

Welcome

The Future of Power Supply

80
YEARS

LPEA

La Plata Electric Association, Inc.

A Touchstone Energy® Cooperative 

LPEA will strive to reduce its carbon footprint by 50% from 2018 levels by year 2030 while keeping members' cost of electricity lower than 70% of its Colorado cooperative peers.

Agenda

- Why are we here talking about power supply
- Discuss our current power supply situation
- Discuss future opportunities of power supply for LPEA

LPEA's Vision – Mission - Strategic Goal

Vision:

Shaping the future by building trustworthy community partnerships as an innovative, forward-thinking industry leader, delivering excellence in our member-owned cooperative.

Mission:

La Plata Electric Association, Inc. provides its members safe, reliable electricity at the lowest reasonable cost while being environmentally responsible.

Strategic Goal:

LPEA will strive to reduce its carbon footprint by 50% from 2018 levels by year 2030 while keeping members' cost of electricity lower than 70% of its Colorado cooperative peers.

LPEA's Vision/Mission/Strategic Goal

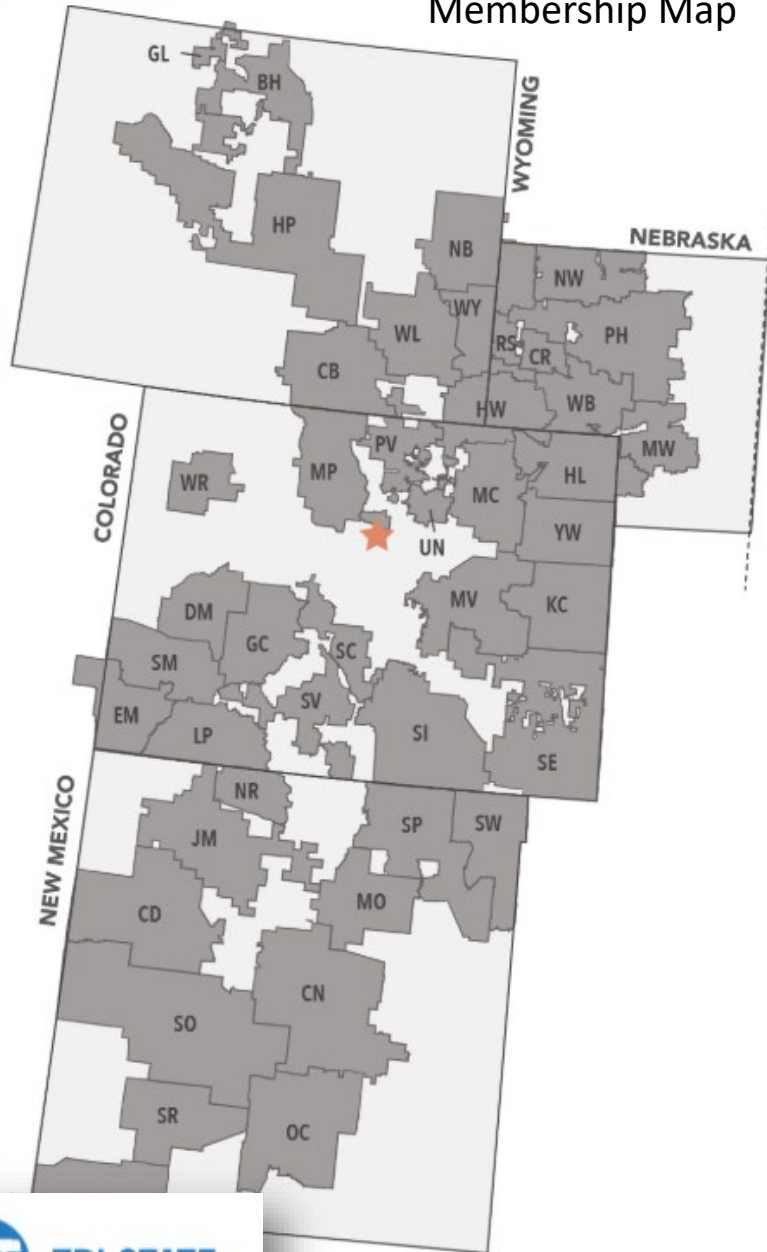
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Membership Map

