Railbelt

Independent System Operator (ISO)

Reliability, Efficiency, and Open Access Transmission

House Special Committee on Energy
Co-Chairs Isaacson & Millett
March 19, 2014 – 8:00 AM

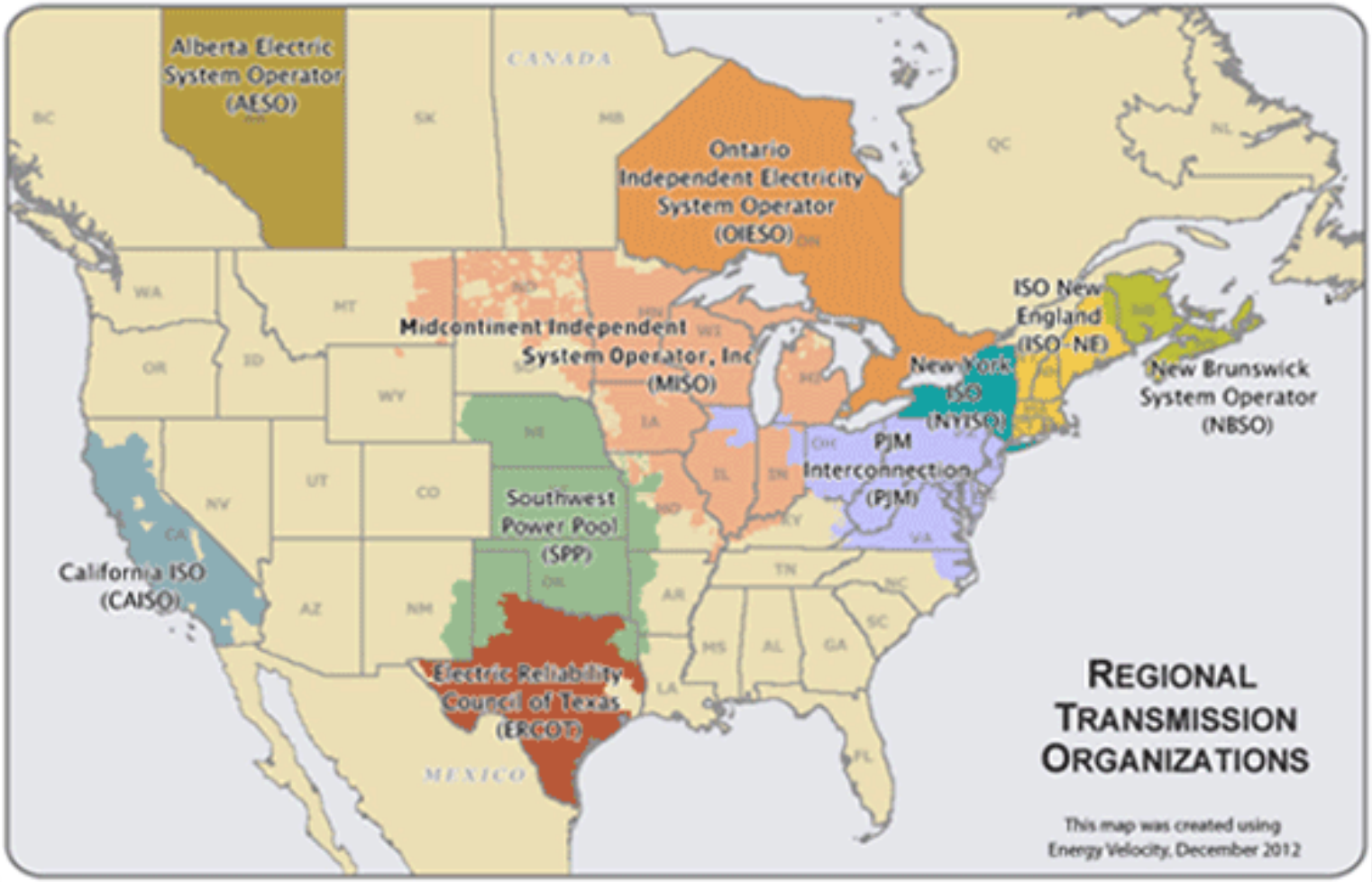
CHUGACH
POWERING ALASKA'S FUTURE

Chugach supports the plan "form an independent entity" that meets the following requirements:

- Authority over transmission
- Non-discriminatory open access
- Adopt, maintain & enforce reliability standards
- Plan, coordinate and condition new facilities
- Single operator – economic dispatch
- Universal transmission tariff

We have investigated the structure of Independent System Operators (ISOs) that are common in the Lower-48 and determined they are similar to requirements identified in HB 340.

