

ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON ENERGY

March 29, 2018

1:34 p.m.

MEMBERS PRESENT

Representative Adam Wool, Chair
Representative Ivy Spohnholz, Vice Chair
Representative Matt Claman
Representative John Lincoln
Representative DeLena Johnson
Representative Jennifer Johnston
Representative George Rauscher

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

HOUSE BILL NO. 382

"An Act creating the Railbelt Electrical System Authority; and relating to the duties of the Regulatory Commission of Alaska."

- HEARD & HELD

PREVIOUS COMMITTEE ACTION

BILL: HB 382

SHORT TITLE: RAILBELT ELEC. TRANSMISSION AUTHORITY

SPONSOR(S): REPRESENTATIVE(S) WOOL

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|----------|-----|---------------------------------|
| 02/21/18 | (H) | READ THE FIRST TIME - REFERRALS |
| 02/21/18 | (H) | ENE, L&C |
| 03/27/18 | (H) | ENE AT 10:15 AM CAPITOL 17 |
| 03/27/18 | (H) | -- MEETING CANCELED -- |
| 03/29/18 | (H) | ENE AT 10:00 AM BARNES 124 |

WITNESS REGISTER

ROB EARL, Staff
Representative Adam Wool
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Introduced HB 382 on behalf of the bill sponsor, Representative Wool.

SETH BROWN, Vice President Transmission Services
GDS Associates Inc.
Marietta, Georgia

POSITION STATEMENT: Provided a PowerPoint presentation entitled, "Facilitation of the Railbelt Reliability Council (RRC)," dated 3/16/18, and answered questions during the hearing of HB 382.

DAVID GLINES, Chair
Board of Directors
Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC)

no address provided, Alaska

POSITION STATEMENT: Provided background information related to the PowerPoint presentation by GDS Associates Inc. during the hearing of HB 382.

JANET REISER, Executive Director
Alaska Energy Authority (AEA)
Department of Commerce, Community & Economic Development
Anchorage, Alaska

POSITION STATEMENT: Provided a PowerPoint presentation entitled, "Railbelt Energy System: USO/ISO/RRC Discussion for the House Energy Committee," and answered questions during the hearing of HB 382.

KIRK WARREN, Chief Operating Officer
Alaska Energy Authority (AEA)
Department of Commerce, Community & Economic Development
Anchorage, Alaska

POSITION STATEMENT: Answered a question during the PowerPoint presentation by the Alaska Energy Authority at the hearing on HB 382.

CHRIS ROSE, Executive Director
Renewable Energy Alaska Project (REAP)
Anchorage, Alaska

POSITION STATEMENT: Testified in support of HB 382.

ACTION NARRATIVE

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CHAIR ADAM WOOL called the House Special Committee on Energy meeting to order at 1:34 p.m. Representatives Wool, Claman, Lincoln, Spohnholz were present at the call to order.

Representatives Rauscher, Johnson, and Johnston arrived as the meeting was in progress.

HB 382-RAILBELT ELEC. TRANSMISSION AUTHORITY

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CHAIR WOOL announced that the only order of business would be HOUSE BILL NO. 382, "An Act creating the Railbelt Electrical System Authority; and relating to the duties of the Regulatory Commission of Alaska."

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ROB EARL, Staff, Representative Adam Wool, Alaska State Legislature, reviewed the documents included in the committee packet and directed attention to a letter dated June, 30, 2015, from the Regulatory Commission of Alaska (RCA), which read in part: "Non-discriminatory access to the grid, open and transparent system-wide transmission pricing, and economic dispatch of generation by an independent entity are key principles that must guide the transformation of the Railbelt electrical system."

MR. EARL paraphrased from the Sponsor Statement [Included in members' packets] [original punctuation provided], which read:

HB 382 calls for the establishment of a Railbelt Electrical System Authority (RESA).

Under HB 382, a Railbelt Electrical System Authority would:

- Manage a unified Railbelt transmission and generation system with the goal of optimizing efficiency;
- Establish nondiscriminatory open access protocols for the transmission system;
- Implement a long-term regional plan for the Railbelt transmission and generation systems.