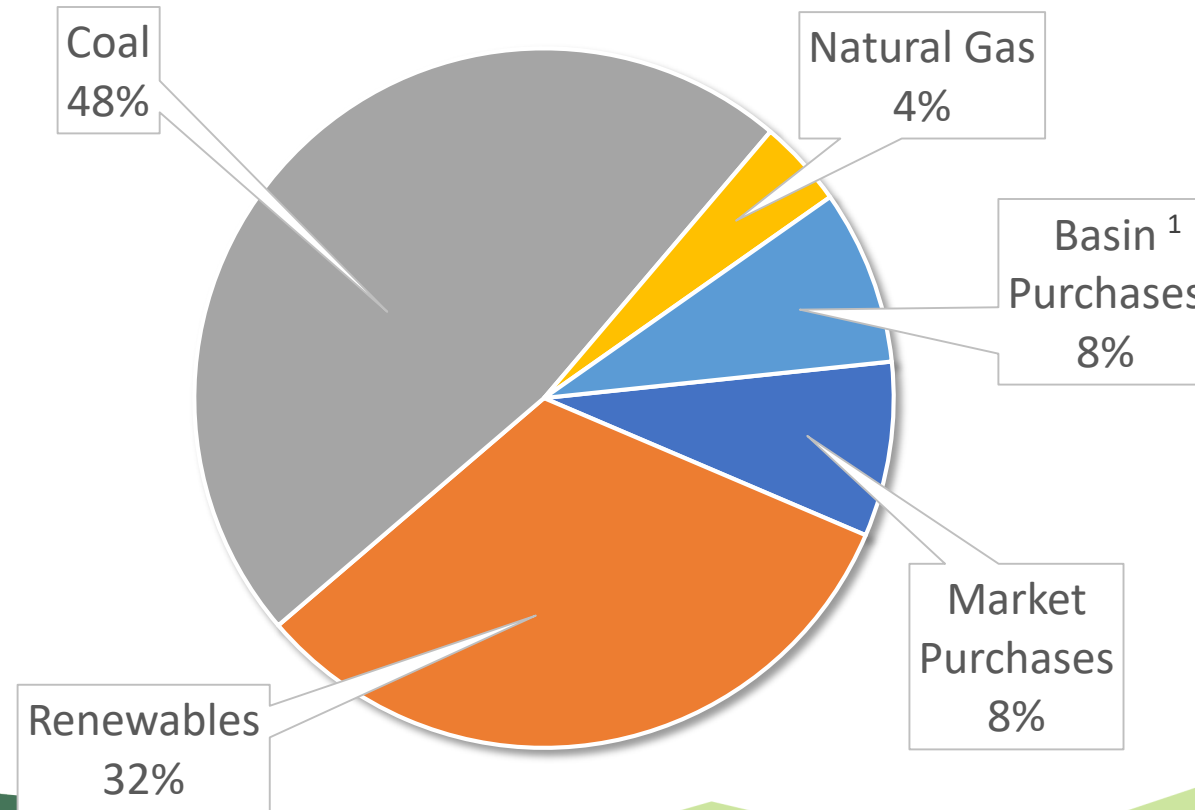


Current Power Supply:

Tri State Generation and Transmission

- Colorado Ute filed for bankruptcy in 1990's
- LPEA contracted with Tri-State (TSGT) after the bankruptcy
- Contract with TSGT was extended from 2040 to 2050 in 2007 when TSGT was considering the development of new generation projects
- 5% local supply was introduced in early 2000's, modified 2007

Tri-State's 2018 Resource Mix - Energy



¹ "Basin Purchases" are purchases made by Tri-State from Basin Electric Power Cooperative which is primarily coal and other non-renewable resources.

Tri-State's Changing Resource Mix

- Tri-State RFPs for renewables has added 656 megawatts of utility-scale wind and solar
- Tri-State issuing RFPs for new renewables
 - Sixth request issued June 2019

Project	Size (Megawatts)	Year Commercial
Cimarron Solar (NM)	30 MW	2010
Kit Carson Wind (CO)	51 MW	2010
Colorado Highlands Wind (CO)	91 MW	2012, expanded in 2013
Carousel Wind (CO)	150 MW	2016
San Isabel Solar (CO)	30 MW	2016
Alta Luna Solar (NM)	25 MW	2017
Twin Buttes II Wind (CO)	75 MW	2017
Crossing Trails Wind (CO)	104 MW	2020
Spanish Peaks Solar (CO)	100 MW	2023