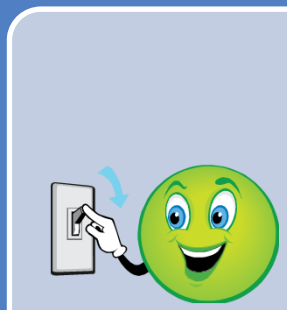
Independent System Operators (common in the Lower-48 and Canada)



FERC ISO – An Independent System Operator

Description

- Also known as a Regional Transmission Organization (RTO)
- An ISO owns no assets
- It is neutral party responsible for planning, management and control of the electric transmission grid in a state or region



Characteristics

- Ensures non-discriminatory access
- Possession of operational authority for all transmission facilities under the ISO's control
- Exclusive authority to maintain reliability
- Regulatory compact
- Plans, conditions and approves projects

ISOs are a Proven Solution

Mid 1990s FERC Order 888 mandated non-discriminatory open access

1999 FERC Order 2000 recognized and encouraged the formation of Regional Transmission Organizations (RTOs) (ISOs)

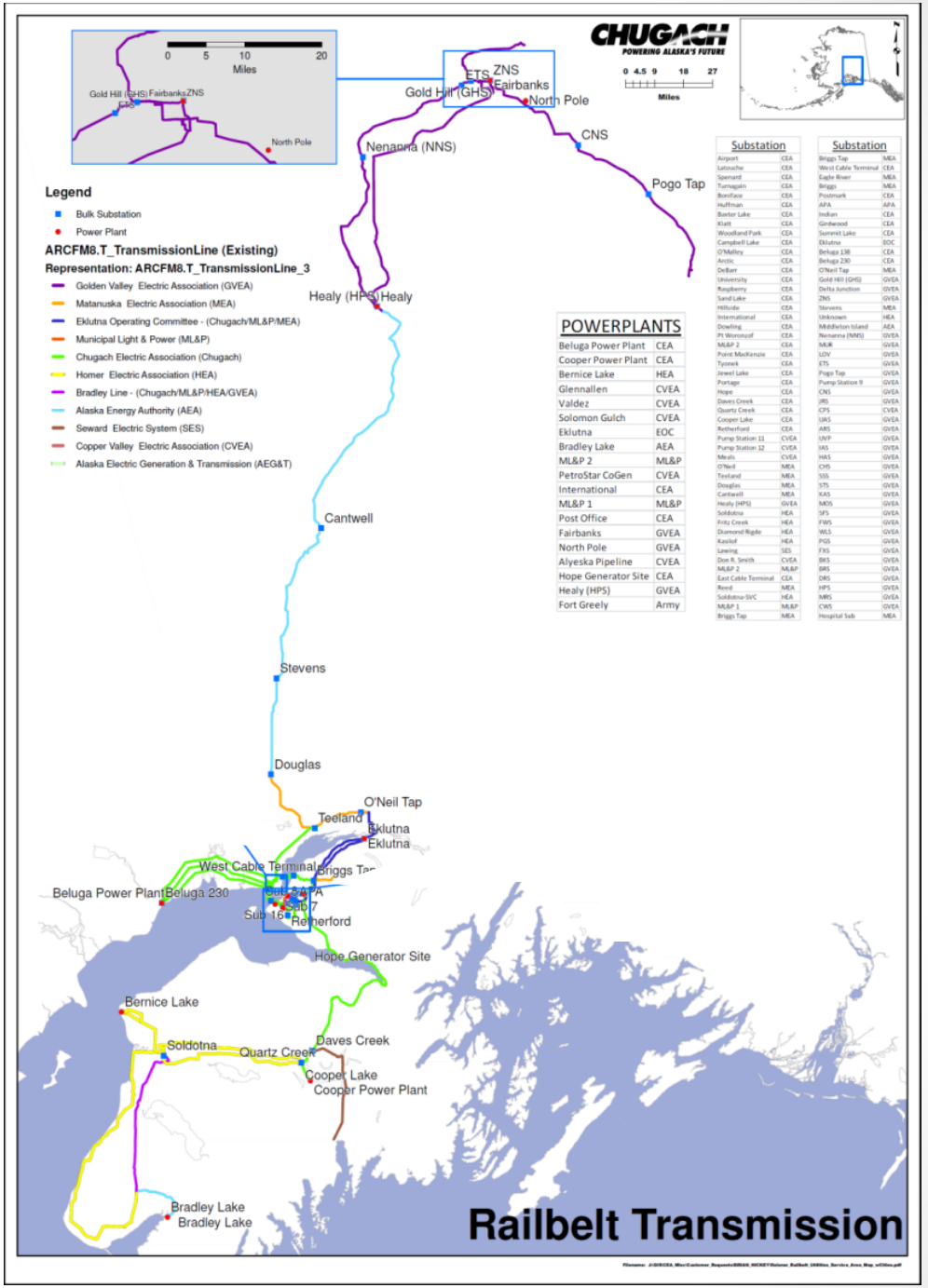
They are common in areas without significant federal investment in transmission and generation i.e. Bonneville and Tennessee Valley Authority

