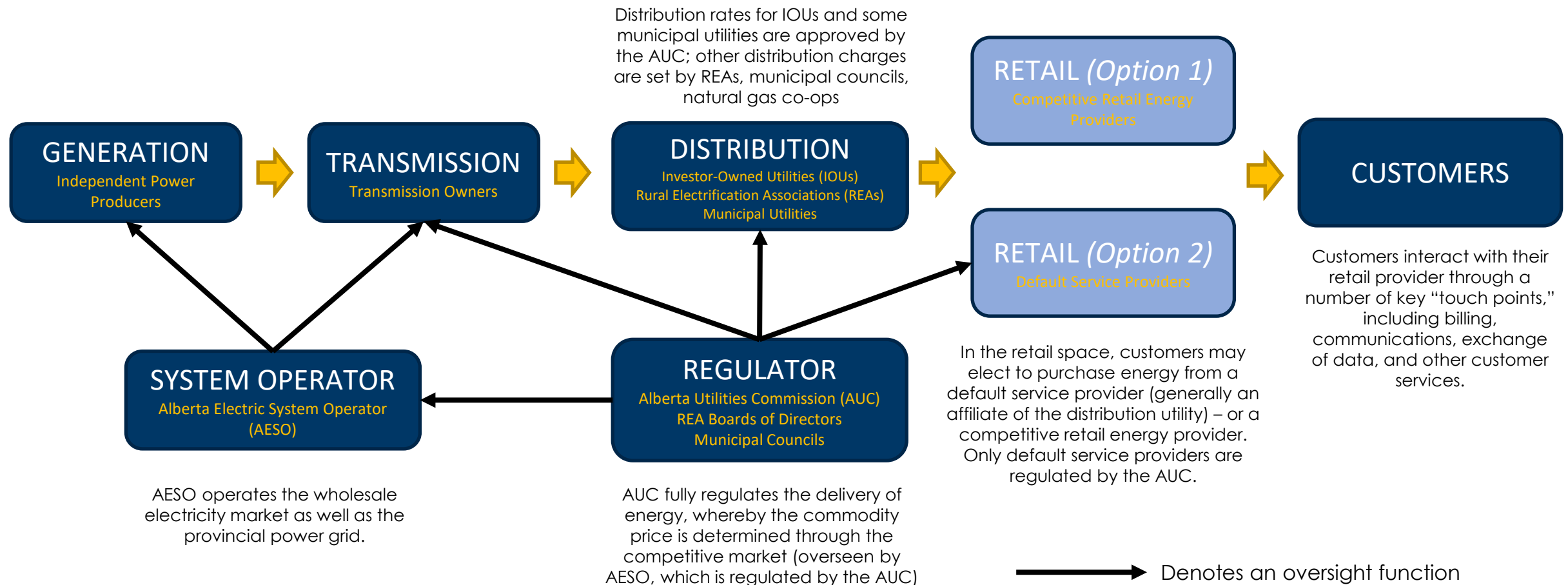
2. History of Energy Efficiency & Community Energy

- **Established Provincial Agency** – Alberta has a varied history of energy efficiency and community energy programs delivered by government and utilities. Most recently, energy efficiency program administration has been the responsibility of Energy Efficiency Alberta, with delivery primarily outsourced.

The following slides address each of these unique and relevant characteristics of the Alberta energy system, which are key to the discussion going forward.

Deregulated System Overview

Key aspects of the Alberta energy system, the stakeholders involved, and their primary functions are presented below.