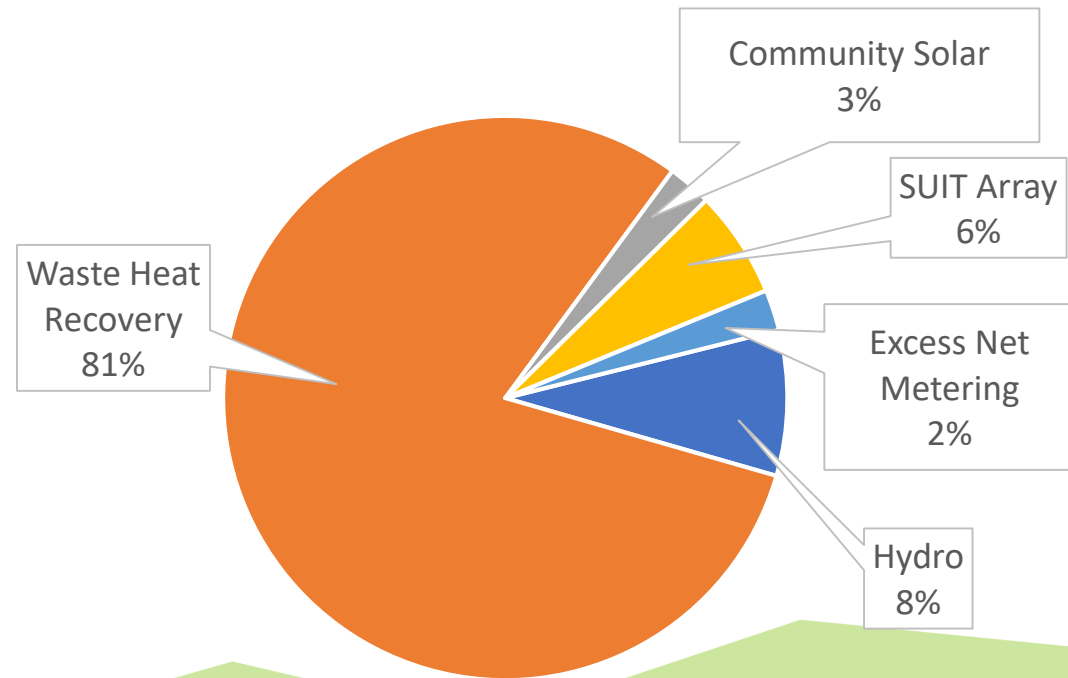
Tri-State's is Dynamic

After a Strategic Planning in June 2019 Tri-State passed a resolution that contained:

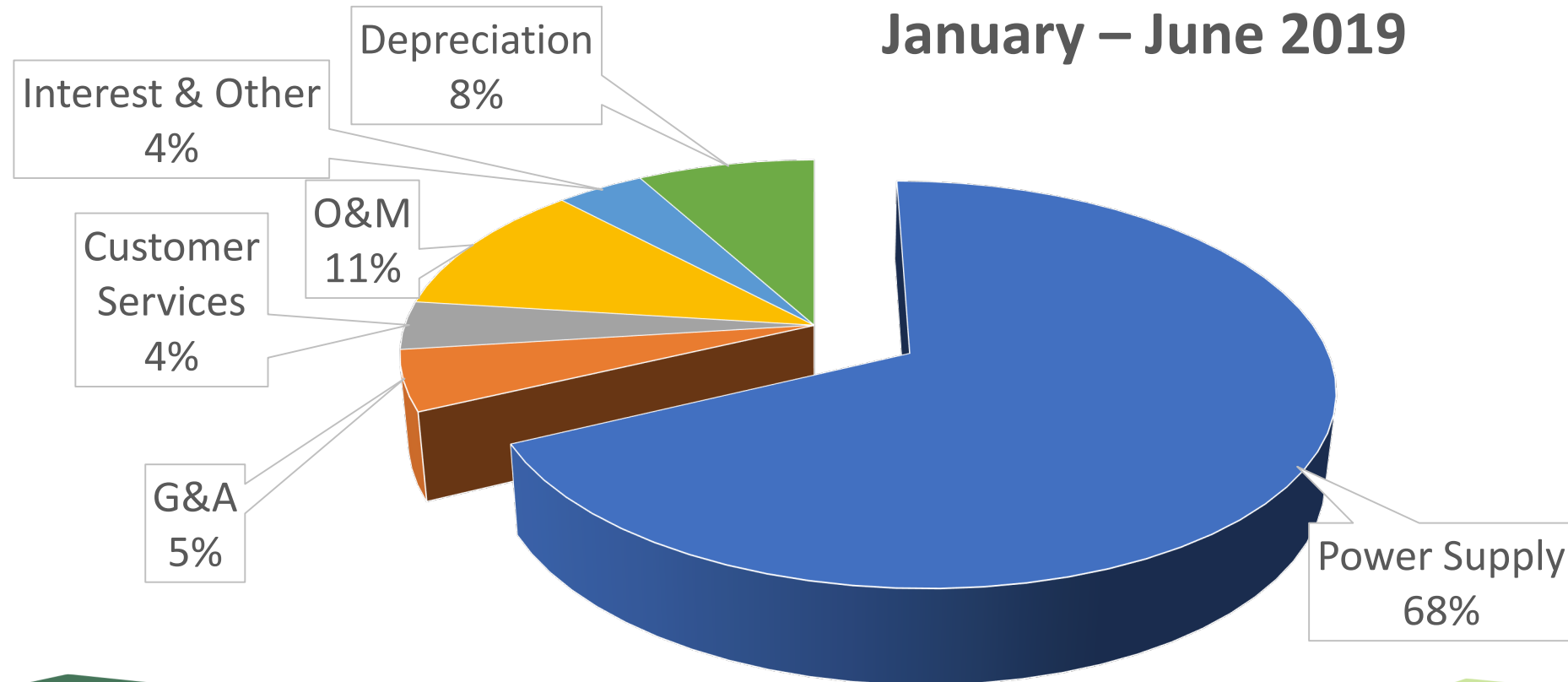
BE IT FURTHER RESOLVED, that staff is directed to investigate and pursue options to develop the ability to provide solar, storage, and other renewable opportunities and energy solutions to its Member Systems, through strategic partnerships or otherwise.