Ten exist today covering most of the US and parts of Canada with proven improvements in efficiency and reliability

Alaska is not FERC regulated…. *However:*

Adapted for the Railbelt's smaller size and unique circumstances they provide a proven road map - a workable rational Railbelt business structure

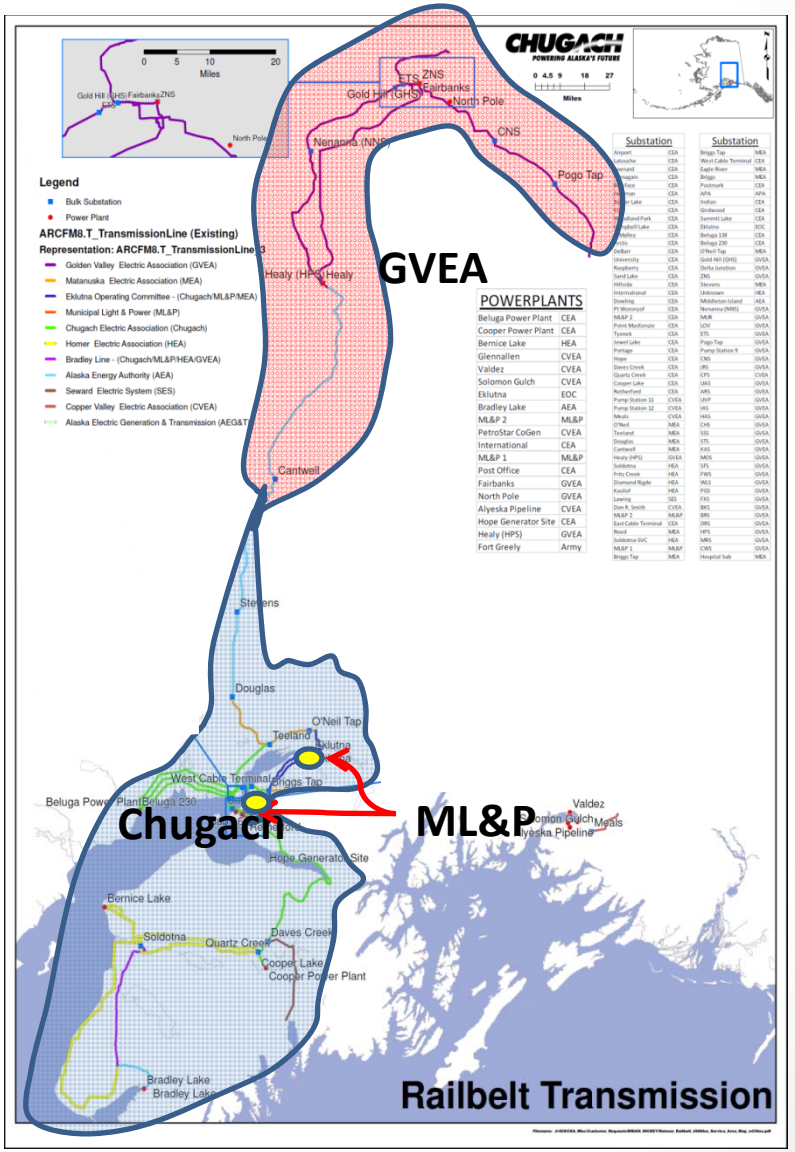
The Railbelt Grid



Railbelt is changing

1985 - 2013

