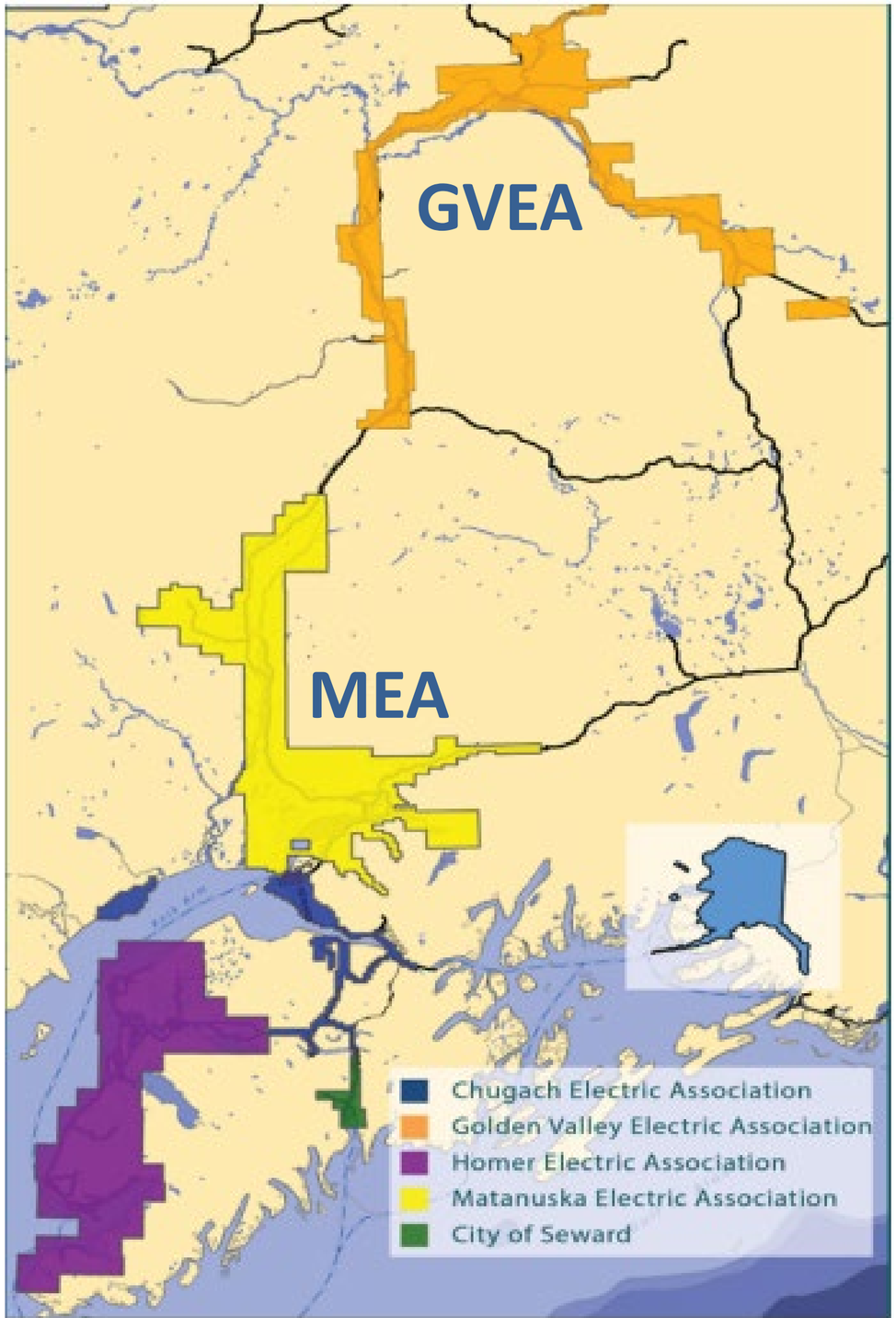
APRIL 11, 2024

UTILITY BRIEFING

ABBY DILLARD
DIRECTOR OF MEMBER SERVICES
GOLDEN VALLEY ELECTRIC ASSOCIATION

KIM HENKEL
SR MANAGER OF STRATEGIC IMPLEMENTATION
MATANUSKA ELECTRIC ASSOCIATION



Our Place in the Railbelt Electric System

GVEA

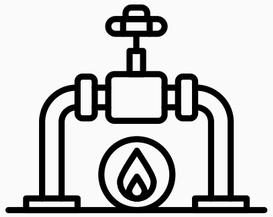
- Cooperative structure
- Serves the Interior
- Mix of naphtha, diesel and coal. Purchase gas fired power
- 25 MW Eva Creek Wind and a small independent power producer, only 9% renewable
- Two key industrial members, residential
- Decreasing load