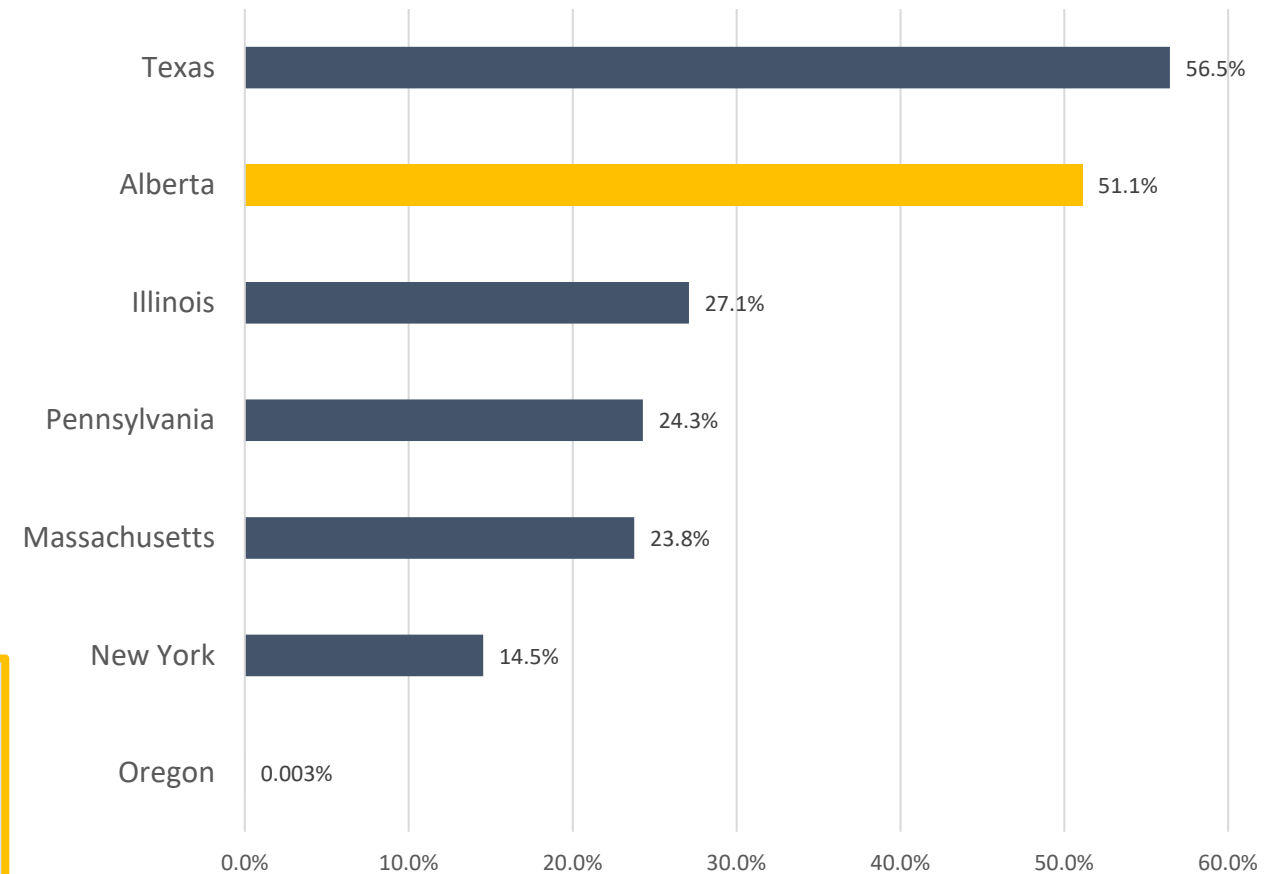


- **Customer choice is a central component of Alberta's electricity system**
- **Alberta's retail electricity market is one of the most robust in North America.**
 - The 2015 *Annual Baseline Assessment of Choice in Canada and the United States* ranked Alberta #2 and #4 in its list of the most robust retail electricity markets for residential and /C&I customers, respectively.
 - In 2019, approximately 50 percent of customers,* representing 81% of load, have selected a competitive retail provider rather than remaining with their regulated default electricity provider.
 - *Caveat:* due to exemptions and lack of regulatory oversight, customers located within Medicine Hat's jurisdiction and some REA/municipal customers currently do not have access to retail choice.

This is important because...

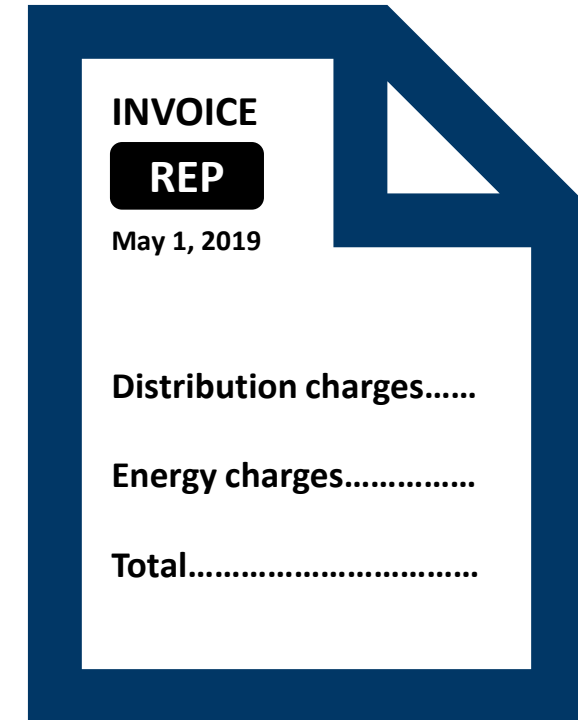
For retailers, there is no guarantee a customer today will be a customer tomorrow. Customers can switch to a different energy provider at any time (in AB, 1%-3% of customers switch providers monthly). **Retailers have no certainty that they will be able to recover their EE costs.**

Percent of customers served by retail power marketers



* Meaning residential, commercial, and agricultural customers within the competitive retail space.

- In Alberta, **distribution utilities'** relationship with customers is limited primarily to data collection (metering) and physical service issues (outages, replacing equipment, etc.).
- In contrast, **retail energy providers'** relationship with customers is focused on sales and billing :
 - **The billing function** is almost entirely handled by the retailer, with most customers receiving a consolidated bill from their supplier that invoices for both the supplier's and distribution utility's charges (a.k.a. supplier-consolidated billing).
 - In other jurisdictions, distribution utilities maintain this relationship with customers by billing them directly (a.k.a. utility-consolidated billing).
 - The *only other jurisdiction* in North America with a significant retail market in which the retailer is the primary entity carrying out the billing function is Texas.



















This is important because...

Retail energy providers are responsible for a key customer touchpoint – billing. This is a valuable point of contact with customers because it provides a recurring opportunity for targeted communication.