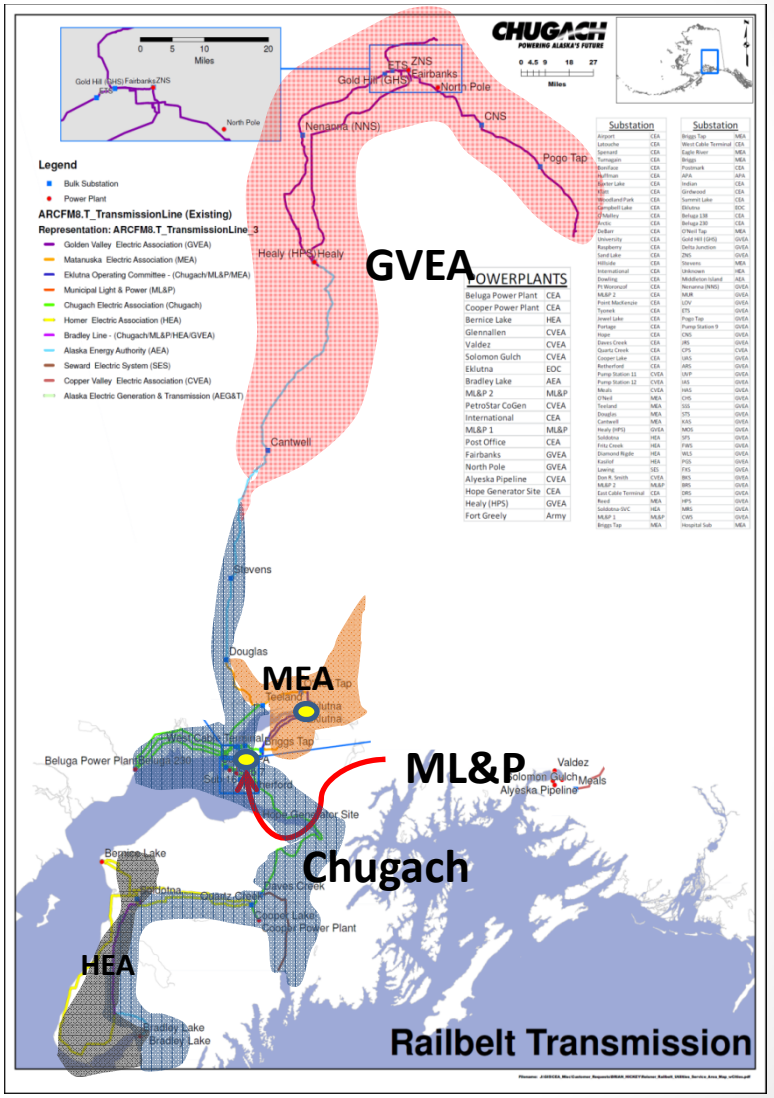
- 3 vertically integrated utilities
- Reliability rules unanimously adopted with voluntary compliance
- Alaska Intertie Agreement “utility users only”
- Bradley Lake Agreements with transmission access
- Minimal changes to Generation & Transmission (G&T) system
- Utility owned & operated generation
- Chugach economically dispatched HEA, MEA, SES & Chugach retail plus GVEA economy