LPEA Local Purchases: the 5%

- Waste-Heat Recovery from an Industrial Member
- Lemon Hydro
- Southern Ute Solar
- Community Solar Gardens
- Excess Net Metering
- Methane Capture



The Impact of Costs to LPEA for Power



Strategic Planning & Timing of Things

- Kit Carson Electric Cooperative buys out of contract with Tri-State
- Delta Montrose begins negotiations to buy out of contract with Tri-State
- LPEA's Long Term Strategies Committee forms in Spring 2018
 - Power supply is recognized as a topic of significant strategic importance
- LPEA's Power Supply Committee forms in Fall 2018 to go deeper

LPEA's Power Supply Committee formed to answer:

1. What is the exit-fee of the contract with Tri-State?
2. What are LPEA's power supply options and potential pricing and reliability?

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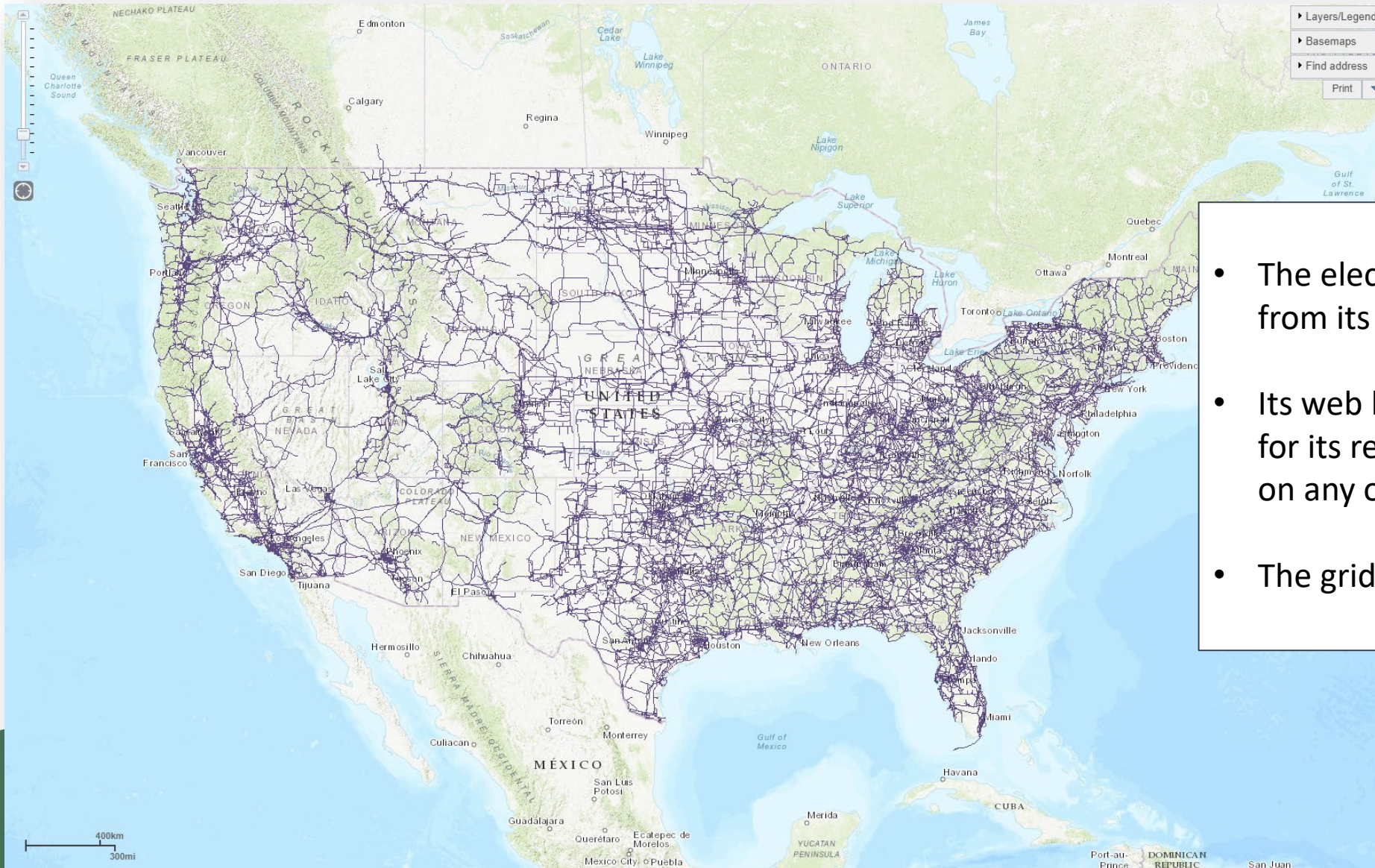
Enchantment Energy Consulting, LLC