- All states/provinces in the jurisdictional scan have deregulated markets.
- In the reviewed jurisdictions, the retailer's role in the customer relationship and the robustness of the retail market varies.
 - ***See next slide for description & comparison***
- Only Texas has a similarly strong retail market and relationship between the retailer and customer.
- Additional detail on each jurisdiction is provided in Appendix A.

Market robustness and customer relationship metrics:

	AB	IL	MA	NY	ON	OR	PA	TX
Retail Market Robustness								
Retailer Customer Relationship								
EE Program Success*	N/A	48%	100%	63%	N/A	60%	18%	5%

-  strong
-  medium
-  weak
-  insufficient data

* as measured by ACEEE: % of points received in Utility/Public Benefit category on annual Scorecard

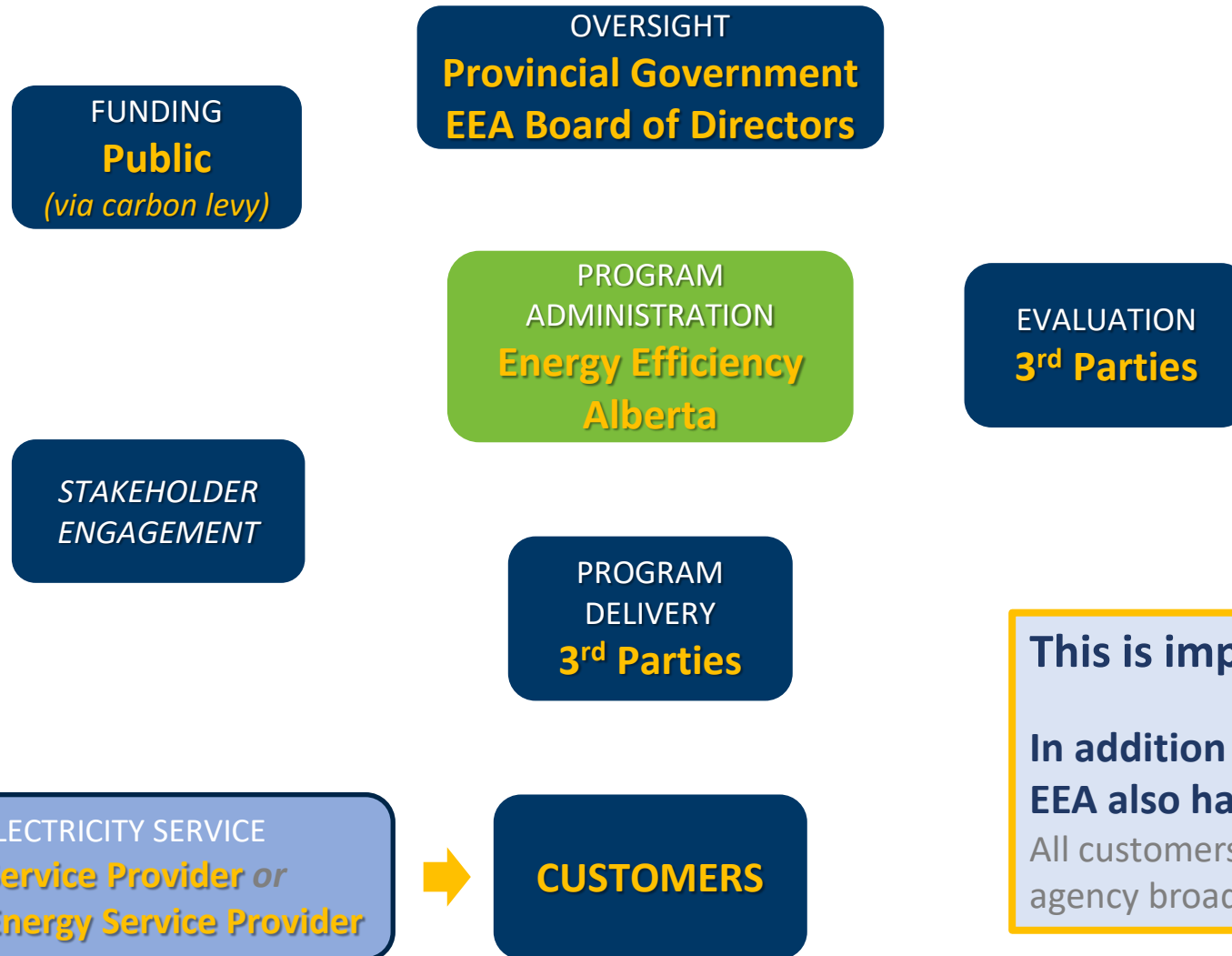
For retail market robustness:

- Strong** = >50% of customers served by retail energy provider
- Medium** = >20% but <50% served by retail energy provider
- Weak** = <20% served by retail energy provider

For retailer customer relationship:

- Strong** = Supplier-consolidated billing is predominant method
- Medium** = Multiple billing methods used
- Weak** = Utility-consolidated billing is predominant method

Alberta's Current Energy Efficiency "Ecosystem"



- **Energy Efficiency Alberta (EEA) is the primary administrator** of electricity and natural gas energy efficiency as well as micro-generation / small-scale energy programs in Alberta.
- EEA outsources the majority of its program planning, delivery and evaluation work to 3rd parties.
- The Municipal Climate Change Action Center also administer EE and RE programs in the province.*

This is important because...