Railbelt is changing

2014 -

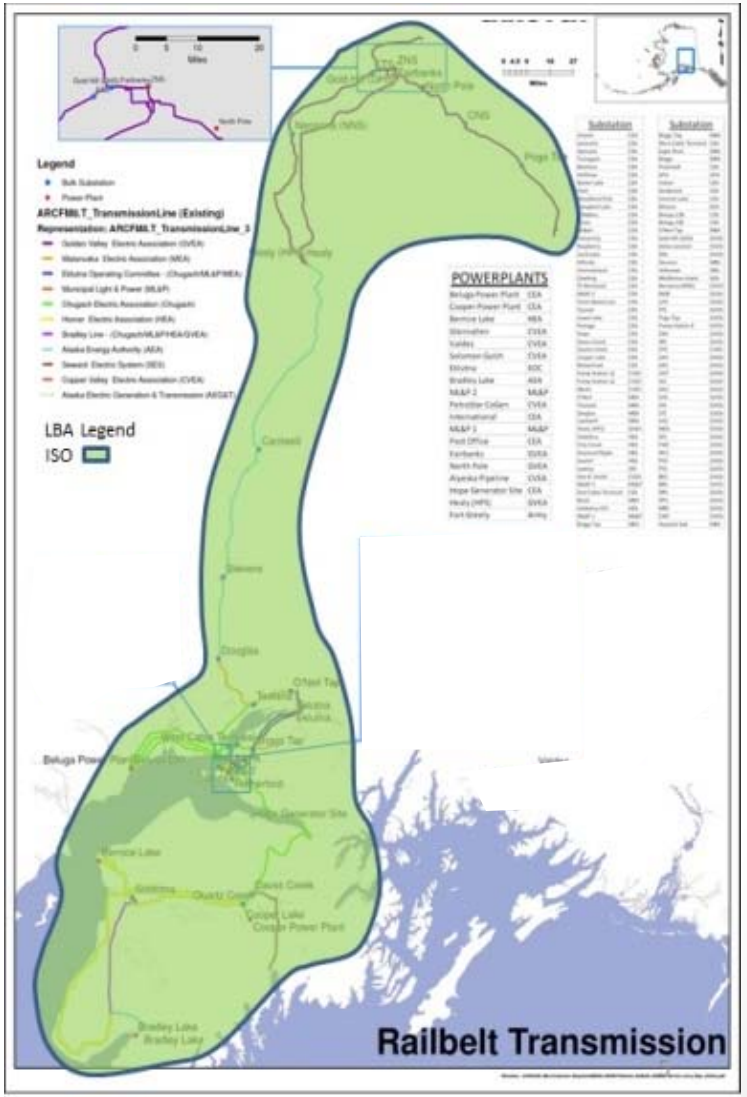
- Addition of 2 new vertically integrated utilities
- Reliability rules not unanimous – interconnection issues not defined
- Alaska Intertie Agreement "possible new users" through open access terms
- Bradley Lake transmission access congestion
- Significant generation replacement/additions – new industrial loads
- Addition of Independent Power Producers (IPP'S)
- Separate dispatch – reserve sharing without transmission rights?



Railbelt needs drive change

ISO

- Universal reliability standards
- Independent authority to enforce rules
- Long-term planning to maximize efficiency, improve reliability, and diversify energy options
- Regional operations for economic dispatch, undertake regional system improvements, and resolve Bradley Lake energy delivery congestion