MEA

- Cooperative structure
- Eagle River and Mat-Su
- Load-following power plant can burn gas or diesel
- Numerous micro-sized independent power producers, only 16% renewable
- Primarily residential load, little industrial
- Increasing load

WHERE WE ARE NOW?

Significant Threats



GAS SUPPLY UNCERTAINTY

HILCORP NOTIFIED THE UTILITIES IT WON'T BE ABLE TO PROVIDE FULL GAS SUPPLY BEYOND 2028. CURRENTLY 84% OF MEA'S POWER IS PRODUCED WITH COOK INLET NATURAL GAS. HISTORICALLY, GVEA PURCHASED 15% OF ITS POWER VIA NATURAL GAS ECONOMY ENERGY SALES.

ESCALATING COSTS/RISKS

INFLATION AND SUPPLY CHAIN IMPACTS ARE BEING CAREFULLY MANAGED. FOCUS ON DOWNWARD PRESSURE ON RATES MEA JUST HAD OUR FIRST BASE RATE INCREASE IN A YEAR AND GVEA HAD A RATE INCREASE AS WELL.

Near/Mid Term Solutions

ENERGY DIVERSIFICATION

INFRASTRUCTURE INVESTMENT

COLLABORATION

GVEA Plan

IMMEDIATE PRIORITIES

(Short term 1-5 years)

STABILIZE COST OF POWER

- Diversify power sources away from generation that are impacted by volatile fuel price swings.
- Implement Strategic Generation Plan

OBTAIN ADEQUATE ENERGY AND FUEL STORAGE

REMOVE BARRIERS FOR REGION-WIDE, SECURE, RESILIENT, COST-EFFECTIVE POWER

- Remove economic constraints (wheeling)
- Develop transmission system

LONG TERM VISION

(10-25 year horizon)

RESILIENT GRID MOVES LARGE AMOUNTS OF COST-EFFECTIVE POWER REGARDLESS OF LOCATION

LOW COST, DIVERSIFIED, CLEAN GENERATION – Board Goal – 26% Carbon Reduction by 2030

FOCUS ON ASSET MANAGEMENT FOR AGING INFRASTRUCTURE SYSTEM

FOCUS ON LOAD GROWTH

GVEA
Golden Valley Electric Association
Your Touchstone Energy® Cooperative

MEA Plan

IMMEDIATE PRIORITIES

(Short term 1-5 years)

SECURE FUEL SUPPLY

- Short-term certainty, long-term flexibility. Long term for ENSTAR

REMOVE BARRIERS FOR REGION-WIDE, SECURE, RESILIENT, COST-EFFECTIVE POWER

- Remove economic constraints (wheeling)
- Develop transmission system

DEVELOP ADDITIONAL RENEWABLE PROJECTS

MANAGE COST ESCALATIONS

LONG TERM VISION

(10-25 year horizon)

RESILIENT GRID MOVES LARGE AMOUNTS OF COST-EFFECTIVE POWER REGARDLESS OF LOCATION

DIVERSIFIED, SECURE, CLEAN GENERATION – Board Goal – '50% Clean Energy by 2050'

INFRASTRUCTURE TO SUPPORT RESOURCE DEVELOPMENT/RURAL NEEDS

CONTINUED FOCUS ON RELIABILITY AND DOWNWARD PRESSURE ON RATES

MEA
MATANUSKA ELECTRIC ASSOCIATION

GOVERNOR'S TAS

TRANSMISSION UPGRADES

BECOME A FIRST WORLD GRID

- FUND UPGRADES TO CAPACITY AND RESILIENCE. REMOVE CONGESTION.
- GRID UNIFICATION TO DEVELOP ELECTRON HIGHWAY VS TOLL ROAD