Rio Energy, LLC

2. What are LPEA's power supply options and potential pricing and reliability?

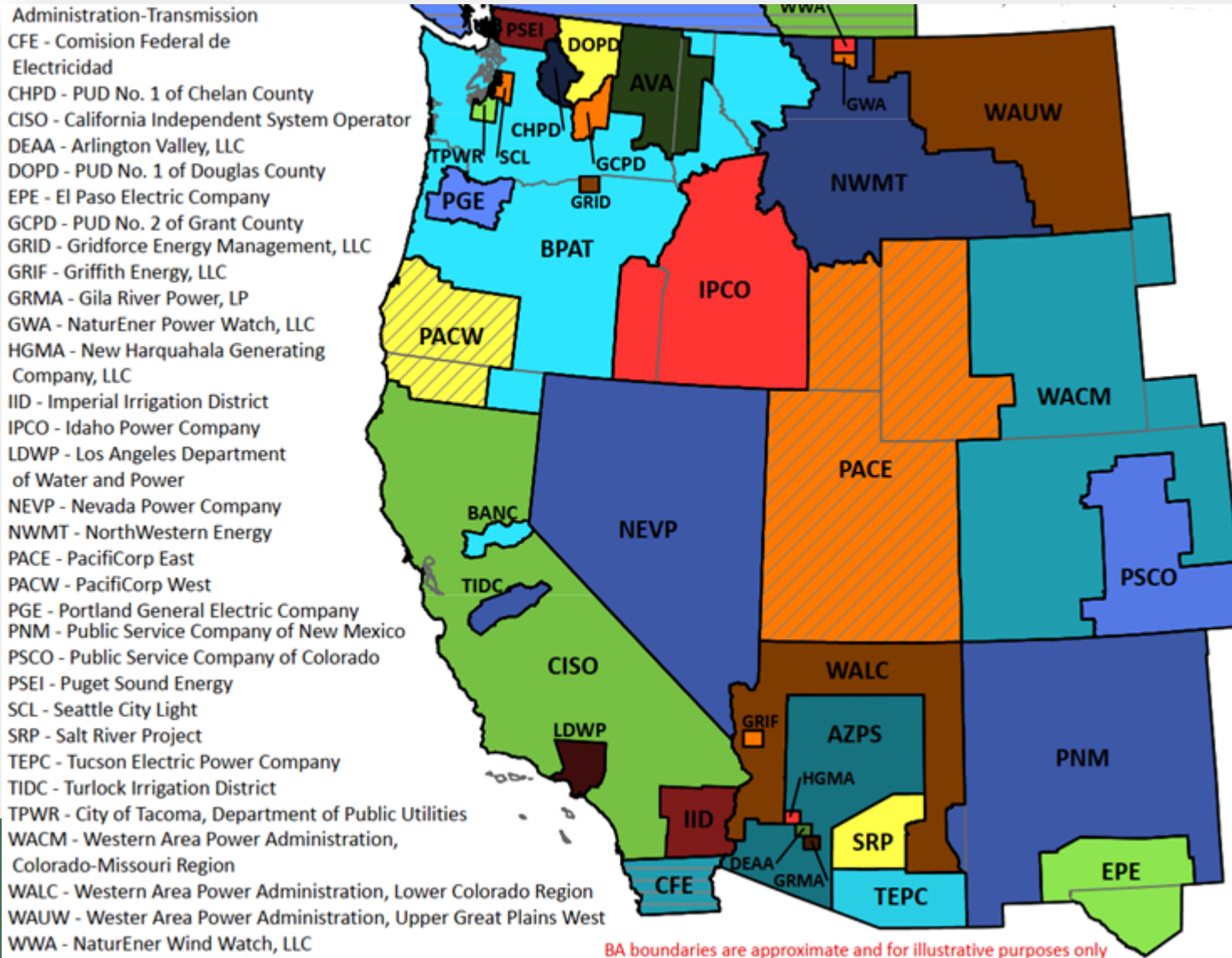
Energy Strategies

Easy Answers First: Reliability



- The electric grid's reliability comes from its design
- Its web like nature of the grid allows for its reliability and is not dependent on any one electric utility company
- The grid lives in a balance

Easy Answers First: Reliability



- The balance of the electric grid is in the hands of Balancing Authorities
- Western Area Power Administration is responsible for our region (WACM)
- Regardless of where LPEA sources its power supply, the reliability of the grid will remain intact.

