HB 340

<TARGET><BILL>HB 340</BILL><SUBJECT>HB 340</SUBJECT><COMM>HENE28</COMM></TARGET>

Alaska Legislature
House Special Committee on Energy

Rep. Charisse Millett
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Agenda

Wednesday, March 19, 2014
8:00 – 10:00 a.m.
Barnes Committee Room (124)

*+HB 340

Presentations by Bradley Evans, CEO, Chugach Electric Association
Gene Therriault, Deputy Director, Alaska Energy Authority

* First hearing in first committee of referral
\+ Teleconferenced
= Bill previously heard/scheduled

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28-LS1408\N
Nauman
3/12/14

CS FOR HOUSE BILL NO. 340( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-EIGHTH LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVE MILLETT BY REQUEST

A BILL

FOR AN ACT ENTITLED

"An Act directing the Regulatory Commission of Alaska to recommend to the legislature an action plan relating to electrical transmission in certain areas of the state; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* **Section 1.** The uncodified law of the State of Alaska is amended by adding a new section to read:

REVIEW OF ELECTRIC UTILITY INTERCONNECTION. (a) The commission shall, not later than January 1, 2015, or as soon as practicable thereafter, recommend to the legislature a plan to establish an independent entity that meets the requirements of (b) of this section to manage the electrical transmission facilities in the Railbelt area. In developing the plan, the commission shall consider options for effective and efficient electrical transmission, including economic dispatch, reliability of electrical service, and nondiscriminatory, open access to transmission services. The commission shall also provide suggested legislation and changes to the regulations of the commission in order to implement the plan.

(b) In developing a plan under (a) of this section, the commission shall evaluate the creation of an independent entity that

(1) is organizationally independent from the commission;

(2) is directed by a board of directors of stakeholders;

(3) has operational authority over the electrical transmission facilities of the Railbelt area;

(4) has the exclusive responsibility to maintain the reliability of the electrical transmission facilities of the Railbelt area;

(5) will provide for mandatory participation by all entities using an interconnected transmission system;

(6) will maximize the use of existing electrical transmission resources and will, where possible, avoid duplication of facilities;

(7) has the power to

(A) mandate the use of a nondiscriminatory electrical transmission system;

(B) adopt, maintain, and reinforce reliability standards by adopting an equivalent national reliability standard as modified to meet the needs of the Railbelt area;

(C) plan, coordinate, and condition necessary additions and improvements to the transmission system;

(D) manage the interconnection of new generation facilities;

(E) administer a universal tariff and employ a pricing system to promote the efficient use and expansion of transmission systems and generation facilities;

(F) manage parallel path flow and transmission congestion;

(G) function as a single control area operator that facilitates regional electricity pooling and economic dispatch to maximize the efficiency of electric generation.

(c) While preparing the plan described in (a) of this section, the commission shall assume that

(1) rate recovery is ensured through the planning, permitting, and construction

phases of projects planned by the independent entity;

(2) existing agreements between generation facilities will be honored to allow cost recovery of existing investments;

(3) standard and tariff rates will be just, fair, and reasonable for all ratepayers and allow transitional rates to minimize the effect on an individual utility;

(4) existing transmission systems and ancillary services recognized by the Federal Energy Regulatory Commission used for the benefit of the Railbelt area will be allowed full cost recovery from the independent entity, including costs for depreciation, interest, margin, operations, maintenance, applicable taxes, and general and administrative expenses necessary for the operation of a transmission system.

(d) The plan required in this section may not affect current open dockets. Until the issuance of the plan, the commission shall continue with activities necessary to preserve existing operations that affect the reliability of the interconnected utilities in the Railbelt area.

(e) In this section, "commission" means the Regulatory Commission of Alaska.

* **Sec. 2.** This Act takes effect immediately under AS 01.10.070(c).

Fiscal Note

State of Alaska
2014 Legislative Session

Bill Version: HB 340
Fiscal Note Number:
() Publish Date:

Identifier: HB340-DCCED-RCA-03-14-14
Title: RCA: RAILBELT ELECTRIC UTILITY REPORT
Sponsor: MILLETT BY REQUEST
Requester: House Energy

Department: Department of Commerce, Community and Economic Development
Appropriation: Regulatory Commission of Alaska
Allocation: Regulatory Commission of Alaska
OMB Component Number: 2417

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2015 Appropriation Requested	Included in Governor's FY2015 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2015**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Personal Services							
Travel							
Services	1,000.0		500.0				
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**1,000.0**	**0.0**	**500.0**	**0.0**	**0.0**	**0.0**	**0.0**

Fund Source (Operating Only)

1004 Gen Fund	1,000.0		500.0				
Total	**1,000.0**	**0.0**	**500.0**	**0.0**	**0.0**	**0.0**	**0.0**

Positions

Full-time							
Part-time							
Temporary							

Change in Revenues							

Estimated SUPPLEMENTAL (FY2014) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2015) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Not applicable, initial version.

Prepared By: T. W. Patch, Chairman Phone: (907)276-6222
Division: Regulatory Commission of Alaska Date: 03/14/2014 04:00 PM
Approved By: Jeanne Mungle, Director Date: 03/18/14
Agency: Administrative Services

FISCAL NOTE ANALYSIS

STATE OF ALASKA **BILL NO.** HB340
2014 LEGISLATIVE SESSION

Analysis

HB340 adds a section to the uncodified law of Alaska regarding "Review of Electric Utility Interconnection" that requires the Regulatory Commission of Alaska to study, report, and suggest legislative and regulation changes. The subject matter of the study and report is determining whether to create an independent entity to manage electrical transmission facilities in the Railbelt area.

The commission estimates $1,000.0 needed in FY2015. The estimate has been arrived at after contacting well qualified attorneys and consultants and following focused discussions with state and federal regulators who have been involved with the adoption or creation of programs where transmission owners, planners, and managers now manage independent or regional electrical transmission systems. However, in the absence of participation in any request for proposal process this fiscal note remains only a carefully arrived at estimate. Actual cost to develop the contemplated comprehensive report could exceed this fiscal note. Authority for $500.0 is requested in FY2016 to complete the requirements of HB340 as work is expected to carry over.

The day-to-day operations of the RCA are funded through a regulatory cost charge (RCC). The RCC is charged to all regulated utility and pipeline service providers in Alaska. This legislation directs the commission to provide a report to the legislature determining whether creating an independent entity that meets the requirements to manage the electrical transmission facilities in the Railbelt area is the best option to provide for effective and efficient electrical transmission, including economical distribution, reliability of electrical service, and nondiscriminatory, open access to transmission services. The cost of undertaking the research, analysis, and preparation of a thorough report should be funded through general funds, rather than shouldered by those now paying regulatory cost charges. Until such time as an independent system operator managing the Railbelt electrical transmission system is certificated or approved, and actually providing a discernible utility service to Railbelt ratepayers it is not possible to collect regulatory cost charges (AS 42.05.254). Thus, the only source of funding for the study of and development of a plan or report on the relative merits of the creation of an independent entity to manage Railbelt electrical transmission facilities and obligations is the general fund.

The commission does not currently have the in-house expertise to undertake the type of research, analysis, review and reporting this legislation requires. Therefore, the commission plans to contract for the research, review, analysis and related undertakings necessary to prepare the report sought by the legislature. It is expected that commissioner and staff time will be required to monitor the process and engage as necessary during the development of a record and to assist in development of the report and to provide the appropriate recommendations with the report at the time it is submitted to the legislature.

Alaska Legislature
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District 24

Version: 28-LS1408\N

Summary of Changes – Blank CS House Bill 340

Page 1

Line 1 – Replaced "provide a report" with "recommend"

Line 2 – Inserted "an action plan" after "legislature"

Line 8 – Replaced "July, 15, 2015" with "January 1, 2015"

Line 8 – Replaced "provide a report" with "recommend"

Line 9 – Replaced "determining whether creating" with "a plan to establish"

Lines 10 and 11 – Replaced "is the best option to provide" with "In developing the plan, the commission shall consider options"

Line 14 – Replaced "the report" with order to implement the plan"

Page 2

Line 1 – Replaced "the report" with "developing a plan"

Line 17 – Replaced "standards" with "standard" and inserted "as modified to meet the needs of the Railbelt area;"

Line 27 – Replaced "economical distribution" with "economic dispatch"

Page 3

Line 6 – Inserted "and ancillary services recognized by the Federal Regulatory Commission used" after "systems"

Line 11 – Replaced "report" with "plan"

Line 12 – Replaced "report" with "plan"

Prepared on March 13, 2014

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Sponsor Statement - House Bill 340
Representative Charisse Millett by Request

"An Act directing the Regulatory Commission of Alaska to recommend to the Legislature an actionable plan relating to electrical transmission in certain areas of the state; and providing for an effective date."

Senate Bill 196 directs the Regulatory Commission of Alaska to recommend a process to adopt an actionable plan that creates a Railbelt Independent System Operator (ISO). The Railbelt comprises the interconnected electric transmission system that runs between Fairbanks in the north to the state-owned Bradley Lake hydroelectric plant near Homer, Alaska to the South.

An ISO will allow the Railbelt Transmission system to deliver Alaska's abundant energy resources to market providing both improved reliability and economic efficiency.

- The Alaska Energy Authority quantified annual cost savings from transmission upgrades of between $146 million and $241 million upon completion of AEA's recommended upgrades and adoption of economic dispatch for all Railbelt generation. Eliminating long-standing transmission constraints for Bradley Lake Energy and providing for greater and more reliable energy transfer between Anchorage and Fairbanks provide much of these savings. Adding a redundant transmission path to Fairbanks will not only improve transfer capability but will allow electric consumers in the north with firm transmission access to avoid operating costly liquid fuel generation.

- Those savings are anticipated to reduce energy rates to Railbelt electric consumers
  The ISO is a non-profit independent corporation subject to jurisdiction of the Regulatory Commission of Alaska (RCA. The ISO would be responsible for electric power grid operations, Railbelt electric reliability, non-discriminatory open access transmission and long-term planning. The ISO would be able to maximize the use of new and existing resources to achieve economic dispatch of Railbelt generation resources for the benefit of Railbelt electric consumers through a unified tariff.

- The objective of the ISO is to promote efficiency in wholesale electricity markets and to ensure electricity consumers pay the lowest possible price for reliable electric service.

- Non-discriminatory access is necessary to encourage competitive generation resources

- Recent construction of new efficient generation with multiple owners, including Independent Power Producers (IPP's), necessitates the adoption of universal reliability standards to maximize electric system safety, reliability and efficiency.

- Disparate electric prices between regions drive the need to reduce transmission congestion and adopt economic dispatch.

- The Alaska Energy Authority (AEA) has identified significant Railbelt transmission improvements necessary for regional economic efficiency but the current individual utility structure lacks a comprehensive regional approach to finance the needed investments.