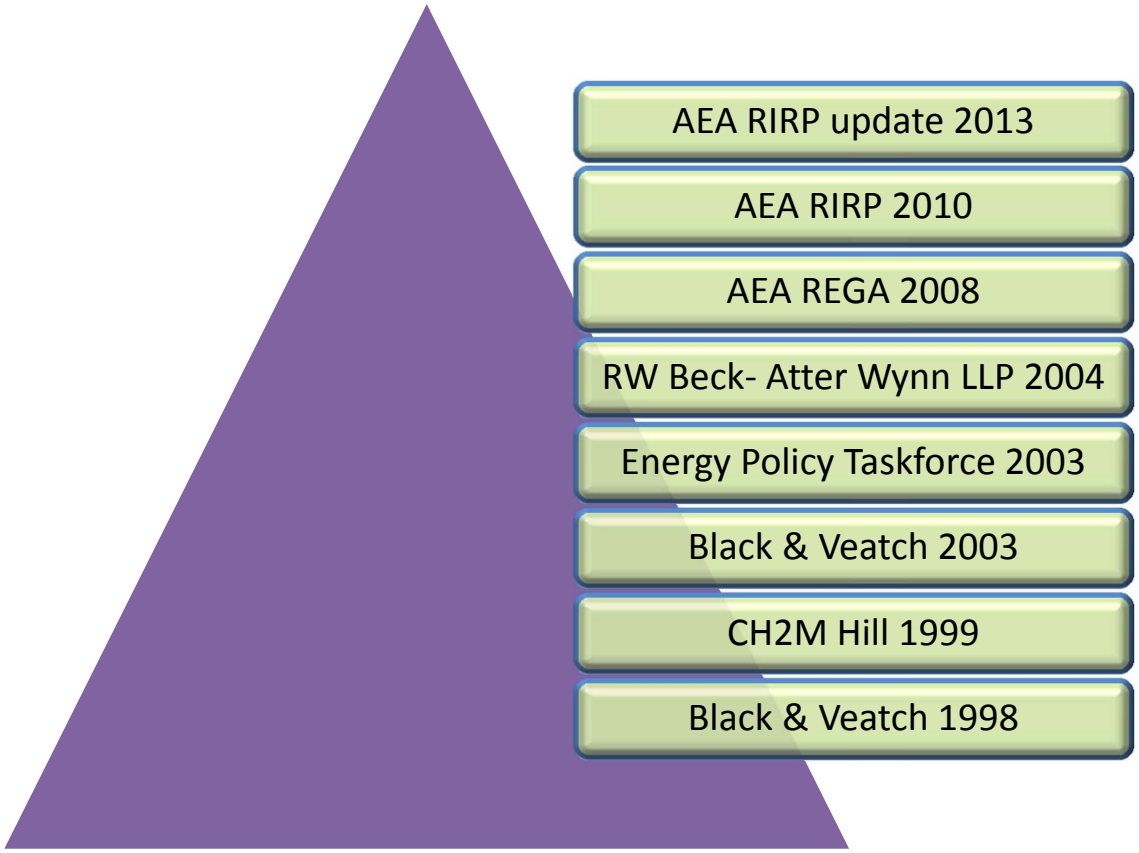
Transmission Challenges

AEA studies highlight transmission constraints that limit power transfer and economic dispatch