CLEAN ENERGY STANDARDS

MEA: 50% CLEAN ENERGY BY YEAR 2050

- ATTAINABLE GOALS
- FOCUSED ON INCENTIVES NOT PENALTIES
- REINFORCE COLLABORATION

ENERGY DIVERSIFICATION

FIRM POWER RESOURCES

- COST COMPETITIVE
- LONG TERM ENERGY SECURITY GOAL
- REDUCE THE COST OF ENERGY

WHAT WE LEARNED FROM ICELAND

- Similar challenges to Alaska (demographics, harsh environment, islanded system).
- Initial government investment in backbone/generation brought energy security and drove economic growth, private investment and entrepreneurship.
- Vision and policy matter.

GENERATION OPTIONS HAVE TRADEOFFS

GAS SUPPLY

COOK INLET INVESTMENT

- PROVEN RESOURCES BUT EXPENSIVE TO DEVELOPAND DELIVER
- QUESTIONABLE LIFE EXPECTANCY
- SINGLE SUPPLIER

NORTH SLOPE INVESTMENT

- SIGNIFICANT RESOURCES AVAILABLE
- LARGE AND SMALL DIAMETER PIPELINES HAVEN'T MATERIALIZED
- OPTIONS TO PRODUCE THERE AND BUILD TRANSMISSION DOWN TO GRID

IMPORT LNG

- AVOIDING BIG INVESTMENT INCREASES PER MCF COSTS
- DECREASES ENERGY SECURITY
- HIGH DEMAND GLOBAL MARKET
- LIKELY OUR ONLY SHORT TERM OPTION