The Regulatory Commission of Alaska (RCA) will appoint 16 board members to govern the Authority, including three non-voting members. Utility membership on the board will not exceed 5 members for the first 5 years and not exceed 1 member after 10 years. The RCA would have oversight of the RESA. The RESA would function as an independent system operator (ISO), referenced below.

Background

In a June 30, 2015 letter to the Legislature the RCA noted that "Concerns about the fragmented, balkanized and often contentious Railbelt utilities have been raised numerous times over the past 40 years" and that "Several efforts have been made to reform and reorganize the Railbelt electrical system, but none have succeeded." The letter further states that: "Non-discriminatory access to the grid, open and transparent system-wide transmission pricing, and economic dispatch of generation by an independent entity are key principles that must guide the transformation of the Railbelt electrical system."

The RESA would unify the Railbelt utilities and other important stakeholders to oversee region-wide planning for transmission and generation. The RESA would also act like an Independent System Operator (ISO) to perform merit order economic dispatch of the system's electrical generation assets. Merit order economic dispatch would run only the most efficient electrical generators in the region at any given time, leading to cost savings for electrical consumers and reduced emissions. Open access to the transmission system and a universal transmission tariff would lead to more opportunities for independent power producers to invest in renewable energy projects across the Railbelt.

The Alaska Railbelt Cooperative Transmission & Electric Company (ARCTEC) is a consortium of four of the six Railbelt utilities formed in 2011 with the stated goal to "develop an organization that would adopt and enforce Railbelt reliability standards, conduct Railbelt system planning and ensure open access." Toward this end, ARCTEC recently hired GDS Associates to facilitate the development of what is being called the Railbelt Reliability Council (RRC), which could someday function like an Independent System Operator. By May 1, 2018, GDS expects to produce a final report and present an MOU containing its recommendations for stakeholders to sign off on before proceeding with the development of a formal RRC business plan.

Formation of a Transmission Company (Transco) has also been proposed by the utilities in association with the American Transmission Company (ATC). To achieve desired results, a Transco should be separate from a RESA/RRC/ISO. If formed, in addition to owning and operating the transmission system, a Transco would execute major maintenance, transmission system upgrades, and new transmission projects necessary for the reliable delivery of electric power consistent with transmission plans developed by a RESA/RRC/ISO.

A draft of GDS's recommendations was presented to the RCA on March 16th. That draft proposed a nine-member governing board for the RRC, with three seats for Railbelt utilities. The GDS draft did not include economic dispatch as a function of the RRC.

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DAVID GLINES, Chair, Board of Directors, Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC), said that ARCTEC was a consortium of four of the Railbelt utilities which had funded the GDS Associated project presented by Mr. Brown. He stated that the project was in response to an RCA instruction to the utilities "to voluntarily get together and come up with some solutions in terms of re-structuring the Railbelt." He reported that this stakeholder collaboration effort began in the summer of 2017.

CHAIR WOOL clarified that ARCTEC had subcontracted with GDS Associates for the study of the Railbelt situation.

SETH BROWN, Vice President Transmission Services, GDS Associates Inc., provided a PowerPoint presentation titled "Facilitation of the Railbelt Reliability Council (RRC)." He shared his background of 30 years in the [power] transmission business. He noted that this was the identical presentation as given to the RCA on March 16, and that there had not been any subsequent changes. He pointed out that these findings by GDS Associates were based on the stakeholder process and had not been endorsed by ARCTEC.

CHAIR WOOL asked if the complete report was due in May.

MR. BROWN expressed his agreement that the final report would be released no later than May 1. He presented an update on the

process, slide 3, and stated that there had been a presentation of the initial findings at the RCA Technical Conference on January 26, 2018. He noted that an update on the facilitation process was filed on March 7, a technical conference for all interested parties was held in Anchorage on March 13, and a summary of the comments received from stakeholders and interested parties was filed on March 20. He moved on to a list of stakeholders and interested parties that had been contacted, slide 4. He shared that the RCA would approve the establishment of reliability, security and other operating standards, including cyber security, and that the commission retained the authority to review and approve investments and administrative costs of the Railbelt Reliability Council (RRC), "RCA Jurisdiction," slide 5. He noted that GDS Associates had been charged with preparing a draft Memorandum of Understanding (MOU) for all the parties to sign. He relayed that the six utilities were developing consensus reliability standards to govern Railbelt grid operations and a report would be filed by April 1, "Reliability Standards," slides 6 and 7. He added that the Railbelt managers had created the Railbelt Cybersecurity Working Group which was developing a scope of work and a budget, which would be incorporated into the RRC when it was established. He moved on to slide 8, "RRC Scope and Functions," which listed the three primary functions for the RRC: reliability, access, and planning. He declared that the RRC would develop the rules and possibly work in concert with Transco for the rates, terms and conditions associated with open access transmission, whereas the non-rate terms and conditions would remain with the RRC.