The time is now! The state's economic prosperity is dependent on available, reliable, and affordable residential, commercial, and industrial energy.

The ISO provides the opportunity for utilities and power producers to collaborate and provide to consumers the savings identified by the Alaska Energy Authority.

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

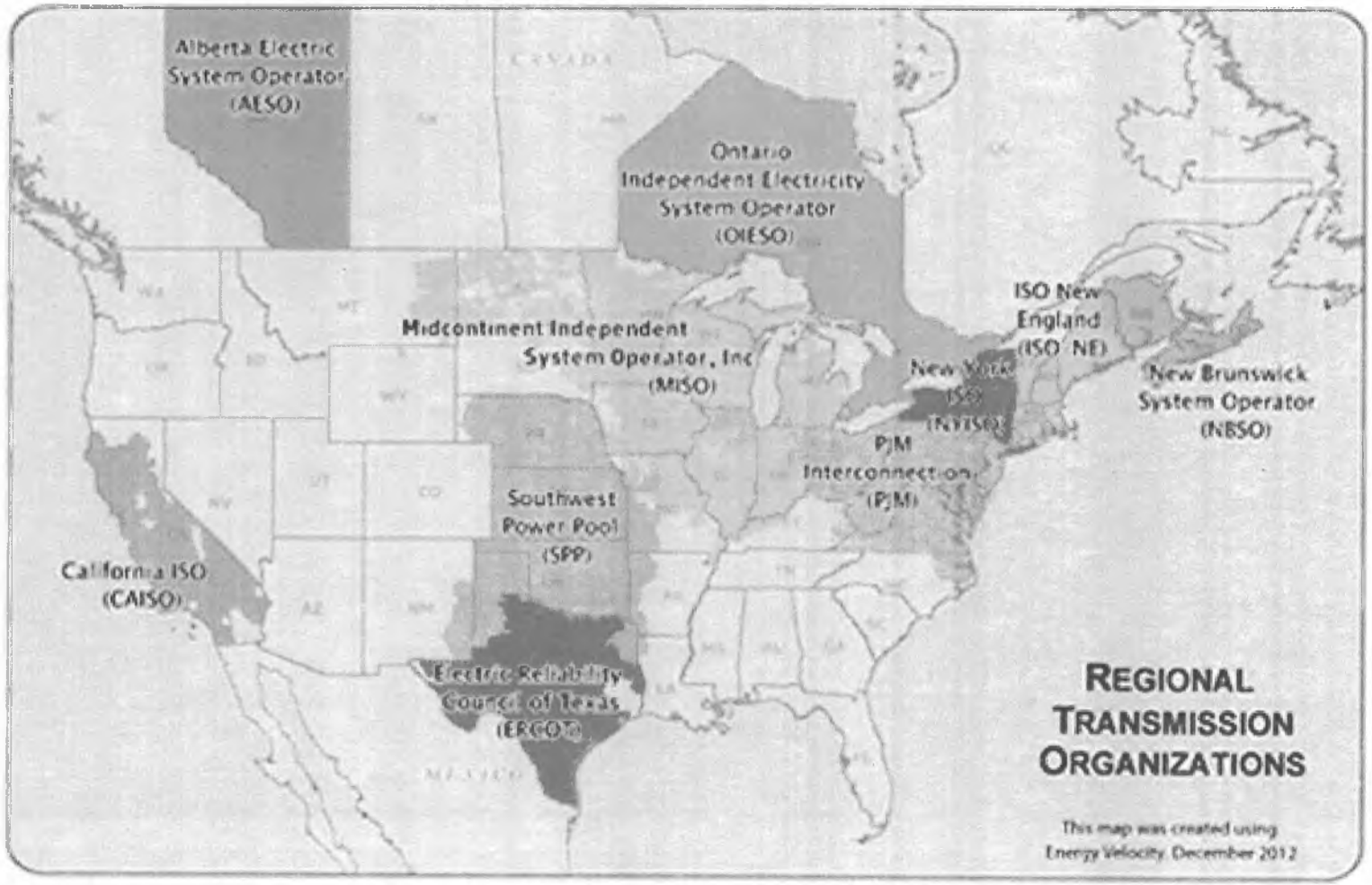
CHUGACH
POWERING ALASKA'S FUTURE

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.

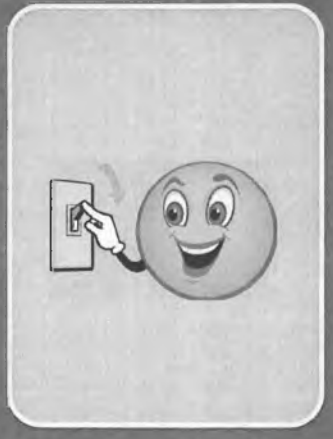
Independent System Operators (common in the Lower-48 and Canada)



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)

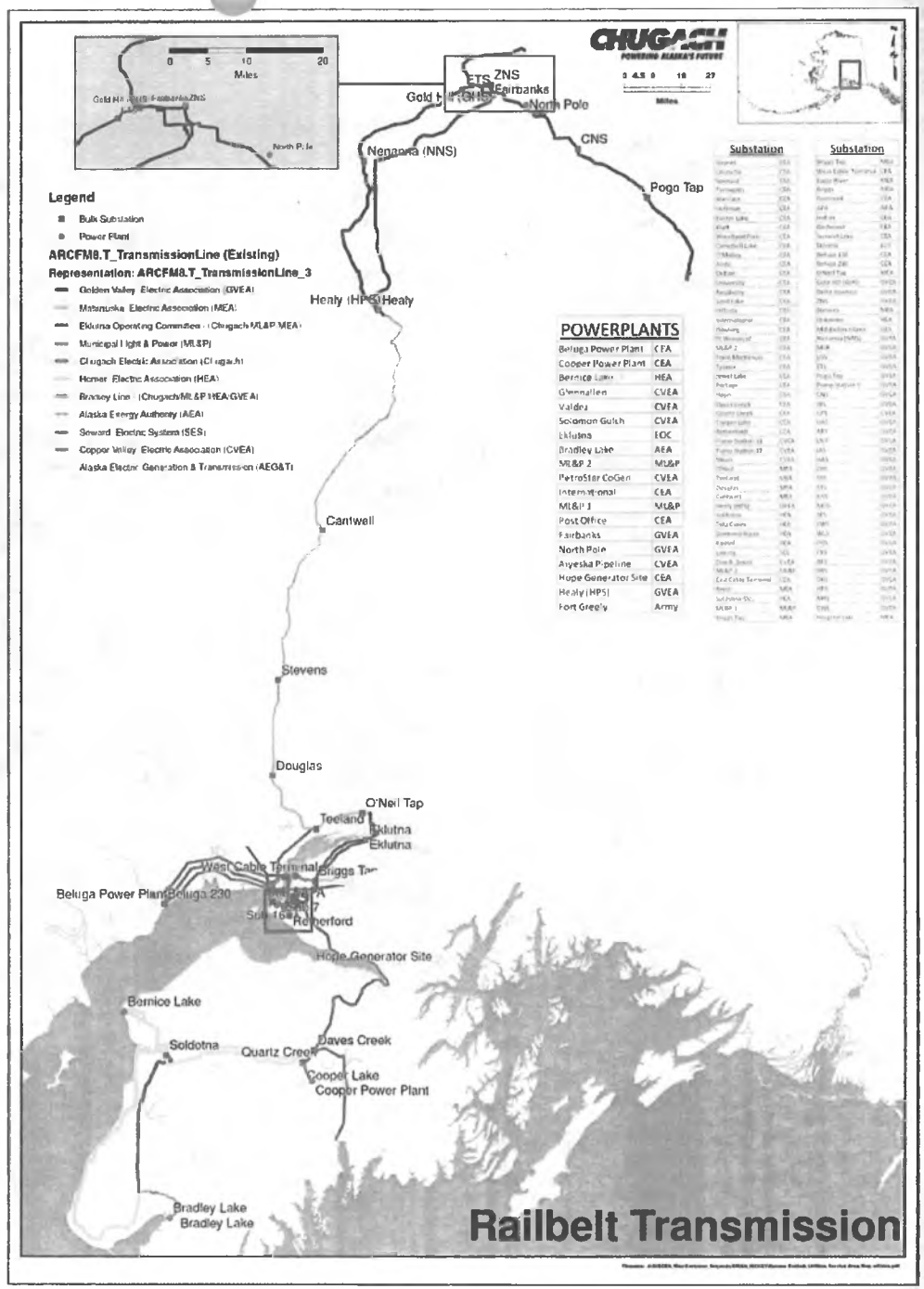
They are common in areas without significant federal investment in transmission and generation i.e. Bonneville and Tennessee Valley Authority