RENEWABLES

HYDRO

- FIRM, CHEAP POWER, LONG LIFE
- REQUIRED HIGH INITIAL INVESTMENT
- ENVIRONMENTAL OPPOSITION

SOLAR

- INEXPENSIVE TO DEVELOP, SCALABLE
- FLUCUATING POWER SUPPLY
- NOT AVAILABLE DURING OUR PEAKS

WIND

- INEXPENSIVE TO DEVELOP, SCALABLE
- FLUCUATING POWER SUPPLY
- SOME AVAILABILITY DURING PEAKS

GEOTHERMAL, TIDAL, ETC

- MORE EXPLORATION, PROVING AND PERMITTING REQUIRED.
- PROMISING IN THE LONG TERM

OTHER CLEAN ENERGY

NUCLEAR

- 10+ YEARS OUT
- ECONOMICS ARE NOT THERE YET
- PERMITTING AND SPENT FUEL QUESTIONS

CARBON MANAGEMENT

- INCREASING OPTIONS TO CAPTURE AND/OR SEQUESTER CARBON

EFFICIENCY

- SUPPLY SIDE EFFICIENCY BURNS LESS FUEL / NUMBER OF KILOWATTS
- DEMAND SIDE EFFICIENCY MEANS CONSUMERS USE LESS

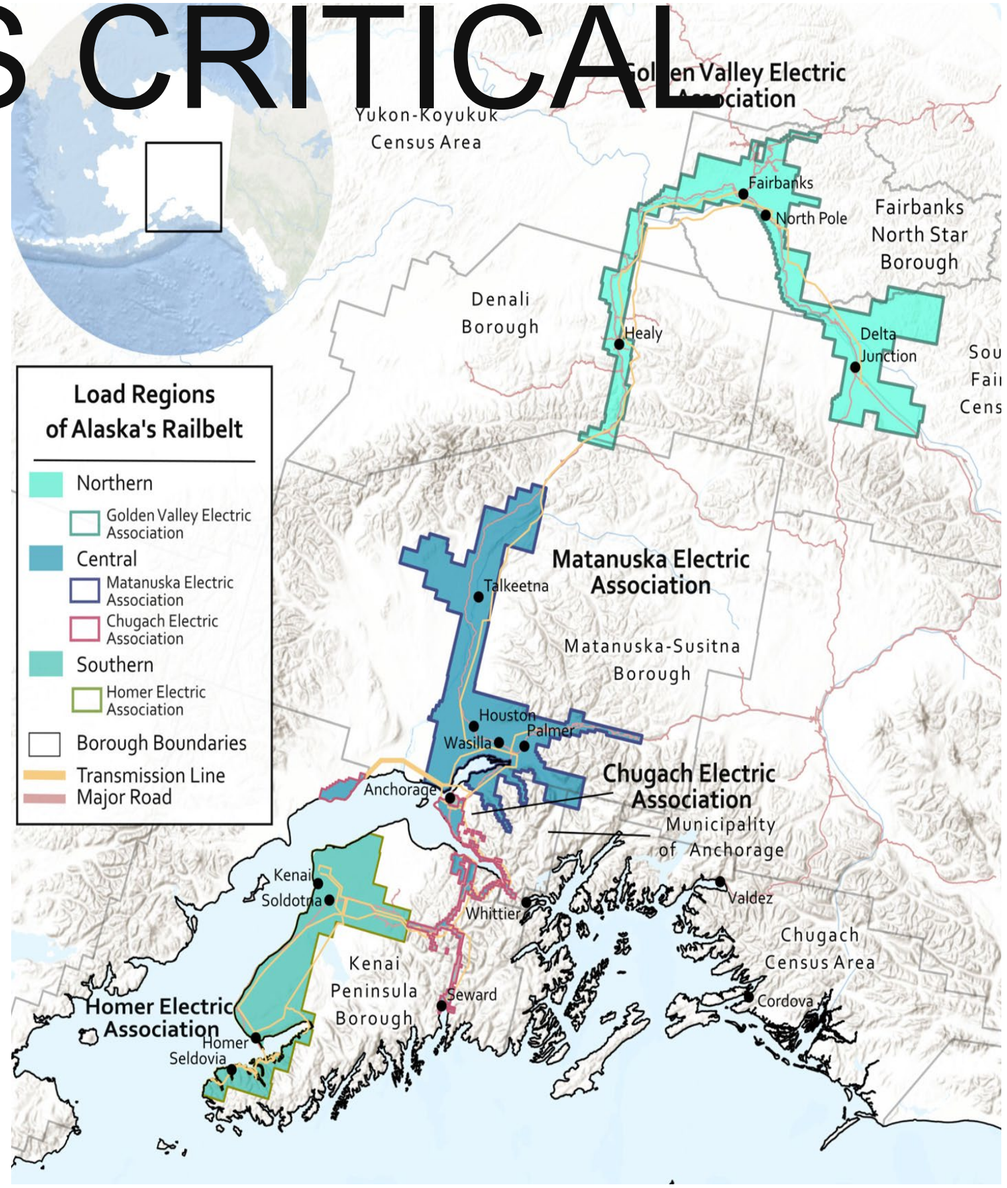
LONG DURATION STORAGE

- NOT PROVEN AT UTILITY SCALE
- SCALABLE
- LONG LIFE EXPECTANCY

INFRASTRUCTURE IS CRITICAL

The Future Requires a Backbone System that:

- Allows cheapest cost power to get to end-users wherever it is produced, whatever the source is, and wherever that generation is located.
- Facilitates innovative energy projects at scale for energy security and diversification.