In addition to the retail electric service provider, EEA also has a key point of contact with customers. All customers may participate in EEA's program, giving the agency broad reach across the province.

* EEA is part of MCCAC's Executive and Program Advisory Committees which are comprised on representatives from EEA, ACCO, Alberta Municipal Affairs, the Alberta Urban Municipal Association, and Rural Municipalities of Alberta.

SECTION 4

Preliminary Considerations for a Made-in-Alberta Model

Key Question for Part 2:

What is the most appropriate EE administration and delivery model for Alberta?

...but before we get to that question, we need to look back at the factors of success and consider:

-  Alignment
-  Consistency

And we also need to take into account...

-  Funding
-  Oversight

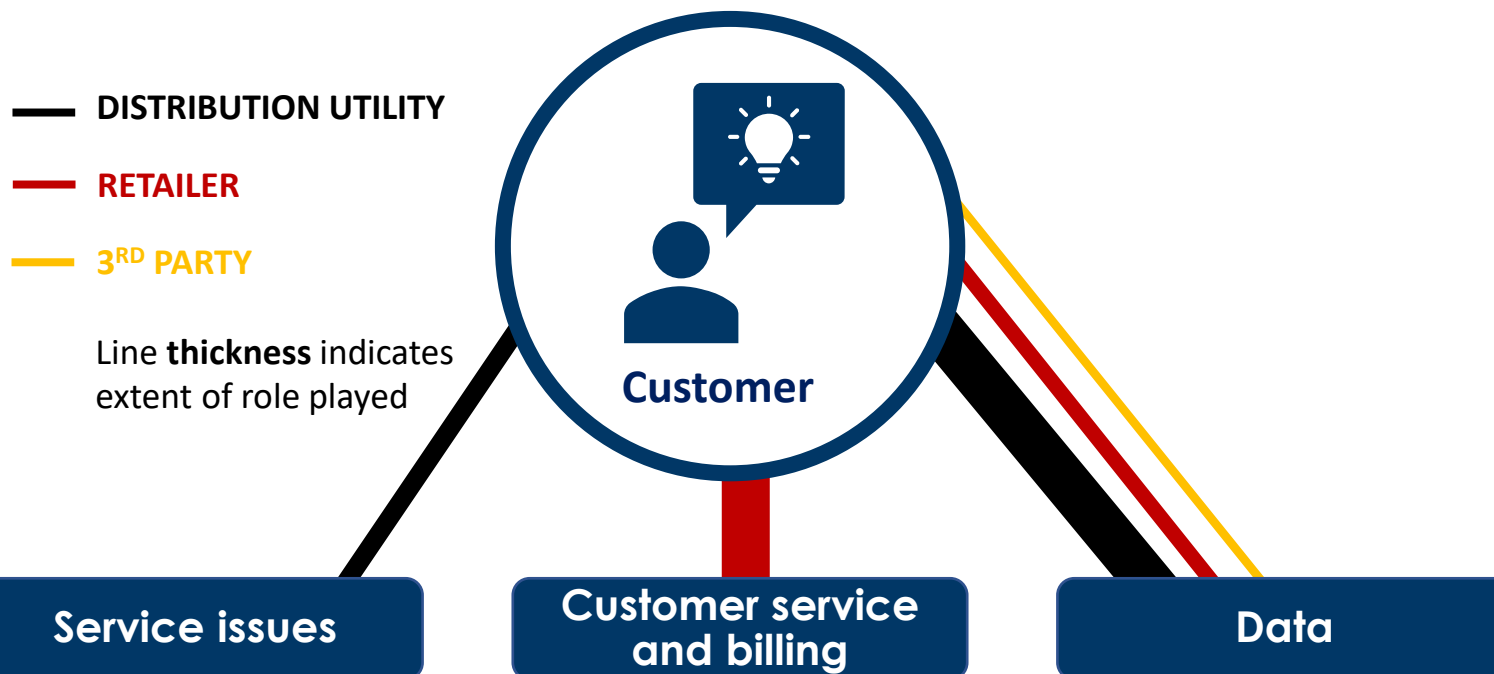
1. Alignment

Alignment refers to a direct link between the **value** an entity can provide and the **role** it is asked to play within the EE “ecosystem.”