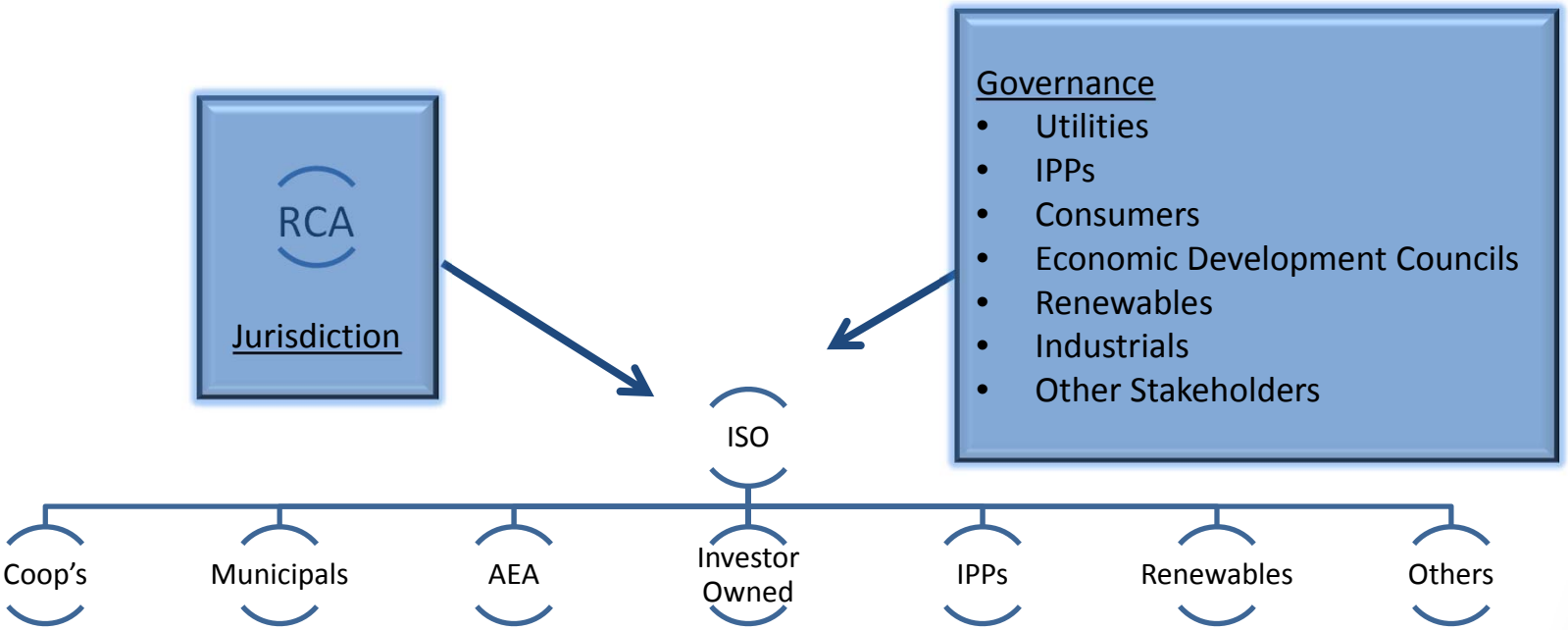
Individual utilities will not sponsor regional transmission projects or undertake economic dispatch without independent entity

Multiple transmission tariffs and operating rules make interconnection challenging and cost recovery uncertain

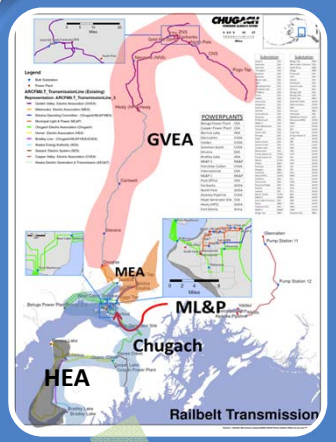
Studies Recommend Integrated Planning and Economic Dispatch