The Question of Cost to LPEA for Power

To meet LPEA's Mission and Strategic Goal, LPEA will need to reduce the carbon footprint while maintaining or reducing the costs of our power supply

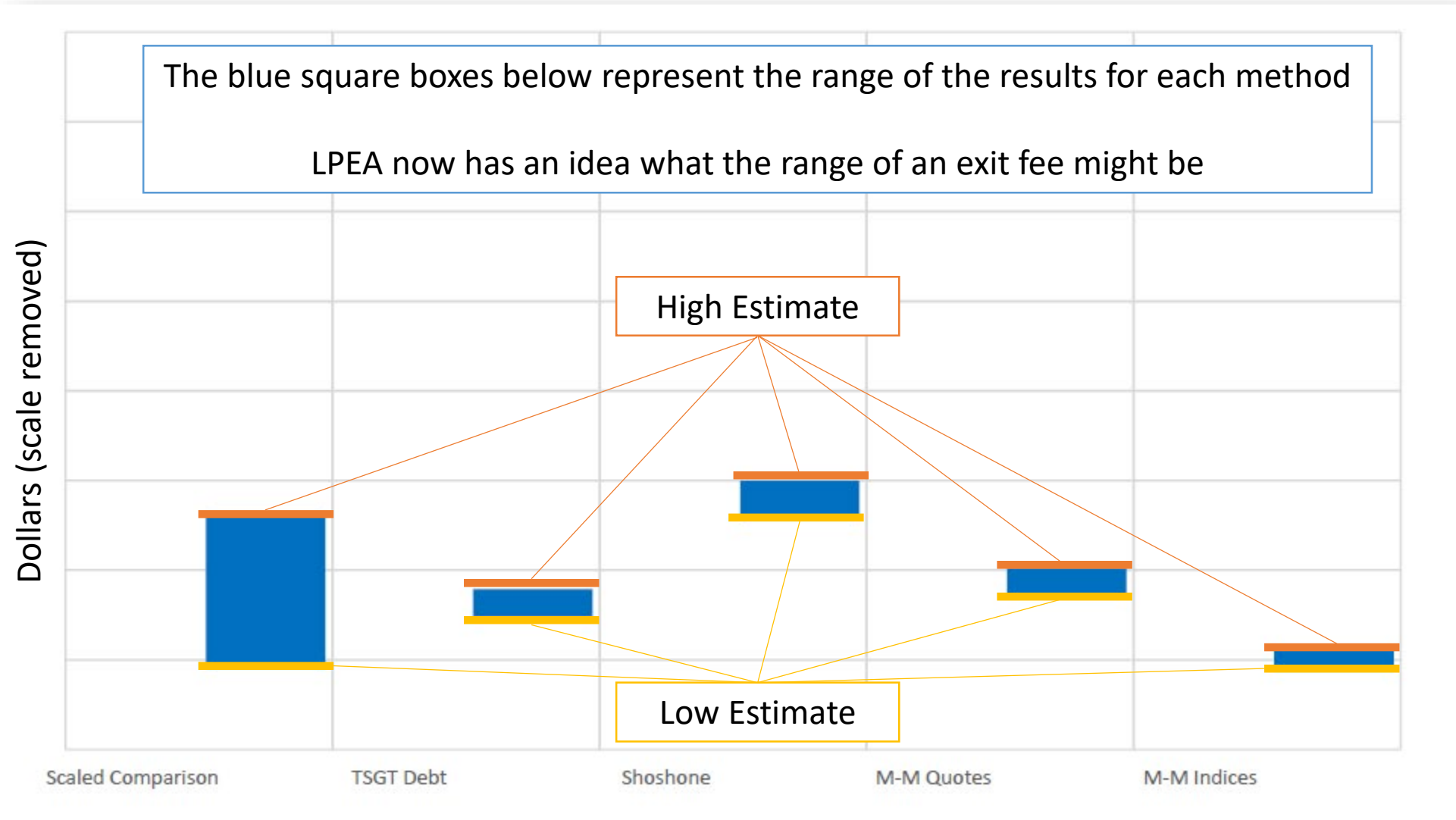
If Tri-State is unable to meet our goals, can LPEA exit our agreement early and find a new source of power that meets our goals that costs less than what we expect to pay to exit over time?



Estimating an Exit Fee – 4 Methods

- Scaled Comparison to Cost of Exit for Kit Carson
 - Energy, Demand, Revenue, and Load Factor
- Share of Tri-State Debt
 - Pro-Rata Allocation of Tri-State Debt Obligations
- Shoshone Method
 - Net Present Value of the Loss of Annual Payment to Tri-State
- Mark-to-Market Valuation
 - Tri-State Gain/Loss Selling LPEA's Power to the Wholesale Market

Estimating an Exit Fee



The Balance – Can We Cover the Cost to Exit?