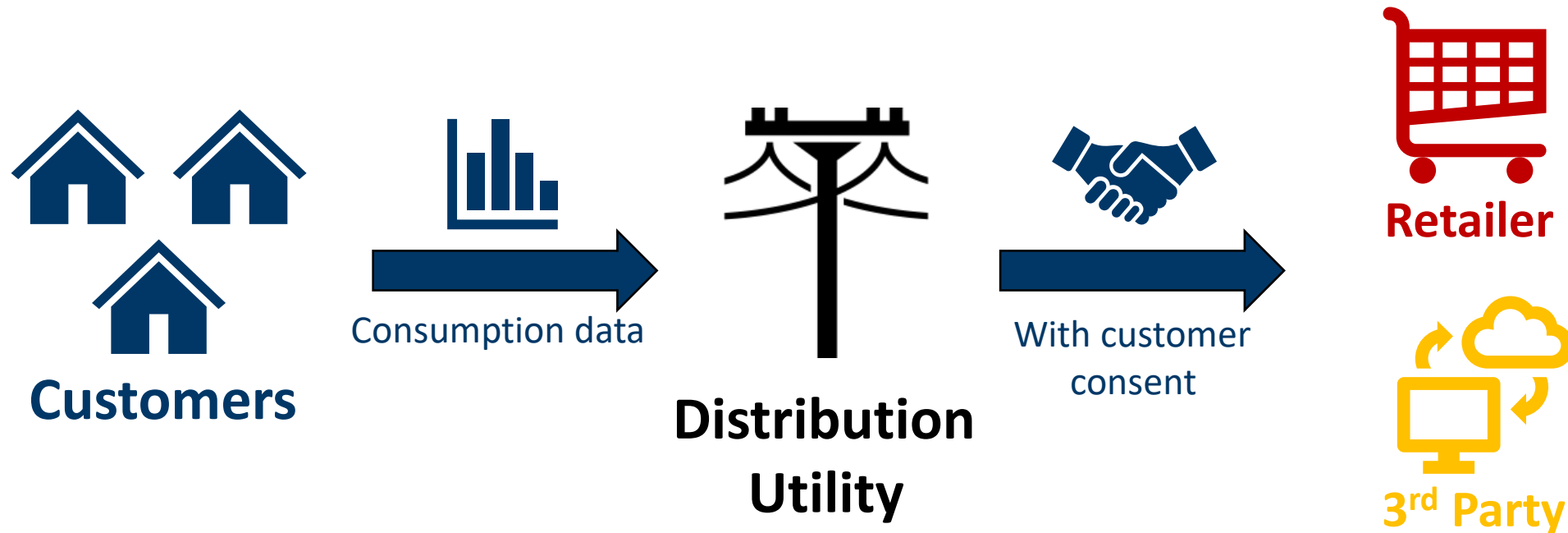
A successful model must therefore address:
Who controls the key elements of the customer experience in Alberta?

Customer Experience & EE

- In Alberta, the retailer and the distribution utility share the customer; **however...**
- **Customer billing is a key touchpoint** – the retailer or distribution company affiliate controls this interface, *but importantly, since they do not have a monopoly under the current retail model, retailers could lose this customer connection at any time.*
 - Exception: Some large and industrial customers (>250MWh per year) may opt to become a “self-retailer” and buy their electricity directly from the wholesale market. In this scenario, the customer must arrange for their own distribution or transmission access with the local distribution utility and establish a direct relationship with their “Load Settlement Agent,” which is typically the distribution utility as well.
- **Customer data is important** – the distribution utility controls customer data, which offers significant potential value; however, retailers and 3rd parties may also access it with customer consent (see next slide).



- Customer consumption data allows program administrators to **design** the best programs for their area(s), **customize** outreach, **engage** with participants, and **measure** success.
- In Alberta, distribution utilities collect and retain customer metered data. This data is shared with retailers and 3rd parties if and when customer consent is obtained (“opt-in”).



2. Consistency

Consistency refers to program uniformity and availability across the market. This reduces confusion, makes outreach more cost-efficient and simplifies participation by multi-facility customers (e.g. retail chains, property owners/managers, etc.).

A successful model must therefore address:

How can the province-wide consistency that exists under the current model be maintained or built upon?

Consistency & EE

- In Alberta, numerous service territories creates a fragmented market.
- Energy Efficiency Alberta is mandated to provide energy efficiency services across the entire province.