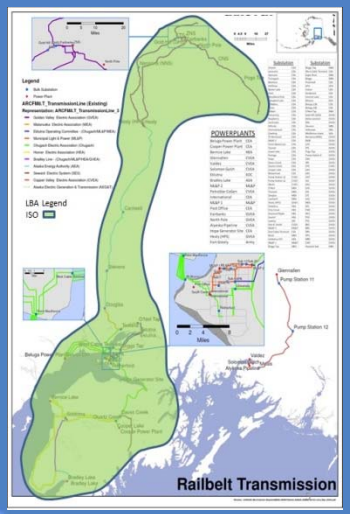


ISO Structure



Railbelt ISO



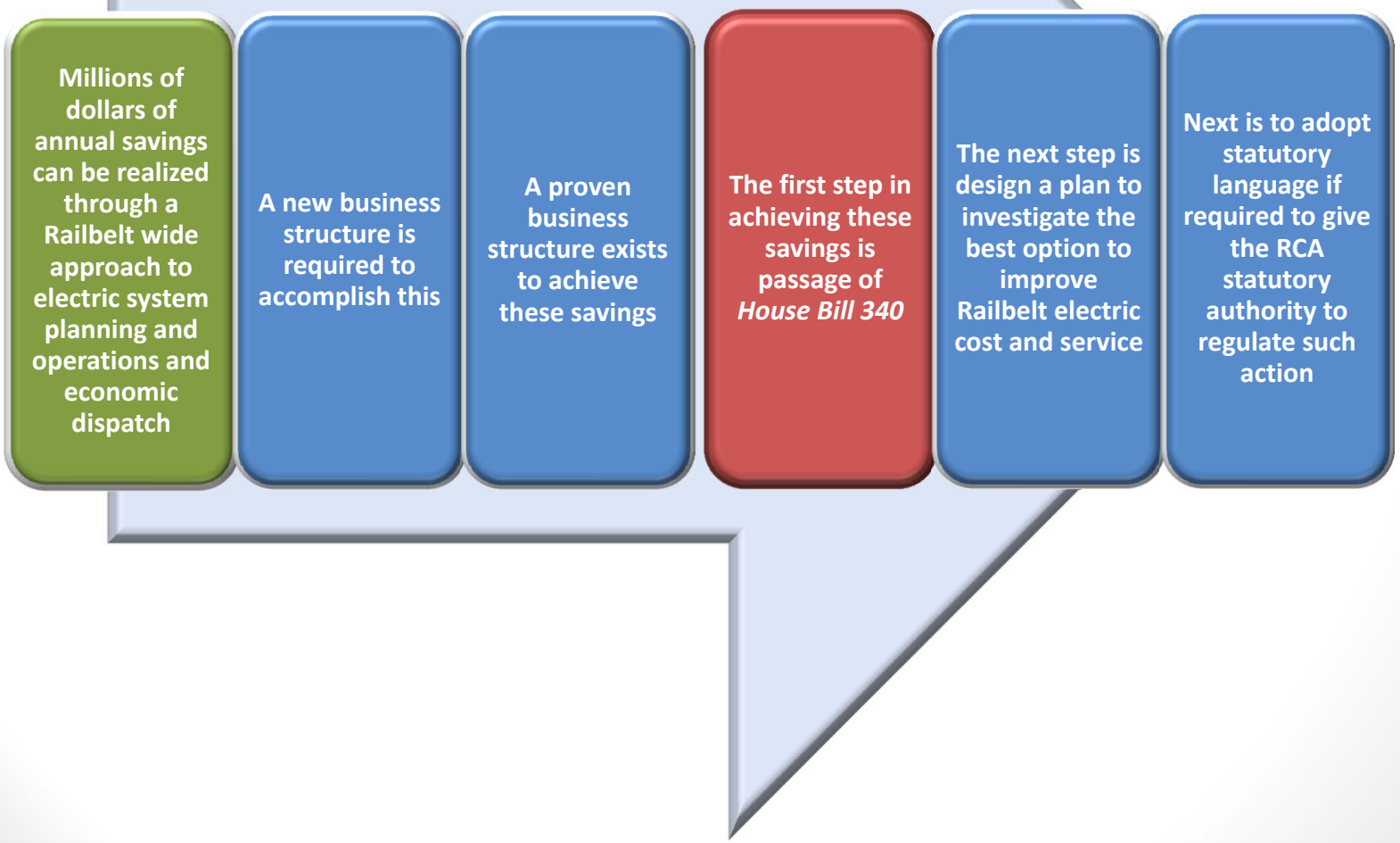


- Stakeholder governance
- Under RCA jurisdiction
- Adopts reliability & interconnection standards
- Plans and condition projects
- Enforces standards
- Possesses regulatory compact
- Ensures non-discriminatory transmission access
- Develops tariff for single system-wide transmission rate
- Responsible for reliability
- Responsible for system economic dispatch

Legislation and Path Forward (HB 340)

- Regulatory Commission of Alaska (RCA) to recommend plan to legislature by January 1, 2015
  - Establish an independent entity to satisfy transmission needs of Railbelt to:
    - Reduce electric rates through economic dispatch
    - Oversee and enforce reliability “rules of the road”
    - Assure fair non-discriminatory open-access
    - Plan, coordinate and condition necessary upgrades
    - Establish a universal transmission tariff
  - Provide suggested legislation and/or regulatory changes necessary to implement plan if needed

Take Away


Millions of dollars of annual savings can be realized through a Railbelt wide approach to electric system planning and operations and economic dispatch
A new business structure is required to accomplish this
A proven business structure exists to achieve these savings
The first step in achieving these savings is passage of *House Bill 340*
The next step is design a plan to investigate the best option to improve Railbelt electric cost and service
Next is to adopt statutory language if required to give the RCA statutory authority to regulate such action