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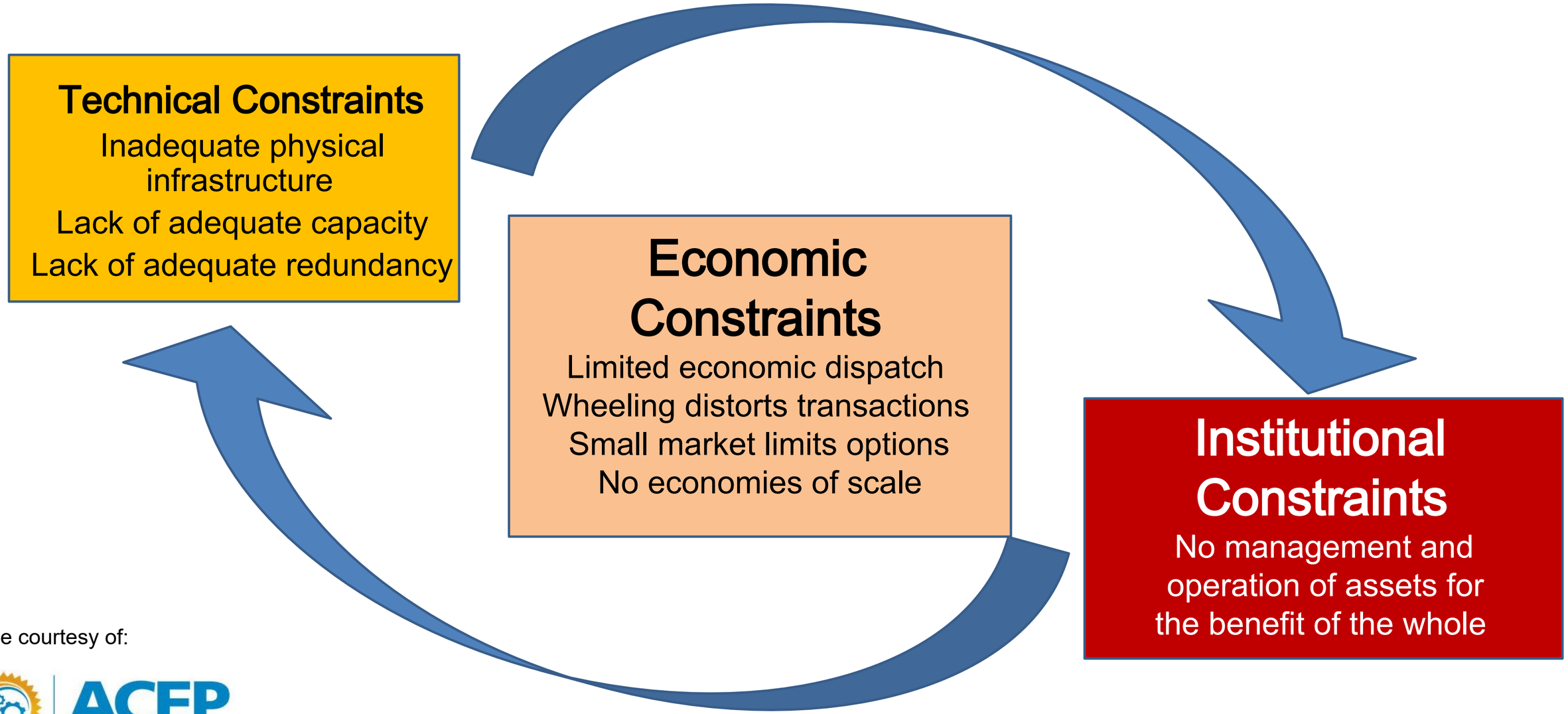
Constraints on the Railbelt Grid