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

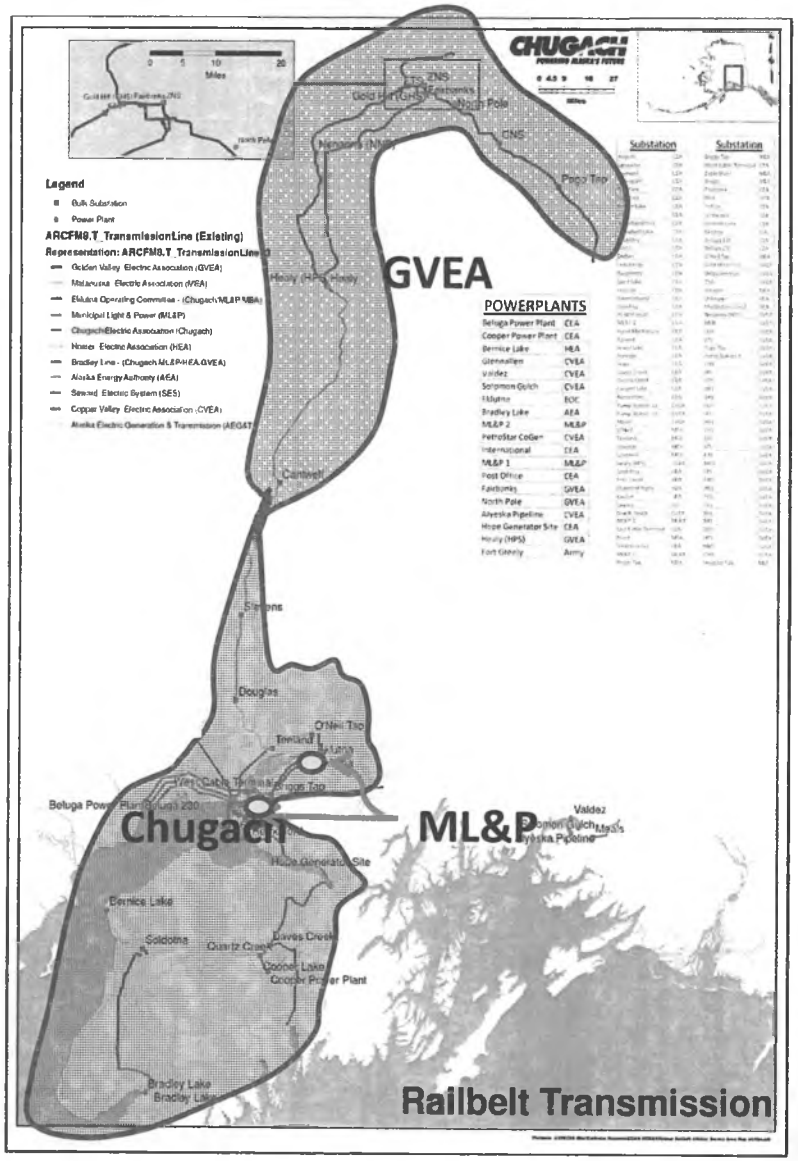
The Railbelt Grid



Railbelt is changing

1985 - 2013

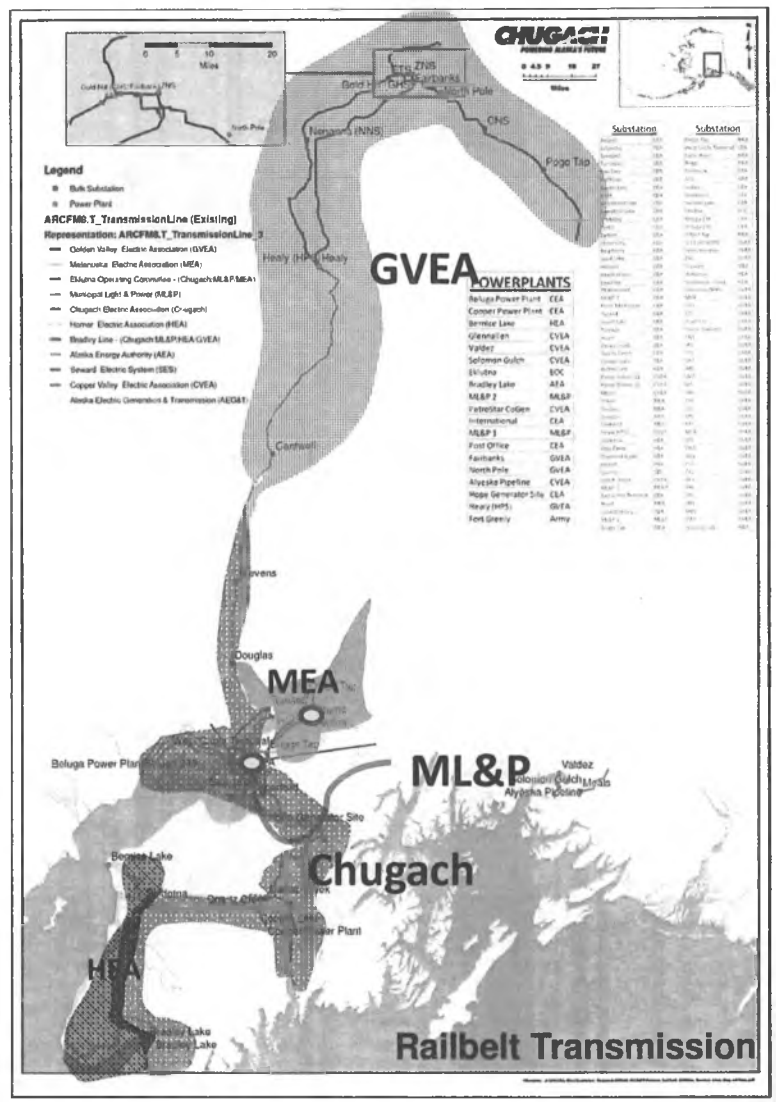
- 3 vertically integrated utilities
- Reliability rules unanimously adopted with voluntary compliance
- Alaska Intertie Agreement "utility users only"
- Bradley Lake Agreements with transmission access
- Minimal changes to Generation & Transmission (G&T) system
- Utility owned & operated generation
- 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

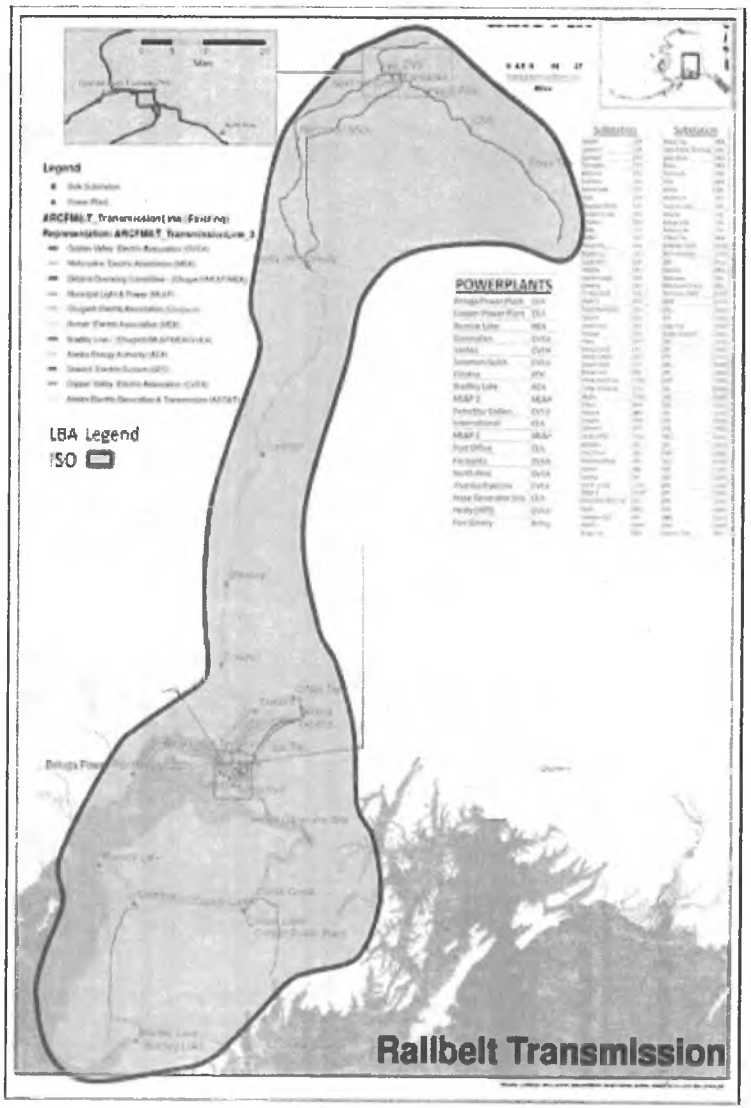
ISO

Universal reliability standards

Independent authority to enforce rules

Long-term planning to maximize efficiency, improve reliability, and diversify energy options

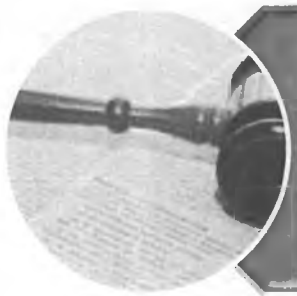
Regional operations for economic dispatch, undertake regional system improvements, and resolve Bradley Lake energy delivery congestion



Transmission Challenges

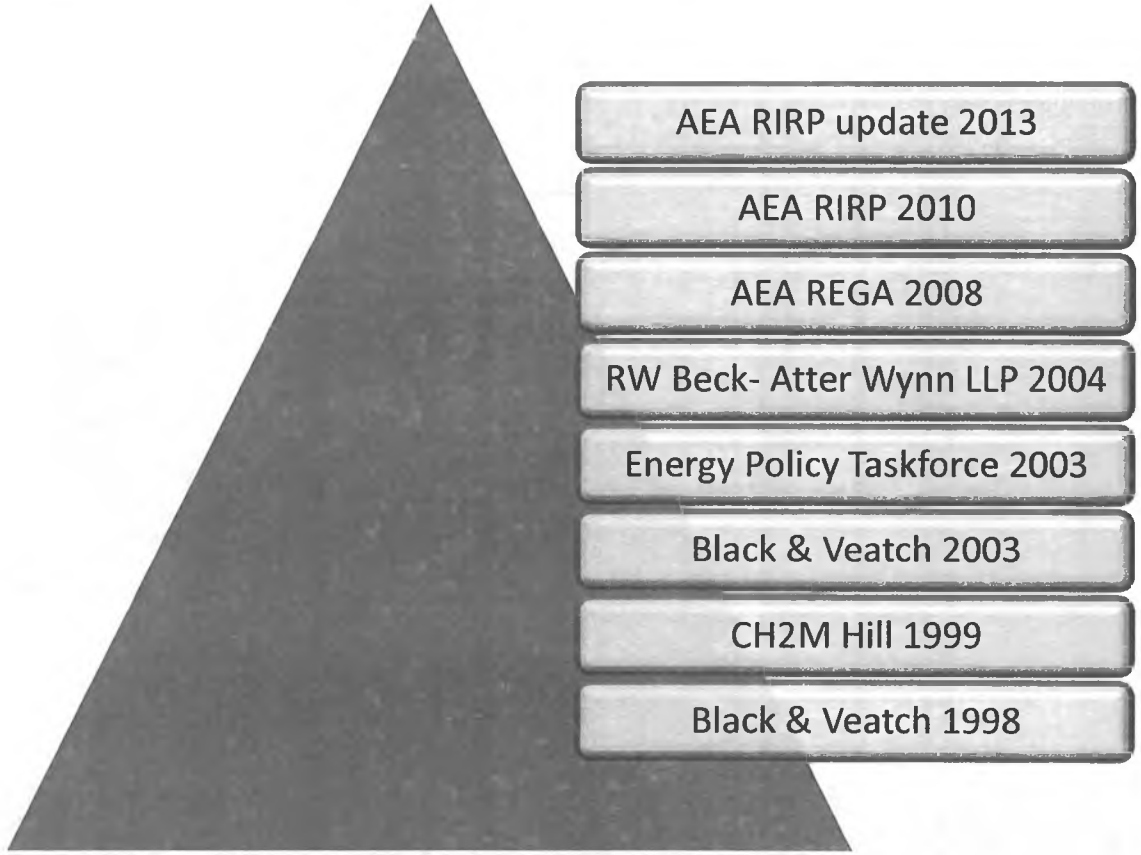
AEA studies highlight transmission constraints that limit power transfer and economic dispatch