Figure 2.1: Electricity distribution systems / Zone

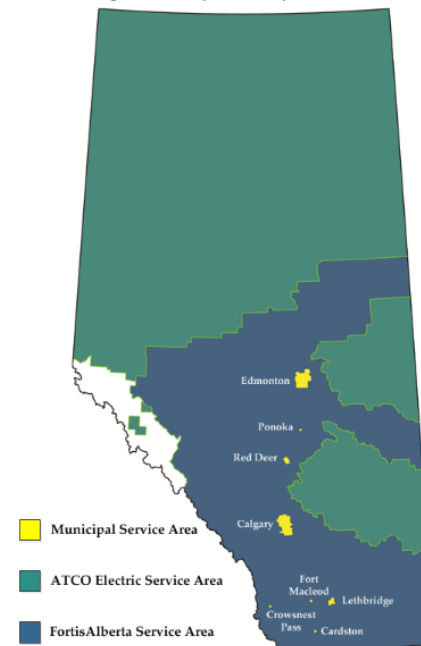


Figure 2.2: Map of REAs

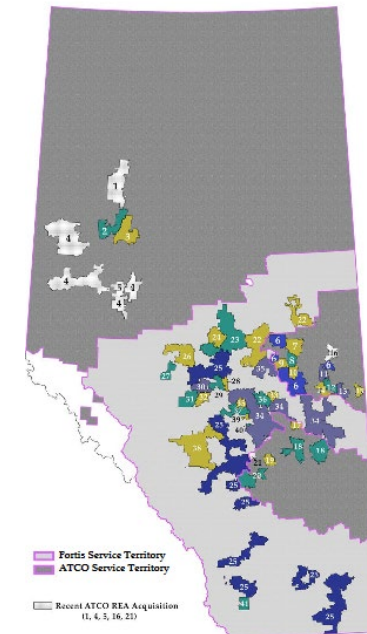
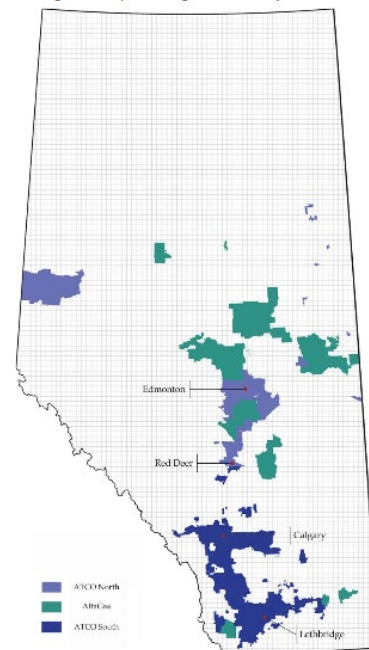


Figure 2.3: Major natural gas distribution systems / Zone



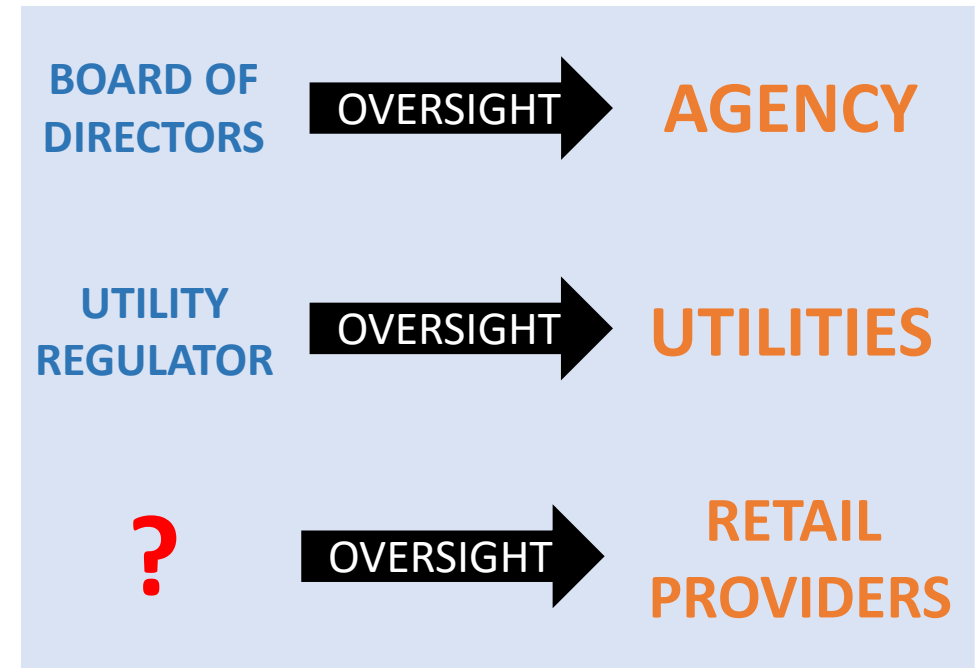
- As we saw in Phase 1 of this work, multiple funding mechanisms are possible (public, ratepayer, capacity markets, etc.).
- This most recent jurisdictional scan finds that there is **no clear link between who administers EE programs and the source of funding** (see table, below).

	AB	IL	MA	NY	ON	OR	PA	TX
Funding Source	PUBLIC	RATEPAYERS	PUBLIC+ RATEPAYERS	PUBLIC+ RATEPAYERS	RATEPAYERS	RATEPAYERS	RATEPAYERS	RATEPAYERS
Administrator	AGENCY	UTILITIES	UTILITIES	AGENCY+ UTILITIES	ISO	AGENCY	UTILITIES	UTILITIES
Delivery Agent	3 RD PARTIES	3 RD PARTIES	3 RD PARTIES	3 RD PARTIES	ISO+ 3 RD PARTIES	3 RD PARTIES	3 RD PARTIES	3 RD PARTIES

Note: Additional detail on each jurisdiction is provided in Appendix A.

- We do note that all of the deregulated jurisdictions examined rely on ratepayer funding, while some *supplement ratepayer funds* with public sources (via carbon levy). Alberta is the only jurisdiction in this review – and the only one we are aware of in North America – to rely solely on a public funding mechanism.

- For retail electricity providers, there is no established line of oversight similar to other jurisdictions in which key players perform the administrator role.
 - Distribution utilities are regulated by provincial/state utilities commissions
 - Dedicated 3rd-party agencies are created with governance structures with specific oversight functions.
- Since retail electricity providers are not regulated, they do not have an established relationship with the utility regulator. Additionally, their corporate governance structure may not lend itself to effective energy efficiency oversight (e.g. lack of expertise on Board of Directors).