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TECHNICAL CONSTRAINTS

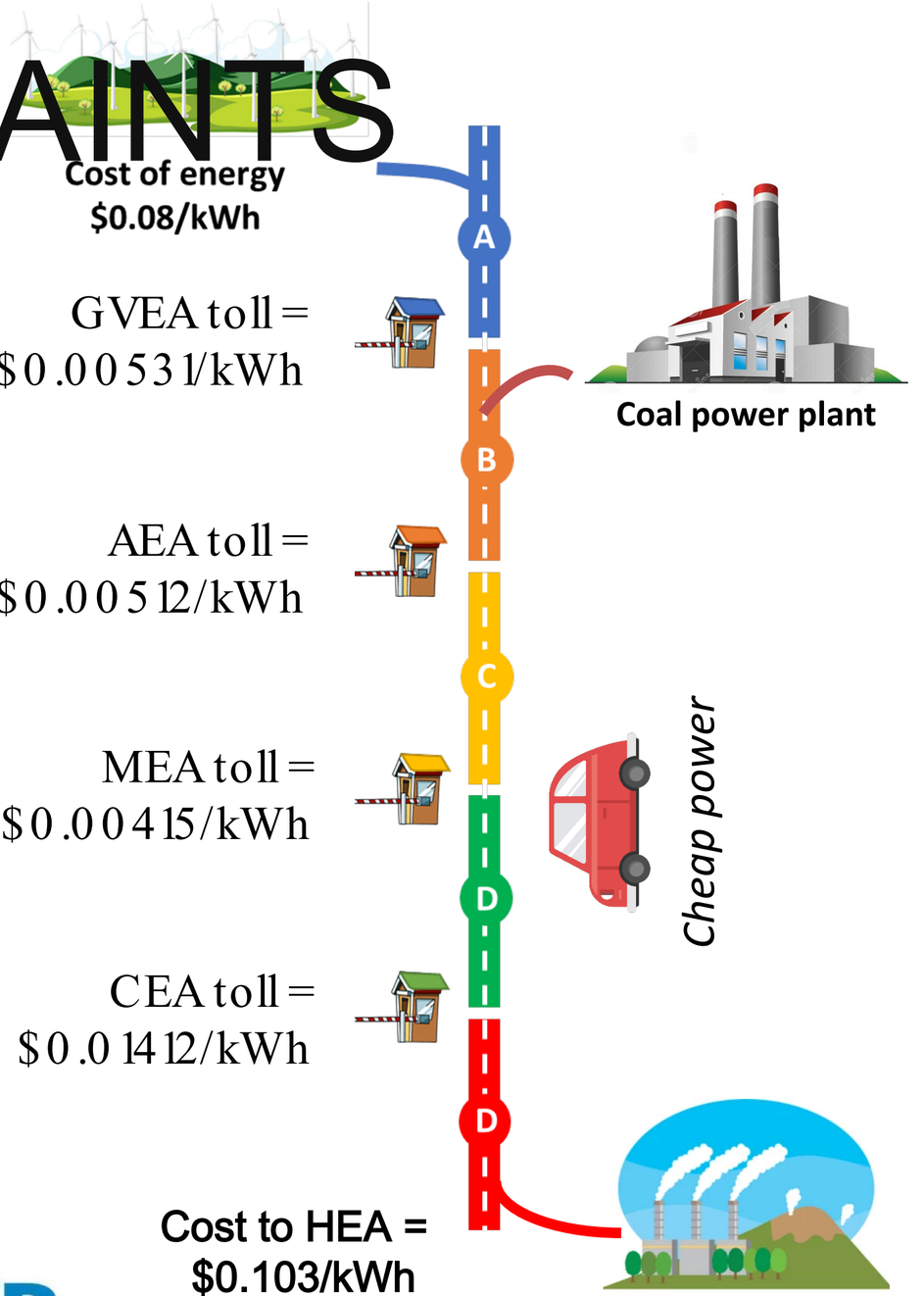
- Energy transmission between Railbelt regions has limited capacity- less than 10% peak load is possible today
- Modernization will ensure reliable electric service, enable growth, increase redundancy and add capacity for lower cost energy
- The project will allow Bradley Lake energy, one of the cheapest sources of power for GVEA, to be transmitted north from Homer, unconstrained

ECONOMIC CONSTRAINTS

Eliminate Wheeling

Decisions about investment in projects or economic dispatch should not be inhibited by the cost of transmission, or the need to move power across transmission lines with different ownership

Get rid of the toll road, create an open access highway that does not discriminate in terms of who generates the power, or what form of generation is used