We have an idea of what the exit fee might be using at least four different methodologies

We need to determine what replacement power sources might cost

If a savings is realized by going to other suppliers, does it cover the cost to exit our current contract with Tri-State?



PSC – Market Valuation – The Portfolios

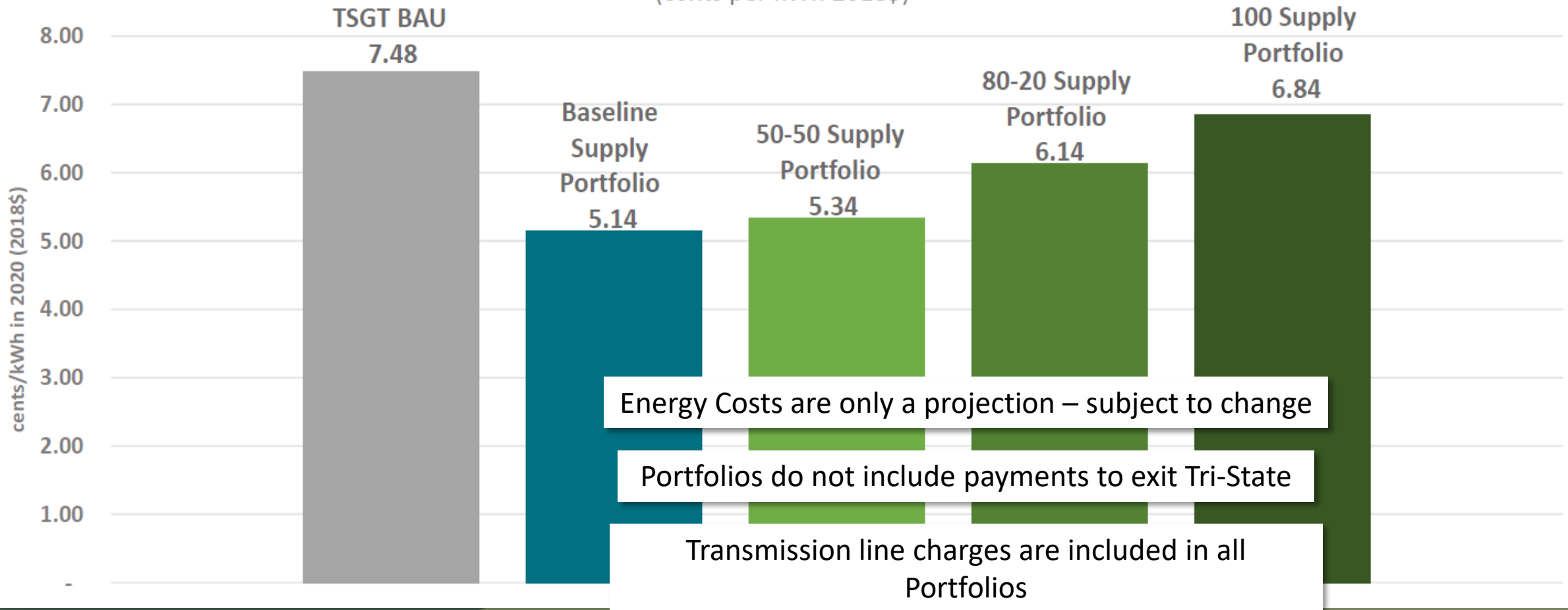
Market Pricing is different depending upon what type of mix of energy you are seeking

Baseline Supply	50/50 Supply	80/20 Supply	100 Supply
Mimics current mix	50% non-carbon in 2020	80% non-carbon in 2020	100% non-carbon in 2020
	100% non-carbon by 2050		



PSC – Market Valuation – Market Costs

Total Expected Energy Cost in 2020
(cents per kWh 2018\$)



PSC – Market Valuation – 2 Key Takeaways

- Wholesale energy market prices are expected to remain flat over the next 5-10 years
 - There is significant uncertainty surrounding price forecasts beyond 10 years.
 - Given relatively low prices and future price uncertainty, there may be benefit in “locking in” a lower price now
- LPEA could be able to secure market power supply options with higher amounts of carbon-free generation at potentially lower costs

Putting it all Together

- The reliability of the grid is not dependent upon our suppliers
- The balance of the what the exit-fee might be and what might be saved by changing power suppliers warrants further investigation
- More work is needed before any decisions are made
 - Member Engagement
 - Further clarification of various topics is underway