What does this mean for Alberta?

Efficiency success depends on securing sustained funding *and* linking roles to inherent value. In Alberta, this means:

- **Energy Efficiency Alberta**
 - ✓ Established and trusted **brand**
 - ✓ Significant specialized experience and **expertise**
 - ✓ Able to provide **consistency** across the province
 - ✗ Does not own or currently access data
 - ✗ Cannot currently collect funds from ratepayers
- **Distribution Utilities**
 - ✓ Own **data**
 - ✓ Can collect ratepayer **funding**
 - ✗ Limited relationship with customers
 - ✗ Limited consistency in coverage (across fuel types and service territories)
- **Retailers**
 - ✗ Relationship with customers is not stable
 - ✗ Weak existing oversight functions
 - ✗ Offer little added value in the AB context
(and no successful models elsewhere in which retailers play a role in EE admin/delivery)

Questions?



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LEARN MORE

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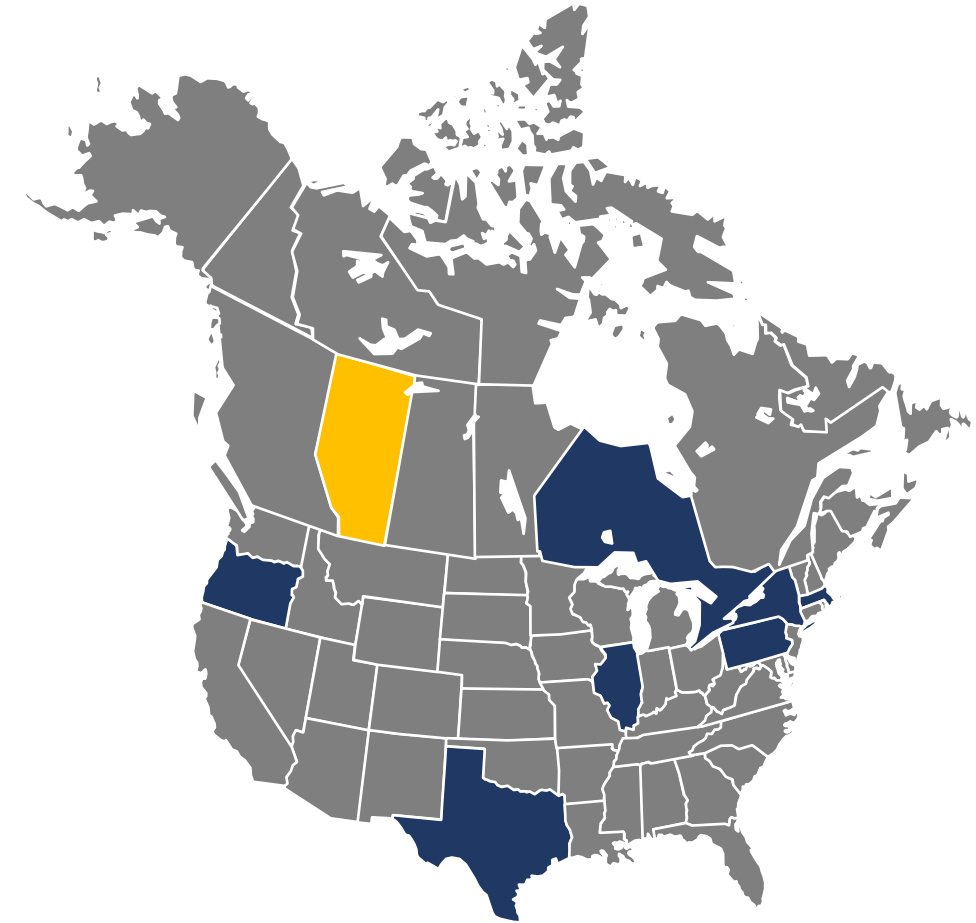
APPENDIX A

Jurisdictional Scan Overview & Findings

- We picked U.S. jurisdictions that represented leaders in energy efficiency and/or mature retail electricity markets. We also included Ontario for a Canadian jurisdiction.

Efficiency leaders	Retail leaders
MA, NY, OR	TX, IL, PA

- For each jurisdiction, we catalogued the key players fulfilling each various roles in the energy efficiency program administration and delivery “ecosystem”.
 - A workbook with additional detail by state/province will be provided to Energy Efficiency Alberta.