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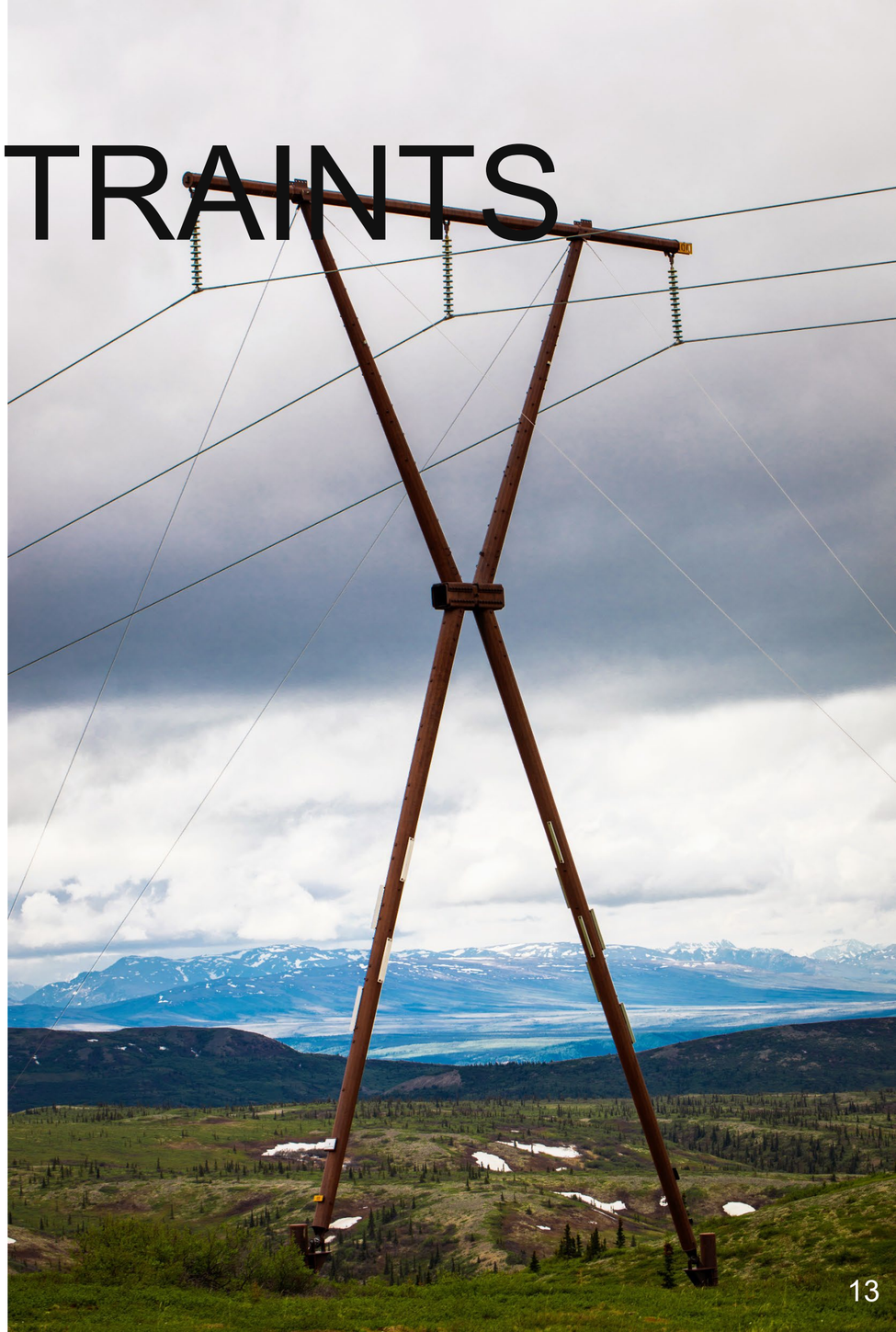
INSTITUTIONAL CONSTRAINTS

- Manage the transmission system for the greater good
- Provide consistent terms and expectations regardless of where a system or project is being interconnected into the grid
- Supports system-wide resource planning



NEXT STEPS

HOW WE CAN MAKE A DIFFERENCE IN ALASKA'S ENERGY FUTURE.

UTILITY COMMITMENTS

Develop joint energy highway

- Unified transmission system
- Eliminate antiquated economic barriers (wheeling)

Leverage Alaska's immense resources for a diverse and secure generation portfolio.

LEGISLATIVE REQUEST for 2024

- Once in a generation grid build out
- Prioritize flexibility and options for the future (gas supply, power)
- Incentivize utility action
- Avoid distractions and be skeptical

PRIORITY LEGISLATION

- Fund GRIP Match for $206.5M Federal award
- SB257 – Develop a transmission organization, increase qualifications for the RCA, eliminate wheeling
- SB217/HB307– Eliminates wheeling, tax parity for independent power producers (IPP's)

Other Bills

- HB368 – Clean Energy Standard
- SB152/HB328– Community Solar
- SB125– Green Bank
- HB227 – Fire liability legislation

WHY DOES THIS MATTER TO A

- Significant infrastructure dollars coming to the state for energy.
- Design, build and operation opportunities for service companies and jobs.
- Small state transmission investment unlocks federal funding, private sector investment and entrepreneurship.
- Builds a new, self-sustaining energy market and trained workforce.
- Model shifts from utility-based to open-source.
- Energy security and diversification to attract new businesses.
- Reasonable and predictably-priced power drives economic development.

Questions?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