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

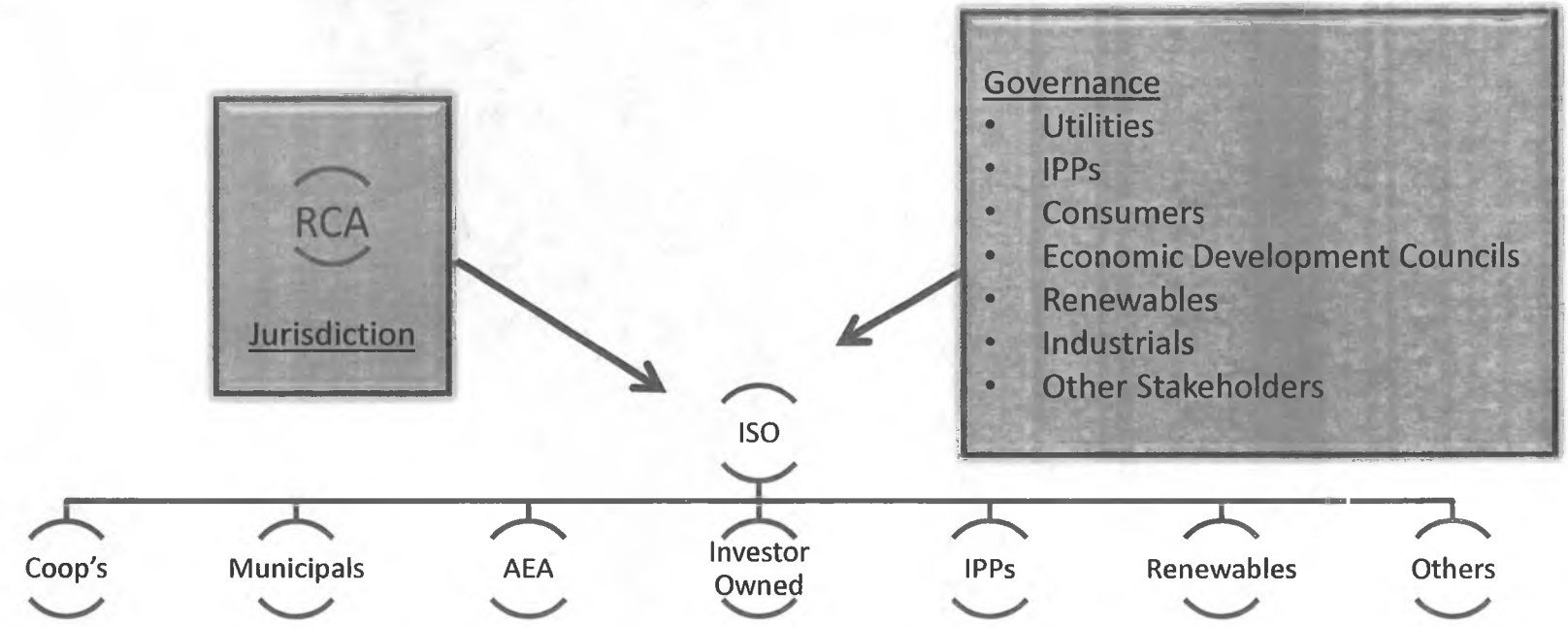


Multiple transmission tariffs and operating rules make interconnection challenging and cost recovery uncertain

Studies Recommend Integrated Planning and Economic Dispatch



ISO Structure



Railbelt ISO

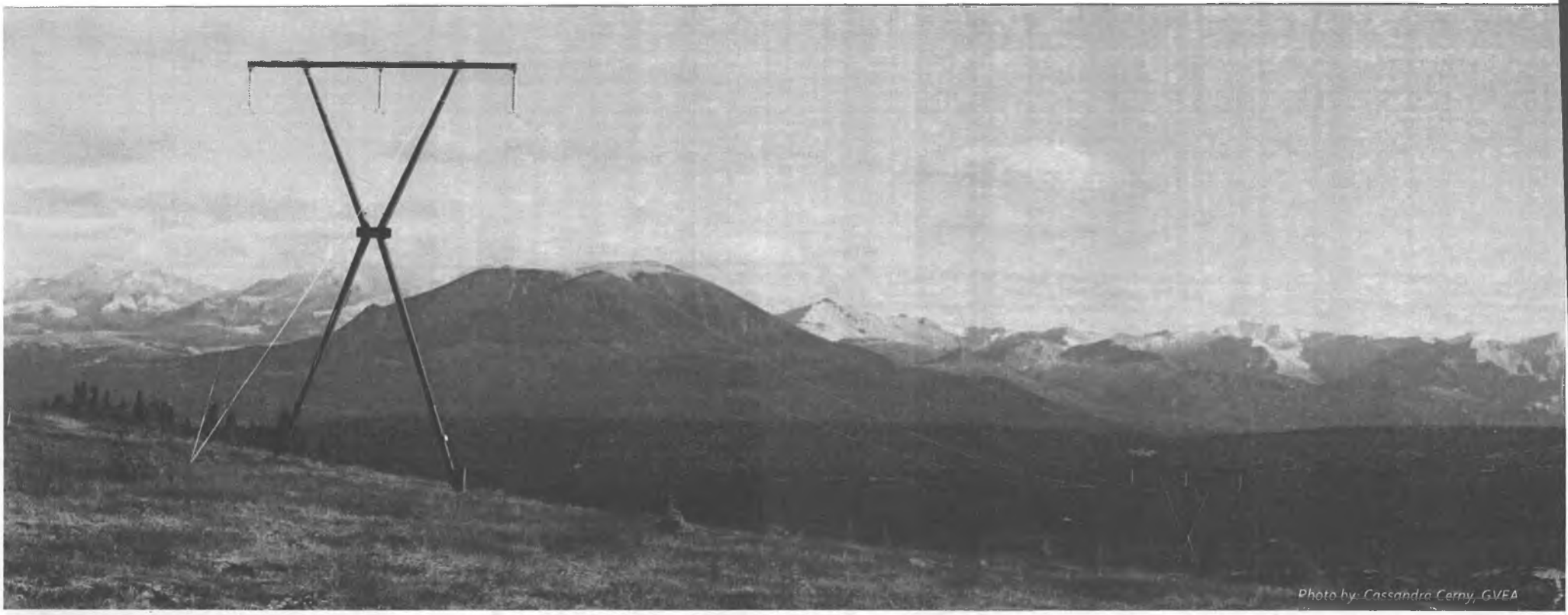
- Stakeholder governance
- Under RCA jurisdiction
- Adopts reliability & interconnection standards
- Plans and condition projects
- Enforces standards
- Possesses regulatory compact
- Ensures non-discriminatory transmission access
- Develops tariff for single system-wide transmission rate
- Responsible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

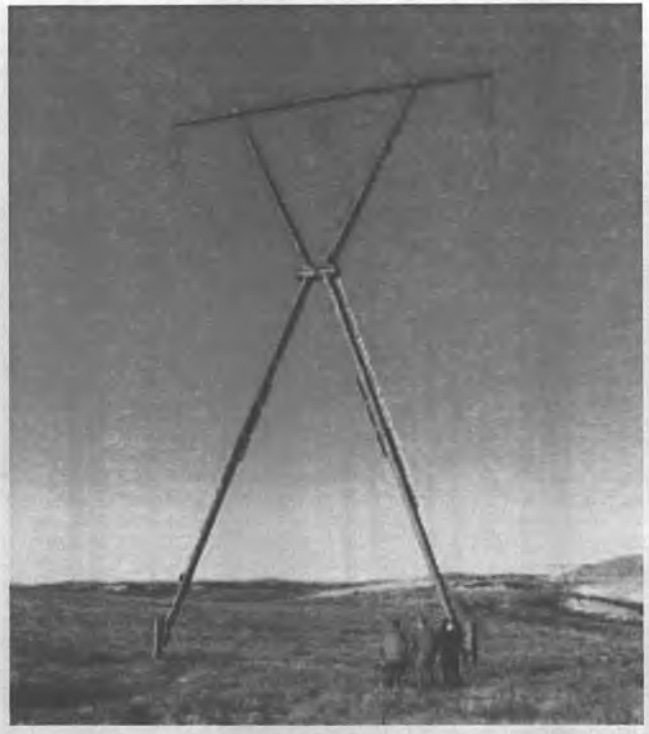


Alaska Transmission Issues

Alaska Energy Authority
House Energy Committee Hearing on HB 340
March 19, 2014

Railbelt Distances, Cost and Governance

- Distance
  - Homer to Fairbanks – 580 miles
- Governance
  - Reliability Standards
  - Open Access Provisions
- Needed Upgrades
  - Evaluate Cost/Benefit Ratio



ALASKA ENERGY AUTHORITY

Unconstraining Bradley Projects

Project	Description	Cost ($mill)
New HVDC Line: Bernice Lake to Beluga	100 MW HVDC intertie	$185.0
Anchorage Area Battery	25 MW/14MWh BESS	$30.2
New Line: Bradley to Soldonta	115 kV line and substation	$72.4
Reconstruct Line: University to Dave's Creek	Reconstruct line to 230 kV	$70.5
Upgrade Substations: University & Dave's Creek	Convert line to to 230 kV	$31.1
Upgrade Line: Dave's Creek to Quartz Creek	Upgrade line to rail conductor	$13.0
Total		**$402.2**

Benefits

- Physically move Bradley energy off of the Kenai Peninsula
- Reduce transmission losses and provide voltage control
- Increase reliability to N-1

ALASKA ENERGY AUTHORITY

Southcentral Projects

Project	Description	Cost ($mill)
Fossil Creek Substation	New 115 kV substation	$10.7
Eklutna Hydro Substation	New 115 kV substation	$9.8
Total		**$20.5**

Benefits

- Allow for energization of Anchorage to Eklutna "express" circuit
- Allow for future transmission additions and upgrades

ALASKA ENERGY AUTHORITY

Northern Projects

Project	Description	Cost ($mill)
New Stations: Lorraine & Douglas	230 kV station	$73.4
New Line: Lorraine to Douglas	230 kV dbl circuit line	$55.9
New Stations: Gold Creek & Healy	230 kV station	$35.8
New Line: Douglas to Healy	230 kV line opearted at 138 kV	$188.1
Communication	Communication for control	$15.0
Healy Additions	2 new transformers	$5.7
Ugrade Stations: Wilson & Gold Hill	230 kV upgrade	$10.3
Ugrade Stations: Nenana, Ester, Eva & Clearly	Station updgrades	$10.8
Upgrade Line: Healy to Gold Hill	Convert line to 230 kV	$85.7
Total		**$480.7**

Benefits

- More firm/low cost power from Anchorage to Fairbanks
- System stabilization and voltage control
- Increase reliability to N-1

ALASKA ENERGY AUTHORITY

Transmission Projects: Potential Railbelt Consumer Impact

- This presentation is for discussion purposes and not an AEA position.
- Demonstration of impact to consumers if cost of projects recovered in electric rates

ALASKA ENERGY AUTHORITY

Transmission Upgrade: Potential Impact

	CAPEX ($mill)
Unconstraining Bradley	$402.2
Southcentral Projects	$20.5
Northern Projects	$480.7
Total Cost	**$903.4**