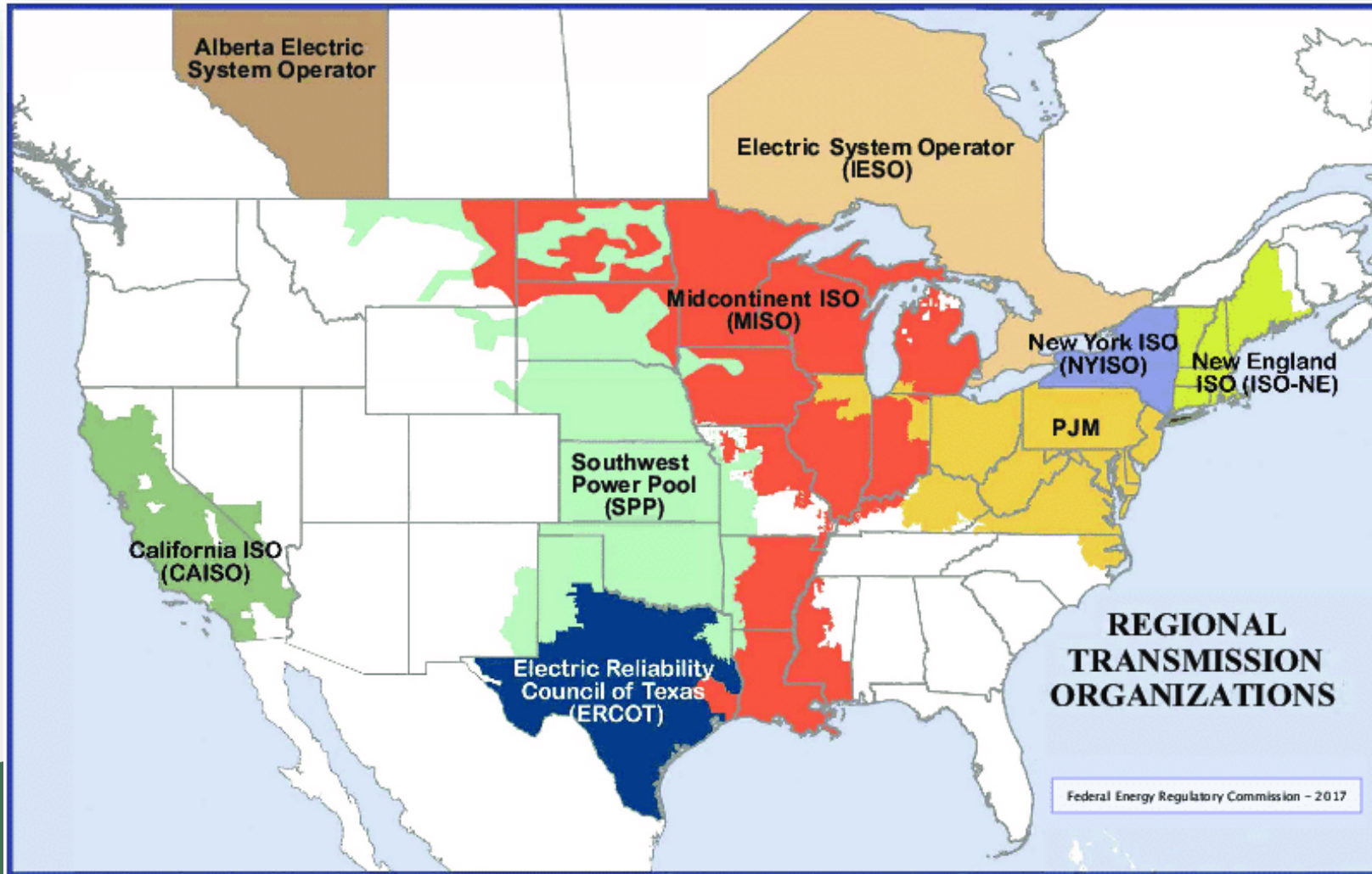
Next Steps

- In-depth financial modeling for LPEA
- Determine costs for access to Transmission Systems
 - Application in to TSGT and WAPA to conduct impact studies
- Conducting Request for Information for Market Pricing
 - Sent out to 10 suppliers - 6 RFI received
 - Board will review during a future board meeting

Other Thoughts

- Development of Regional Transmission Organization (RTO)
- Colorado is adopting goals to reduce carbon

Regional Transmission Organizations



RTOs typically open up a moment to moment bidding process for generation owners to bid into “market” to serve loads

RTOs determine best market solutions to deliver power to meet load requirements

RTOs highly transparent transactional marketplace

Colorado's Carbon Goal

- Governor Polis signed seven climate and energy bills as of June 3, 2019
 - Reduce carbon in Colorado's economy by 90% below 2005 level by 2050
 - Codified Xcel Energy's 100% carbon-free electricity by 2050
- Governor Polis signed four electric vehicle (EV) bills
- Governor Polis presented a roadmap to be 100% carbon-free electricity by 2040

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