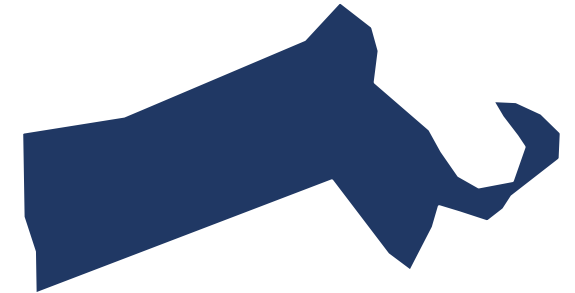


Function	Player	Notes
Policy Direction / Goal Setting	Government	Legislation sets overall utility energy efficiency requirements.
Regulatory Oversight	Utilities regulator	Illinois Commerce Commission
Administration	Distribution utilities	Prior to 2016 25% of portfolio was administered by IL Dept. of Commerce
Program Delivery	3 rd parties	
Evaluation	3 rd party	
Funding	Rate-payers	Via cost-recovery tariffs
Stakeholder Collaboration	Self-selected stakeholders	Via rate cases



Findings: Massachusetts

Function	Player	Notes
Policy Direction / Goal Setting	Government and utilities regulator	Legislation requires utilities to procure all cost-effective EE. Utility regulator sets numerical targets.
Regulatory Oversight	Utilities regulator and advisory committee	Energy Efficiency Advisory Committee (EEAC) is appointed by utility regulator and approves EE programming
Administration	Distribution utilities and municipal aggregators	Municipal aggregators may develop EE plans consistent w/ state energy conservation goals and receive funding from system benefit charge to fund programs.
Program Delivery	3 rd parties	
Evaluation	Administrator	Distribution utilities administer evaluation programs but generally performed by contractors. EEAC oversees evaluations.
Funding	Rate-payers and public	Public benefit charge, energy market revenue, carbon market proceeds
Stakeholder Collaboration	Formal council	EEAC includes and represents external stakeholders



Function	Player	Notes
Policy Direction / Goal Setting	Utilities regulator	Targets set via orders by the PSC
Regulatory Oversight	Utilities regulator	Public Service Commission (PSC)
Administration	Government agency and distribution utilities	NYSERDA administers “market development and transformation” programming, while utilities administer customer-focused programming.
Program Delivery	3 rd parties	
Evaluation	Administrators	Both NYSERDA and utilities administer evaluations, though they may utilize outside contractors
Funding	Rate-payers and public	Service Benefit Charge and carbon market proceeds
Stakeholder Collaboration	Self-selected stakeholders	Via participating in PSC proceedings



Function	Player	Notes
Policy Direction / Goal Setting	Government	Via ministerial directive
Regulatory Oversight	Primary: IESO Secondary: Government	
Administration	IESO	Previously, distribution utilities shared some administration functions.
Program Delivery	IESO / 3 rd parties	Previously, distribution utilities carried out some program delivery
Evaluation	IESO	IESO generally contracts out to 3 rd parties
Funding	Rate-payers	Via global adjustment mechanism. There has been informal discussion to fund using tax revenue, but no concrete plans as of yet.
Stakeholder Collaboration	IESO Stakeholder Committees	



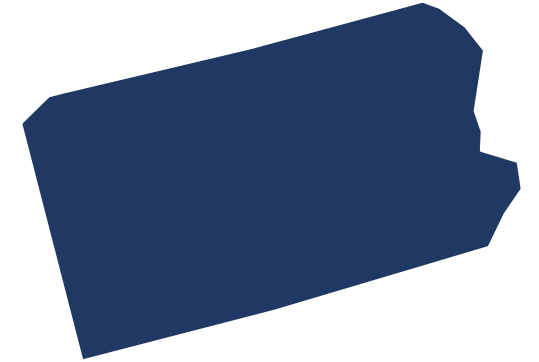
Findings: Oregon

Function	Player	Notes
Policy Direction / Goal Setting	Primary: Administrator Secondary: Government	Legislation required creation of energy efficiency programming, but numerical targets are developed by ETO in long-range plans
Regulatory Oversight	Board of Directors	ETO reports to utilities regulator, but grant agreement between ETO and regulator gives wide latitude to ETO to operate as it sees fit.
Administration	Primary: 3 rd party Secondary: Utilities	Energy Trust of Oregon (ETO) serves customers served by investor-owned utilities, which is approximately 73% of customers. Non-IOU utilities may also offer EE programming.
Program Delivery	3 rd parties	ETO directly contracts with 3 rd parties and maintains a Trade Ally network
Evaluation	Administrator	ETO administers evaluations of its EE programming, but generally contracts out implementation.
Funding	Rate-payers	Via public service charge
Stakeholder Collaboration	Advisory council(s)	



Findings: Pennsylvania

Function	Player	Notes
Policy Direction / Goal Setting	Government	
Regulatory Oversight	Utilities regulator	
Administration	Distribution utilities	
Program Delivery	3 rd parties	
Evaluation	3 rd party	Legislation requires a “Statewide Evaluator” to evaluate utility energy efficiency programming
Funding	Rate-payers	Via general rates
Stakeholder Collaboration	Self-selected stakeholders	Via participating in rate case proceedings



Findings: Texas

Function	Player	Notes
Policy Direction / Goal Setting	Government and Utilities regulator	Via legislation and utility regulator
Regulatory Oversight	Utilities regulator	
Administration	Distribution utilities	Investor owned-utilities are required to administer EE programs. Some municipals and co-op utilities are exempted.
Program Delivery	3 rd parties	Utilities mandated to delivery energy efficiency through 3 rd party “project sponsors”
Evaluation	Utilities regulator	The utilities regulator generally contracts out evaluation implementation to a 3 rd party
Funding	Rate-payers	Via tariffs and general rate base
Stakeholder Collaboration	Self-selected stakeholders	Via participation in rate case proceedings