- Transmission system upgrades benefits entire Railbelt system
- Project separated into two phases
  - The State has not provided funding for first stage of project
- Costs from May 9, 2013 EPS Presentations
- **Analysis of impact on rates of transmission upgrades**

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Transmission Upgrade: Costs

Base assumptions

- Full capital cost recovered through rates
- Annual operating costs are 2% of capital costs
- Entirely funded with commercial rates
- Costs shared proportionally by all utilities

CAPEX ($millions)	$903
OPEX (2% OPEX)	$18.1
Interest Rate	5.00%
Bond Term (Years)	30
Output (GWhs)	4,817
Inflation	2.50%

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Transmission Upgrades: Benefits

Base assumptions

- The annual cost savings from transmission upgrades will lower rates
- Range of annual savings has been estimated by Electric Power Systems, Inc. (EPS) (May 9, 2013)
  - Low savings: $146 million
  - High savings: $241 million
  - Estimates are being refined by AEA/EPS
- Savings shared proportionally by all utilities

	Annual Savings ($millions)
Low Savings	$146
High Savings	$241

ALASKA ENERGY AUTHORITY

Impact on Railbelt Rates: Net Effect

- Annual costs and savings are spread across all Railbelt kWh's
- Majority of upgrade costs are fixed while savings increase with inflation
  - Larger savings over time
- $146 million savings
  - Immediate positive impact on rates
- $241 million savings
  - Immediate and significant positive impact on rates

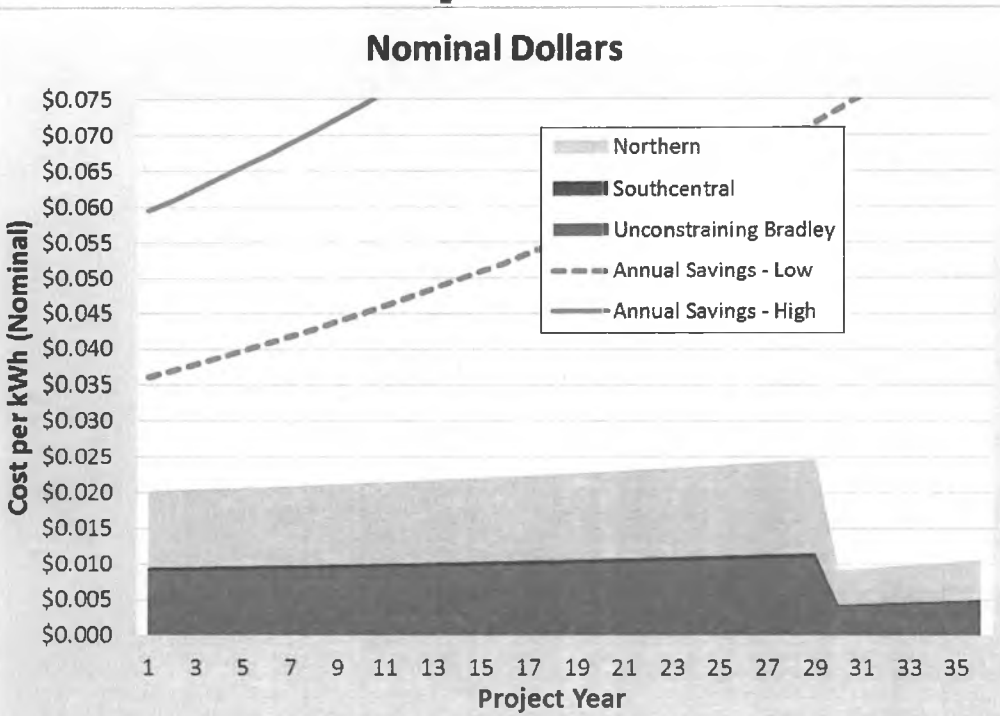
Net Rate Savings (Costs) ($/kWh)

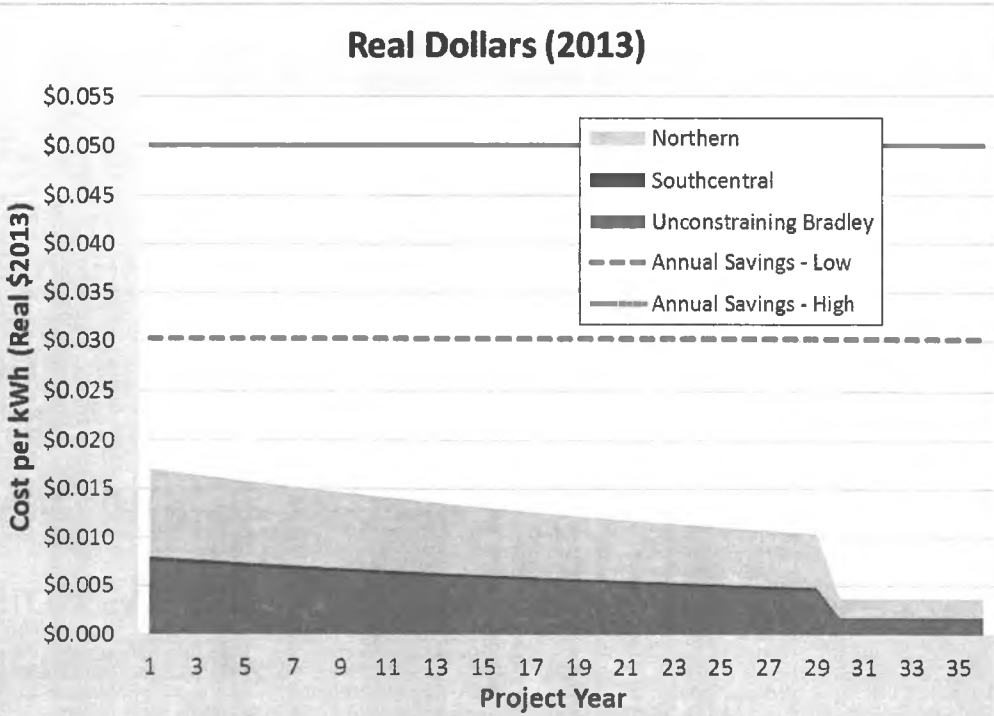
	$146 MM Savings	$241 MM Savings
Year 1 (Nominal)	$0.016	$0.039
Year 1 ($2013)	$0.013	$0.033
10 Yr Ave ($2013)	$0.015	$0.034
25 Yr Ave ($2013)	$0.016	$0.036
50 Yr Ave ($2013)	$0.021	$0.041

**($2013) means adjusted for inflation to today's dollars*

ALASKA ENERGY AUTHORITY

Impact on Rates: Nominal vs. Real





- When annual savings exceed costs – positive impact on rates
- $146 million annual savings – immediate positive impact on rates
- $241 million annual savings - immediate and significant positive impact on rates

ALASKA ENERGY AUTHORITY

Next Steps – Policy Direction

- AEA will work with all stakeholders to make recommendations for transmission system
- Formal coordination with transmission system users/stakeholders (utilities, independent power producers, potential independent system operator, military)

  -File transmission system reliability standards

  -File transmission system open access language

ALASKA ENERGY AUTHORITY

AKEnergyAuthority.org

Creation of a Railbelt Electric Independent System Operator (ISO)

What?

A non-profit independent corporation subject to jurisdiction of the Regulatory Commission of Alaska (RCA) that is responsible for electric power grid operations, Railbelt electric reliability, non-discriminatory open access transmission and long-term planning that maximizes the use of new and existing resources to achieve economic dispatch of Railbelt generation resources for the benefit of Railbelt electric consumers through a unified tariff.

Why?

The objective of the ISO is to promote efficiency in wholesale electricity markets and to ensure electricity consumers pay the lowest possible price for reliable electric service.

- Non-discriminatory access is necessary to encourage competitive generation resources
- Recent construction of new efficient generation with multiple owners, including Independent Power Producers (IPP's), necessitates the adoption of universal reliability standards to maximize electric system **safety, reliability** and **efficiency**.
- Disparate electric prices between regions drive the need to reduce transmission congestion and adopt economic dispatch.
- The Alaska Energy Authority (AEA) has identified significant Railbelt transmission improvements necessary for regional economic efficiency but the current individual utility structure lacks a comprehensive regional approach to finance the needed investments.

'hen?

The time is now! The state's economic prosperity is dependent on available, reliable, and affordable residential, commercial, and industrial energy.

Where?

Interconnected Railbelt Region Only

How?

Draft legislative language that directs the Regulatory Commission of Alaska (RCA) to identify the statutory changes necessary and once identified, proceed with introduction of appropriate legislation that allows the RCA to oversee creation of the ISO.

The initial legislation would permit the utilities to submit an implementation plan to create an ISO that meets the governance requirements, minimum characteristics, functions, and regulatory compacts of an ISO by July 1, 2015. In the absence of a submission of a plan by two or more utilities within a reasonable time, the RCA could order affected utilities to make such filing. Following submission of the plan, the RCA shall have 180 days to review the plan and approve or disapprove the structure in whole or part and direct the utilities to bring any non-conforming aspects into compliance with final approval by July 1, 2016. The characteristics and functions are based upon Federal Energy Regulatory Commission (FERC) orders and regulations and are modified to meet Railbelt electric needs.

Establish capital appropriation for ISO transitional start-up functions completed over an estimated five-year time horizon.

- ISO – initial start-up costs – $7.5 million
- RCA supplemental funds for administrative support and consultation to establish ISO - $1.0 million

Governance

The initial ISO board membership shall be comprised of electric industry professionals who have direct opertional experience in transmision or generation infrastructure and shall include relevant stakeholder segments that will expand over time as those markets mature.

Characteristics

1. Independence ensured organizationally by stakeholder appropriate Board of Directors.
2. Possession of operational authority over the Railbelt transmission system.
3. Exclusive authority to maintain Railbelt reliability.
4. Mandatory participation by all entities using interconnected transmission system.
5. Maximize use of existing resources to avoid duplication of facilities.