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CHAIR WOOL asked if economic dispatch was part of the scope and functions.

MR. BROWN pointed to the key takeaways on slide 9, and stated that the protocols, planning, and informational postings would provide transparency to the stakeholders, while the RRC scope and functions had been shown to work in concert with Transco. He stated that economic dispatch monitoring and evaluation of potential costs and savings would provide needed information to stakeholders. He shared that there had been a lot of discussion for the need to have single system, economic, merit ordered dispatch for the Railbelt. He noted that the issue was that the utilities had stated that this was already being achieved through their own mechanisms, including power pooling, whereas other stakeholders felt there was an even greater savings to be achieved through an independent system operator (ISO). He

shared that GDS Associates recommended for the RRC to undertake a study of single system, merit ordered dispatch. He said that there had not been a study endorsed by the stakeholders that could clearly demonstrate over a long period of time that the net present value of those dispatch savings would pay for the cost of an ISO.

CHAIR WOOL pointed out that the RCA had listed this as an item of importance in a letter from 2015.

MR. BROWN, in response to Representative Spohnholz, said that an ISO was an independent system operator. He moved on to slide 10, "RRC Governance Structure," which detailed that this was a bottom-up organization, of both voting and nonvoting members, which could be defined by the organization. He noted that there would be technical and audit committees, which would report to the Board of Directors. He shared that it was very important to have an independent organization which operated under a code of conduct. He stated that it would be independently staffed by the RRC as defined by the MOU.

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REPRESENTATIVE JOHNSTON asked for clarification that the RRC would work for the Board of Directors.

MR. BROWN explained that, although they would be hired by the Board of Directors, they would still have independence. He noted that the CEO of the RRC would be a voting member of the Board of Directors. He pointed out that the RRC Board of Directors would have four transmission and four non-transmission voting members, with the CEO to cast any tie breaking votes, slide 11. He noted that it was necessary to identify the transmission owning members as this was what it was "really all about." He added that there were also seats on the board for a consumer advocate, three utilities, and an outside unaffiliated director.

MR. BROWN, in response to Representative Johnson, said that the Matanuska Electric Association, Inc. (MEA) utility would be included in the Anchorage utility board spot and that it would rotate with the other utilities in that area.

REPRESENTATIVE JOHNSON expressed her concern that the largest utilities were lumped together in one seat.

MR. BROWN explained that this was an attempt to strike a balance of power, and that the utilities, with some reasonable consensus, had not objected to the structure. He declared that, as the work was done in the technical committee, there would be representation from all six of the utilities.

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REPRESENTATIVE JOHNSTON asked about TRANSCO, listed for a future place on the Board, slide 11.

MR. BROWN explained that it depended on whether one or more utilities elected to transfer their existing assets into TRANSCO. If this was only for new assets, it may be necessary to expand and bring another not-transmission owner to the board. He moved on to slide 12, "RRC MOU/Regulatory Compact," stating that GDS Associates recommended a Memorandum of Understanding that would document consensus on the RRC and recognize the RCA to retain full authority over the RRC. It would outline the RRC structure and scope, and a commitment to develop a formal RRC business plan. He stated that all the utility participants would be signatory, and it would be acknowledged by the RCA and interested parties.

CHAIR WOOL asked if the utilities were the only signatories for the MOU.

MR. BROWN said that some legal advice would be necessary. He moved on to slide 13 and discussed the continuing collaboration with stakeholders. He stated that any follow up meetings would be held as necessary, as the goal was to develop the final report and the recommended MOU by the end of April.

REPRESENTATIVE RAUSCHER asked if the agreement between the utilities would make something happen.