Functions

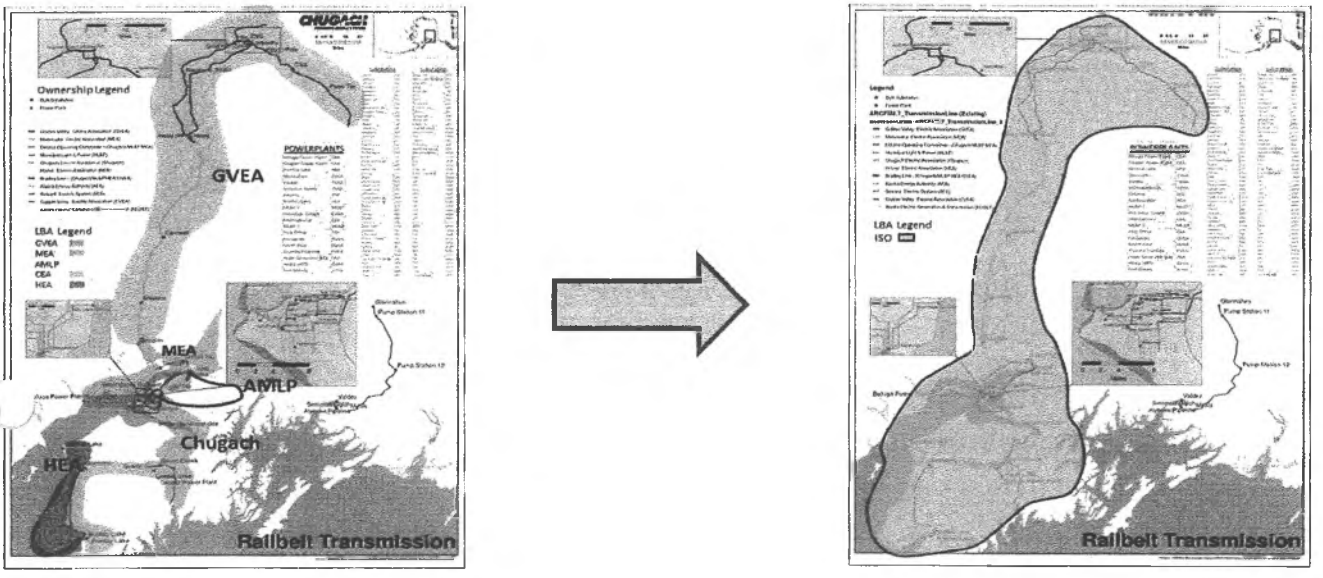
1. Mandates non-discriminatory open access transmission.
2. Adopt, maintain and enforce Railbelt reliability standards - initially adopts North American Electric Reliability Corporation (NERC) based reliability standards equivalent to those approved by the Intertie Management Committee (IMC) for the Railbelt.
3. Plan, coordinate and condition necessary transmission additions and upgrades.
4. Condition and authorize the interconnection of new generation.
5. Administer a universal tariff and employ a transmission pricing system that will promote efficient use and expansion of transmission and generation facilities.
6. Manage parallel path flow and transmission congestion.
7. Functions as a single control area operator facilitating regional power pooling or economic dispatch to maximize generation efficiency.

Regulatory Compact

1. RCA ensures rate recovery throughout the planning, permitting and construction phases of projects planned and conditioned by the ISO.
2. RCA honors existing agreements and allows cost recovery of existing investments.
3. RCA ensures that standards and tariff rates are just, fair and reasonable to all ratepayers and allows transitional ramp-in rates to minimize individual utility rate impacts.
4. Existing transmission assets used for the benefit of the Railbelt region will receive full cost recovery from the ISO including depreciation (both direct and general plant), interest, and margin, as well as operations, maintenance, applicable taxes, and general & administrative expenses necessary for the operation of the transmission system.

Stakeholders

All Alaska Railbelt Electric Utilities, Independent Power Producer's (IPP's), Alaska Energy Authority (AEA), Large Industrial Users, Consumer Advocates, Regulatory Commission of Alaska (RCA), and Renewable Energy Interests



Consideration of a Railbelt Electric Independent System Operator
By Bradley Evans
CEO, Chugach Electric Association
February 5, 2014

The interconnected Railbelt electric system is in transition. Legacy agreements are coming to an end. New generating facilities are being built. New and upgraded transmission lines are needed but are not being constructed. Commonly accepted rules of the road are needed for the transmission network, along with a means of enforcing them. Non-utility power providers want access to the grid. And above all, studies by the Alaska Energy Authority have shown that ratepayers in the Railbelt could save significant amounts of money each year if the most efficient generating units could be dispatched first – and if there were not transmission bottlenecks restricting their output.

These conditions, and the potential benefits to Railbelt electric consumers, illustrate the need to consider a new business model for the region. Years ago, similar circumstances caused regulators to create a series of Independent System Operators (ISOs) to improve grid operations across the Lower 48. It is time to consider whether a similar approach would be beneficial for the Railbelt.

Currently, six different electric utilities provide retail service to customers throughout the region. For decades, Chugach Electric Association provided centralized planning, construction and operations of generation and transmission facilities to meet the electrical requirements of much of the region. Chugach was in this role because it had wholesale contracts to meet the needs of customers of three other utilities in addition to providing for its own retail base.

Now we have reached a time when two of those contracts are ending, and the subject Southcentral utilities have and are building new power plants to serve their customers. These plants need to be connected to the grid and operated in a way that does not cause harm to other users. Additionally, through the Alaska Energy Authority, the State owns both generation and transmission assets that are part of the Railbelt system. Existing and prospective non-utility generators also want to be able to promote projects and gain grid access.

The benefits of coordinated planning and dispatch extended northward after the State constructed the Alaska Intertie between Willow and Healy. This 170-mile segment of transmission line connected the Southcentral and Interior grids. The intertie made it possible for power to flow between the two regions. For more than 20 years Interior customers have seen lower bills because power generated with Cook Inlet natural gas has moved north over the intertie. Chugach actively planned and managed the fuel supply, generation and transmission assets necessary to make these sales. After the original gas supply contract ended, Chugach secured additional supplies to continue these sales. Interconnection with the Interior provides security and reliability benefits to Southcentral utilities as well.

When it comes to grid operations, customers are best-served by a system where the most economic generation runs most of the time and power can flow efficiently from where it is made to where customers need it. In order to do this, an entity must be empowered to direct the incremental use of the most efficient generating units. Currently no single entity has this ability, leaving individual utilities to make their own decisions from a more-limited list of generating choices. Eliminating duplication of dispatch services is another area where an ISO could achieve savings.

It is also vitally important that the grid remain reliable. Some entity must set and enforce interconnection standards that ensure the reliability of the transmission system. At present that authority is not clearly recognized within the Railbelt. Absent any other alternative, the Intertie Management Committee (a committee comprised of the majority of Railbelt electric utility operators) has adopted and applied to the Railbelt interconnection and reliability standards from the North American Electric Reliability Corporation. While this was both reasonable and necessary, a long-term solution is needed. An ISO should be given the specific authority to address these issues in the future.

In fairness, organizations up and down the Railbelt have made investment decisions based upon circumstances and rules in effect at the time. In considering a transition to a new business model, it is important that utilities and others be able to recover the costs of existing and under-construction infrastructure. Existing contracts must also be honored.

It is not necessary for one organization to own all of the transmission facilities in the Railbelt in order to achieve the benefits of a unified grid. However, there do need to be operating agreements between the ISO and transmission owners so the facilities may be used for the good of the interconnected region. The transmission-owning entity must also be made whole for its costs. The best approach would be for the ISO to create a unified tariff for the transmission system. In other words, add up all the annual costs of the component parts of the Railbelt transmission system and apportion them across the region as a single transmission rate. This would allow a prospective generator or purchaser to negotiate a sales contract knowing they would have one entity to deal with for interconnection rules and a uniform transmission rate.

Creating an organization to take a regional approach is probably the only realistic means to build out a fully functional grid for the future. Currently much of the discussion of new transmission has focused on only two models: either have the State grant fund all new transmission or have it funded by utility customers. Each of these has its limitations. The State has constraints on its capital budgets and individual utilities are challenged to pass on the cost of regional activities to the customers of their defined service territories. An independent ISO however, can consider what improvements are necessary, cause them to be built, and recover the cost through a unified tariff.

The ISO would not be unconstrained however. The development of a Regulatory Compact would be critical to this business model. This would be an agreement with the

Regulatory Commission of Alaska that system improvements consistent with a regional plan would be guaranteed rate recovery. The Compact would provide guidelines for the ISO as it worked to expand and strengthen the grid.

Creating an ISO for the Railbelt will ensure a more rational approach to future planning, investment and operations. It will provide a regional approach to grid planning. That is increasingly difficult for individual utilities to undertake when they are focused within their respective service territories.

Fortunately for Alaska, we are not the first to confront this issue. Throughout the Lower 48, federal and state regulators over the past 15 years have taken actions to address similar concerns on a much larger scale. The creation and use of independent, non-asset-owning ISOs has created a way to more rationally plan, operate and finance generation and transmission systems. It is time to seriously consider whether a similar approach – modified if necessary to fit the Railbelt – would provide similar benefits for Alaska's most populous region.

Examples from the Lower 48 provide a path forward. The Legislature should pass legislation directing the Regulatory Commission of Alaska to identify statutory changes necessary to permit utilities to submit implementation plans to create an ISO that meets certain requirements. Once identified, proceed with introduction of appropriate legislation that allows the RCA to oversee creation of an ISO.

CHUGACH
POWERING ALASKA'S FUTURE

March 17, 2014

Representative Charisse Millett
State Capitol Rm 403
Juneau, AK 99801-1182

Dear Representative Millett:

Chugach Electric Association supports legislation that would lead to the creation of an Independent System Operator (ISO) for the Railbelt. This concept is currently embodied in the Committee Substitute for HB 340.

In the Lower 48, ISOs are a proven means of providing the benefits of grid unification and ensuring the economic operation of transmission systems. We need the same thing in the Railbelt. Currently six electric utilities and the Alaska Energy Authority own most of the transmission facilities in the Railbelt. An ISO can cause these assets to be operated as one unified system, administered under uniform rules for reliability and interconnection. A universal tariff would recover the cost of the transmission system, with the owners of the system components compensated for their investments. Assets do not transfer under the ISO model.

The ISO would also provide the structure to take a regional approach to planning and improvement of the transmission system. Studies by the Alaska Energy Authority have identified there would be significant benefits to ratepayers from expanding the regional transmission system. However, today's structure makes it difficult for individual utilities to make regional investments.

The Regulatory Commission of Alaska would have jurisdiction over the ISO. The involvement of the RCA is critical to the success of the concept. CS HB 340 calls for the RCA to recommend to the Legislature a plan to implement an ISO for the Railbelt in line with key principles. This is the same method the Federal Energy Regulatory Commission used years ago in establishing what became a series of regional ISOs in the Lower 48.

CS HB 340 would take the first steps to rationalize the Railbelt transmission system. Chugach supports the bill and urges its passage.

Sincerely,

Bradley W. Evans
Chief Executive Officer

Chugach Electric Association, Inc.
5601 Electron Drive, P.O. Box 196300, Anchorage, Alaska 99519-6300 • (907) 563-7494 Fax (907) 562-0027 • (800) 478-7494
www.chugachelectric.com • info@chugachelectric.com

MATANUSKA ELECTRIC ASSOCIATION

March 17, 2014

Representative Charrise Millett
716 W. 4th Avenue
Anchorage, AK 99501-2133

Dear Representative Millett:

I would like to express my full support for HB 340, "An Act directing the Regulatory Commission of Alaska to provide a report to the legislature relating to electrical transmission in certain areas of the state and providing for an effective date".

Matanuska Electric Association is the state's oldest and second largest electric cooperative with almost 50,000 members and 60,000 accounts. Our service area includes over 4200 miles of power lines and extends from Eagle River up to the South Denali town site beyond the Chulitna River and from the Little Susitna River across to Sheep Mountain.

MEA is a part of Alaska's Railbelt grid and will become a vertically integrated utility when we begin producing our own power in 2015. Our service area sits at the heart of the Railbelt and our ability to achieve our vision 'To ensure our members have safe, reliable, sustainable and economical electricity' relies on a healthy and robust Railbelt grid and the cooperation of all the involved utilities. This is why in 2011 we became an active and founding member of the Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC).

While ARCTEC provides a platform for the Railbelt utilities to work together to address common opportunities and concerns, there are opportunities to do more to optimize the Railbelt system for the benefit of all the electric cooperatives and their members.

We firmly believe one single operator to manage and economically dispatch power on the Railbelt system is in the best interest of Alaskan utilities and ratepayers. Not only should it decrease the cost of providing power to our members, but it also provides an avenue to accomplish large capital projects which benefit the entire system.

The health and vitality of our state's core electric and transmission system will drive economic growth and improve the quality of life for the Alaskans we serve. I urge you to support HB 340 to allow further exploration of this concept and determine the best model to provide Alaskans with this economic benefit for our residents, businesses and communities.

Thank you for your consideration,

Evan J. Griffith
General Manager

MATANUSKA ELECTRIC ASSOCIATION, INC. • P.O. Box 2929 • Palmer, Alaska 99645 • t 907.745.3231 • f 907.761.9368 • www.mea.coop

ALASKA POWER ASSOCIATION

R E S O L U T I O N

A Resolution Urging the Legislature to Support Utility Efforts to Create a Unified Transmission System for the Railbelt (14-9)

The Railbelt electric transmission system is comprised of hundreds of miles of lines owned by a number of entities, including utilities and the State of Alaska. The system is not nearly as robust as grids in the Lower 48. Limitations affect both the reliability and the cost of electric energy in the region.

A 2012 study by the Alaska Energy Authority determined that there are Railbelt transmission restrictions that result in significantly higher energy costs in the region. The AEA study determined that more than $900 million of transmission projects are needed to resolve existing problems. Although it is clear that the region would benefit from these necessary improvements, it is unlikely to be financed by utility ratepayers under the current operating model.

Absent a clear path to implement AEA study results, the Railbelt needs to consider a different approach to grid management.

In the Lower 48, a series of geographic Regional Transmission Organizations or Independent System Operators have been developed to address similar problems. Railbelt electric utilities have begun working together to study successful Lower 48 models and consider how best to develop, operate and maintain a rational regional transmission system.

Alaska Power Association urges the Alaska State Legislature to support efforts by the Railbelt electric utilities to unify the regional transmission system.

(Adopted Dec. 2013)

Association Members
Alaska Electric and Energy Co-op
Alaska Electric Light & Power
Alaska Power & Telephone
Alaska Village Electric Cooperative
Anchorage Municipal Light & Power
Aurora Energy
Barrow Utilities & Electric Co-op
Chugach Electric Association
Copper Valley Electric Association
Copper Valley Telephone Co-op
Cordova Electric Cooperative
Doyon Utilities
Golden Valley Electric Association
Homer Electric Association
INN Electric Cooperative
Inside Passage Electric Co-op
Kodiak Electric Association
Kotzebue Electric Association
Kwaan Electric Transmission Intertie Cooperative
Matanuska Electric Association
McGrath Light and Power
Metlakatla Power & Light
Middle Kuskokwim Electric Co-op
Naknek Electric Association
Nome Joint Utility System
North Slope Borough
Nushagak Cooperative
OTZ Telephone Cooperative
Southeast Alaska Power Agency
Tanalian Electric Cooperative
Tanana Power Company
TDX Power
Unalakleet Valley Electric Co-op
Yakutat Power

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99503
907-771-5700
1-877-992-7322
Juneau office
302C Assembly
Building
211 Fourth Street
Juneau, Alaska 99801
907-463-3636

alaskapower.org

	Allocations	Appropriation Items	General Funds	Other Funds
Hydro Project (HD 5)				
Native Village of Cantwell - Jack River Hydro Project (HD 7-11)	30,000			
Wrangell - Electric Vehicle Feasibility Study (HD 2)	25,000			
Sitka - Centennial Hall and Library Renewable Energy Feasibility Study (HD 2)	30,000			
Sitka - Wastewater Treatment Plant Renewable Energy Feasibility Study (HD 2)	20,000			
Inside Passage Electric Cooperative - Tenakee Inlet Geothermal Resource Study (HD 5)	599,200			
Metlakatla Indian Community - Triangle Lake Hydroelectric Project (HD 5)	500,000			
Alaska Energy Authority -			SPP 56,000,000 ~~96,500,000~~	SPP 56,000,000 ~~96,500,000~~
ARCTEC Energy Projects			SPP 15,000,000	
AEA - Anchorage to Quartz Creek Transmission Line Maintenance and Repair (HD 16-32)			~~25,000,000~~ SPP 5,000,000	
AEA - Battle Creek Diversion (HD 33-35)			~~15,000,000~~ SPP 1,000,000	
AEA - Cook Inlet Gas Gathering System Remodel			~~2,000,000~~	

	Allocations	Appropriation Items	General Funds	Other Funds
(HD 12-35)	SLP 500,000			
AEA - Daves Creek to	~~1,500,000~~			
Seward Transmission Line				
Completion (HD 33-35)	SLP 2,000,000			
AEA - Girdwood and Sterling	~~4,000,000~~			
Substation Improvements				
(HD 16-32)	SLP 20,000,000			
AEA - Homer Electric	~~25,000,000~~			
Association Soldotna to				
Nikiski Transmission				
Upgrade (HD 33-35)	SLP 5,000,000			
AEA - Quartz Creek to	~~10,000,000~~			
Soldotna Transmission				
Maintenance and Repair (HD				
33-35)	SLP 2,000,000			
AEA - Seward Power Plant	~~4,000,000~~			
Integration (HD 33-35)	SLP 2,000,000			
AEA - Soldotna to Quartz	~~5,000,000~~			
Creek Transmission Study,				
Design and Permitting (HD				
33-35)	SLP 2,500,000			
AEA - Teeland to Healy	~~5,000,000~~			
Substation Improvements				
and Repair (HD 7-11)				
Alaska Energy Authority -				
Energy Generation Projects				
It is the intent of the legislature that the state's capital investment into energy generation projects not exceed 50% of the total investment required to fully complete those projects.				
AEA - Akiak Community		4,000,000	4,000,000	
Electrical Generation				
System Upgrade (HD 38)				

Stuart Goering, Asst. Attorney General/HB 340

As requested, the following are concerns I have identified with HB 340. I have tried to keep my comments somewhat general, as the bill currently before the committee is ver. \U, but I am also aware that a work draft ver. \N is under discussion. I will address those two versions as a singular concept, except where necessary to address specific differences.

As I explained to the committee last Wednesday, these concerns are not advanced on behalf of the RCA. Instead, they represent my observations as an Assistant Attorney General in the exercise of the Department of Law's function, found in AS 44.23.020(b)(5), of advising the legislature on current and proposed law. However, my observations necessarily reflect the expertise and perspective I have developed advising and representing the RCA, and could fairly be assumed to be what I would advise commissioners if asked.

My concerns fall into three broad categories: timing, scope, and possible internal conflicts and conflicts with existing law. In essence, the bill would task the RCA to examine an idea and prepare a work product (characterized as a report in ver. \U or a plan in ver. \N) for delivery to the legislature. The nature of the examination is determined by the objectives to be considered, the "requirements" of the entity to be evaluated, and assumptions to be made in the evaluation process.

Timing

Both versions of the bill have fairly short timelines for completion. This appears reflect the sense that there is a crisis that must be addressed quickly.

While the RCA has significant expertise in the subject matter, and a highly qualified advisory staff, it is already using its resources to accomplish its existing statutory duties. Unique to the RCA are strict statutory timelines for completion of most of its core work, so existing matters cannot be put on hold while the work contemplated by this bill takes priority. As a consequence, it is likely that outside expertise will have to be identified and contracted for, which takes time and is governed by the state procurement process. In addition, as a commission (unlike a line department such as a DCCED) it must conduct its decision making in a matter of this type in public, and generally also includes public input in the form of written and oral comments.

Balanced against the difficulty of accelerating the assigned task is the probability that the crisis, while real, is not as pressing as it might initially appear. The RCA already has broad authority over efficiency and reliability of public utility operations (AS 42.05.291), joint use and interconnection of public utility facilities (AS 42.05.311 - .321), discrimination (AS 42.05.301 and .391) and management practices (AS 42.05.511). While there are completed and pending matters tangentially involving electric transmission, those have all arisen in the context of individual utility tariff filings. Overarching structural problems with the electric transmission system could be, but to date have not been, brought to the commission under the cited authorities. Such a proceeding would be an appropriate remedy even in the absence of this bill or additional legislation.

Scope

The scope of the evaluation portion is fairly narrow, and appears to dictate the adoption of a particular model. However, neither the bill itself, nor legislative history to date, clearly identifies the alternatives from which that particular model was selected nor the relative merits of the model. Indeed, there is as yet no legislative history to support the proposition that the selected model (apparently ERCOT) is even correctly described by the list of attributes in sub-section (b) of the bill.

The narrow scope of inquiry has two potentially negative effects. First, in the absence of a clearly articulated basis for the legislative decision in favor of the selected model, it negates the broad expertise of the agency in utility and pipeline matters which the RCA would otherwise bring to bear on their inquiry. This could have the probably-unintended effect of a work product that appears to reflect agency expertise, but which in fact only echoes a decision that was already made by the legislature. In other words, the RCA might be merely the conduit through which an idea is conveyed, not a meaningful contributor to the development of that idea.

Second, the narrow scope also creates ambiguity as to the RCA's task. On one hand, sub-section (a) directs the commission to "consider options," while at the same time sub-section (b) lists numerous details of the notional entity to be considered, and sub-section (c) mandates that the RCA make a number of foundational assumptions about the regulatory environment in which that entity will operate. A probable result of that ambiguity is a work product that does not address the range of existing solutions in electric and other regulated industries, except to the extent that a particular solution, no matter how effectively implemented in another jurisdiction or context, coincidentally matches the characteristics in sub-section (b) and the assumptions in sub-section (c).

I would suggest that the bill be modified to either: (1) identify the problem to be solved and grant the RCA latitude to apply its expertise to achieving a solution, or (2) define the concept to be implemented and pass authorizing legislation to allow the RCA to establish and regulate the appropriate entity. Essentially, existing sub-section (a), after deleting references to "the requirements of (b)," would suffice for the first option.

As an example of the latter approach, see AS 42.05.800 - .890, dealing with intrastate long distance telephone competition, and particularly the authority to create a state universal service fund (AS 42.05.840) and an exchange carriers association (AS 42.05.850). With that statutory authority, the RCA's predecessor adopted regulations and an access charge manual to govern the process of pooling of costs and access charge revenues for many of the state's local exchange carriers. One result is a single tariff developed from a pooled revenue requirement reflects the costs of operating facilities owned by multiple telecommunications carriers, and used by other telecommunications carriers, in a unitary telecommunications network.

Conflicts

One of the assumptions, funding of new facilities, contains language that appears to conflict with existing regulatory law. Specifically, the statement that "rate recovery is ensured through the planning, permitting and construction phase" suggests that cash flows from ratepayers to the new entity will begin at the planning stage. Normally, a public utility is expected to generate the cash necessary to plan, permit and construct a project, with rate recovery beginning when the facilities are placed into public utility service. The concept is that ratepayers should not have to pay for facilities until they are "used and useful," and, more importantly, that ratepayers do not pay for facilities that never enter service, or that otherwise do not benefit them. There is also an intergenerational inequity inherent in having

current ratepayers finance improvements that will benefit future ratepayers, because current and future sets of ratepayers usually have significantly different members.

Two of the assumptions appear to be internally inconsistent. Just and reasonable rates (assumption 3) are generally cost-based rates, but will not necessarily provide for "full cost recovery" (assumption 4) if costs were not prudently incurred, or were incurred for facilities that are not used and useful. The "full cost recovery" assumption therefore violates existing regulatory law, and the explicit assumption that rates will be "just and reasonable."

These apparent conflicts may be intentional. However, if the legislature intends to fundamentally modify regulatory jurisprudence, it is preferable to do so explicitly, not by implication.

One last item that does not necessarily merit a complete discussion is the amount of highly technical language in the bill (e.g., economic dispatch, ancillary services, universal tariff, single control area operator, parallel path flow and transmission congestion). Virtually none of the terms have definitions in existing Alaska law, and are susceptible of differing interpretations. For example, "open access" has a well-understood meaning in the context of transmission of electricity generated in a transparent, competitive market. It may not have a clear meaning in a different context.

Please call me if you have questions or would like to discuss this bill further.

Stuart W. Goering
Assistant Attorney General
(907) 269-5565
Stuart.goering@alaska.gov

CIRI
ENERGY LLC

CIRI Testimony to Energy Committee Hearing (SB 340 HB 196) on legislation proposing studies relating to unified grid operation and ISO in the Railbelt.

Background:
The Railbelt represents the largest population concentration in Alaska. Within the Railbelt there is also a significant industrial base. The electric energy needs of this area are met by 6 separate utilities (CEA, MEA, HEA, GVEA, AMLP, and Seward). Historically there has been limited cooperation between utilities to share generation reserves and some sales of economy energy. The utilities are interconnected by a high voltage transmission system (which is really just one line) that extends from the Kenai Peninsula to Fairbanks.

The vast majority of the High Voltage (HV) transmission system is a single path only and limited transfer capacity between regions. Therefore there is considerable reliability risk if there were to be a transmission outage and there are limited opportunities to share the most economic resources due to the limited transfer capacity between balancing areas. As a result, each utility has built generation plants (including reserve capacity) to serve its own loads. Because each utility has operated separately, there has been emphasis on planning for generation needs and less focus on the high voltage transmission system between utilities that ties the Railbelt together.

Historically CEA, the largest utility in the Railbelt has served the loads of or dispatched the generation of multiple smaller utilities (MEA, HEA, Seward) and so some economies of economic dispatch have been available. Starting in 2014 however, with expiration of certain whole-sale power agreements between the utilities, there will be no obligation for utilities to cooperate with each other regarding dispatch of generation. This means that at many times there could be economical generation sitting idle in one location, while at another point in the Railbelt a utility could be serving load with its own generation which is more expensive and less efficient than the generation that is sitting idle. This means that most of the time some customers in the Railbelt are paying more than they need to for their electricity. In addition, each utility pays for and operates its own spinning reserves, and as a result the cost of reserves for the Railbelt as a whole is greater than it should be.

In order to achieve the critically important efficiencies of economic dispatch and unified generation reserves sharing, there are two primary needs, which must be addressed: 1) Utility to utility coordination must be increased, and 2) The non-redundant (low reliability) and undersized HV transmission system must be upgraded.

Key Points:

1. **The benefits to Railbelt utility customers are significant and achievable:** CIRI agrees that the potential benefits of joint economic

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dispatch for Railbelt electric generation, coupled with HV transmission improvements is substantial. CIRI has reviewed the AEA sponsored Railbelt Transmission Plan dated November 13, 2103, and has discussed the conclusions with AEA and some Railbelt utilities. CIRI concurs that a significant annual benefit, estimated to be between $60 million and $140 million/year, is possible to achieve.

2. **The Railbelt utility operations must be modified to achieve the financial benefits**. In order for the benefits to be attained, the Railbelt grid must be re-structured. Key among the necessary components is the creation of an Independent System Operator (ISO) with authority to plan HV transmission expansions, and economically dispatch Railbelt generation for benefit of the entire Railbelt load. This legislation takes the critical first steps of completing the necessary studies, and setting the framework for RCA regulation of the ISO and its participants. CIRI supports the creation of an ISO and encourages the Legislature to begin the process of enabling formation of an ISO immediately.
3. **Cooperation between utilities will be greatly enhanced**: The formation of an ISO with mandatory membership by all utilities will encourage and cause the utilities to cooperate more fully on both transmission planning as well as generation dispatch and reserves sharing. The foregoing will all inure great financial benefit to Railbelt customers.
4. **Economic dispatch is a critical need**. The current state of industry practice in the USA is to utilize a centralized ISO or Regional Transmission Organization (RTO) to ensure that within regions, generation can reach load largely without restriction. In the Railbelt, a future where Fairbanks residents could be assured of the most efficient generation serving their load, irrespective of where in the Railbelt the generation is located or who in the Railbelt owns it, would represent major cost savings. Further, the ability of all utilities to share one set of generation reserves instead of each utility providing its own, would also create significant cost savings for Railbelt customers.
5. **Centralized planning of grid expansions is necessary.** Historically, Railbelt utilities have not always taken advantage of the ability to plan joint transmission projects for benefit of all customers. This has resulted in, among other things, the "over building" of new generation by individual utilities because there is no assurance that excess generation at "utility A" can be used to serve load at "utility B" who might need it. Having a centralized ISO-based transmission planning function will ensure that the Railbelt grid operates with the highest reliability and lowest cost to customers. **Further, the ISO's independent plans to improve or expand the grid can be implemented not only by utilities but also by interested 3rd party private investors. Bringing 3rd party investment into energy infrastructure is an important means to**
6. **gain efficiencies and to prevent utilities from becoming over-levered or from having to continually seek state funds to operate.**
7. **Reduced generation reserves cost will result from ISO formation**. Sharing of generation reserves within the ISO region (Railbelt) and for

benefit of all customers will be far less costly than current practices which apply very limited sharing of reserves.

8. **Independent status – not for profit structure ensures "open" operations**: Maintaining a 3rd party independent relationship with each ISO stakeholder will be critical. This will prevent one member from using its assets to disadvantage or otherwise increase costs of operation for other stakeholders. Structuring the ISO as a "not for profit" entity subject to RCA regulation will ensure lowest possible operating costs of the ISO organization over time.
9. **Stakeholder control.** CIRI supports the ISO model that provides for a board of stakeholders acting as its governing body. A fair balance should be struck between stakeholder interests, so that undue influence cannot be exercised by any one segment of the stakeholder group. The board of stakeholders should at the very least include electric utilities, transmission owners, generation owners including IPPs, large industrial customers, residential representatives and commercial customers.
10. **Mandatory participation is necessary**. CIRI supports the ISO legislation requiring mandatory participation/membership by all utilities and 3rd party owned generation and HV transmission owners (if any). In order to achieve the significant "economies of scale" for the savings associated with the ISO, all asset owning stakeholders must be required to participate.
11. **RCA regulation is preferred in AK**: CIRI supports the rates of the ISO and its operations being subject to regulation. In the Lower 48, it is the FERC which regulates ISO operations. FERC is non-jurisdictional in Alaska. It is critical for an overall regulatory oversight to take place to ensure lowest possible rates, non-discriminatory treatment, and the open and fair operation of electric power markets within the ISO region.
12. **Private investment in transmission infrastructure should be encouraged**: In the Railbelt, studies to date indicate that significant capital must be invested in order to complete the upgrades which will unlock the significant benefits of joint economic dispatch, reserves sharing, and liquid energy markets. The recent AEA study concludes that over $900 million will need to be invested in transmission upgrades within the next 10 years. **CIRI supports an ISO structure that encourages 3rd party non-utility investment in transmission infrastructure as a means to keep costs as low as possible, and to help eliminate pressure on the State of Alaska to fund infrastructure upgrades.**
13. **Aligns AK with utility practice in L48**: There are many examples of efficiently designed and operational ISO's in the electric power industry in the US. Forming an ISO in Alaska will move our system to be able to capture the efficiencies and cost savings which customers in many other states have enjoyed for more than a decade.
14. **Final clarifications CIRI:**
    a. Allow stakeholders to help RCA develop the scope of the required study and participate in structural discussions about the ISO. CIRI believes all stakeholders; not just utilities and the RCA, should participate in the scoping studies required by the legislation, and in the formation of the ISO.

b. Mandate opportunity for private investment in the construction and ownership of transmission assets as this will be a key factor to ensure that the needed network upgrades can be financed efficiently and timely and with minimal state participation. Competition lowers cost of power for all.
c. Governance of the ISO should consist of broad membership representing the market. Broad participation should be required including utilities, transmission owners, generation owners, industrial, commercial, and residential representation on the board of governance.
d. CIRI supports moving directly to formation of the ISO now without the pre-requisite step to study its viability first. The benefits are clear and delay increases the cost of electricity to everyone in the Railbelt.

Sincerely,

CIRI Energy, LLC

Ethan Schutt
President

A Partial Description of Relationships

distributed by Rep. Isaacson

Entity:	**RCA**	**ISO**	**TRANSCO**	**UTILITY**	**IPP**	**STATE**
Purpose:	Oversees/Regulates ISO,TRANSCO, & UTILITY	Manages load: economical dispatch	Owns Transmission	Owns Customer		
	Adjudicates Conflicts					
	Sets Tariffs	Recommend Tariff				
		Recommend Generation and Transmission		Owns Generation (retail)	Owns Generaton (wholesale)	Currently owns Generation
				Owns Transmission		Currently owns Transmission
				Owns Debt Service		
	Fee Funded	What/who Funds?	What/who Funds?	Rate Funded	Sales Funded	Provides funding