MR. BROWN opined that there was a reasonable chance for a majority of the utilities to come together, pointing out that they had been supportive of the process, even as none of the stakeholders were getting everything they would like.

REPRESENTATIVE RAUSCHER asked about the influence of state agencies in the Lower 48.

MR. BROWN explained that they were participants in these regional organizations, even though they do not manage or operate independent transmission organizations. In response to

Representative Rauscher, he declared that they recommended that AEA be a participant, which he opined was consistent with the models in the Lower 48.

REPRESENTATIVE JOHNSON asked if the size of the grid affected agreement, as in Alaska it was smaller and newer than in the Lower 48.

MR. BROWN shared that stakeholders had told him that this was the best opportunity in recent years to come to an agreement.

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JANET REISER, Executive Director, Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development (DCCED), provided a PowerPoint presentation titled "Railbelt Energy System," and listed six of the issues regarding Railbelt electricity reform, slide 2. She addressed the first issue, "Background:" and stated that many of the electrical systems across the country were siloed systems, built up around small communities, similar to the variety of power cooperatives in Southcentral Alaska, slide 3. She moved on to slide 4 and stated that each organizational structure had an inherent conflict as they each had their own fiduciary responsibilities to their member rate payers, even as the utilities were interconnected. She noted a lack of centralized planning, which often lead to a limited ability to benefit all the ratepayers in the region. She explained that, as each transmission owner had its own tariff, any expansion had to pay the tariff for every utility that touched that transmission. She said there had been at least three separate initiatives to restructure, slide 5, which had been proffered but not acted upon, and that this, the fourth attempt, had been ongoing for more than a decade, slide 6. She said that the key items for change included institutional reform and economic dispatch, a fundamental first order issue per AEA, slide 7. She declared that the utilities had been given time to voluntarily undertake these efforts. She offered her belief that the system was not built to easily discharge the fiduciary responsibilities in a systematic way, and hence, the efforts had failed. She added that the utilities needed to reconcile disparate reliability standards.

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MS. REISER directed attention to slide 8, "What has already been done to that end?" She applauded the announced efforts although there was no proof or evidence that these efforts had happened.

She stated that there was a difference between prudent utility management and economic dispatch. She said that there were two similar sets of reliability standards, although either set could change because neither were enforced. She challenged the idea that all the ARCTEC and GDS component utilities would agree on the findings. She stated that this had the potential to be another failed attempt. She offered her belief that a much earlier economic dispatch study did involve all the utilities in the Railbelt, although there was no stakeholder process and no starting point was agreed upon. She expressed that AEA agreed with GDS Associates that this needed to be revisited and refreshed, pointing out that the initial study had cost \$1.5 million. She reiterated that a regional perspective was critical, as well as the inclusivity of all the stakeholders.

CHAIR WOOL asked for clarification of the definition for the starting point.

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KIRK WARREN, Chief Operating Officer, Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development, explained that economic dispatch models and transmission plans were created using the reliability standards given the RCA for informational purposes. In that study, there was a benchmark to identify what improvements to the system would happen and what economic realities would come from those improvements. Since the utilities could not agree during the development of the plan for how the system was operated, it was very difficult to arrive at the base case. The assumptions made in the base case were that the utilities were operating as efficiently and economically as they could at the time, and that there were not any hurdles to overcome in order to generate the savings. He opined that this was the most conservative approach possible to ensure that the savings at the end of the plan could not be minimized.

MS. REISER directed attention to slide 10, "What needs remain?" and stated that, as the utilities along the Railbelt were cooperatives and municipalities [owned], the public had a right to know what was available for money and for savings, although currently this was not a transparent process. She pointed out that there was not any publicly available information for the consumer.

CHAIR WOOL mused that for the utilities, as cooperatives or municipality owned, the ratepayers were the owners. He asked if

there was a group of ratepayers represented in these discussions.

MS. REISER offered her belief that a variety of groups had some influence, and that these issue-based groups were noticeable during elections for their advocacy toward certain individuals. She restated the need for the transparency which was currently lacking as an important feature necessary to move forward. She stated that GDS Associates and ARCTEC had done good work with the basics and that there were areas of alignment. She stated that she had some starting points for an on-going conversation, slide 11, which included: establish a USO, or unified system operator, as opposed to an ISO, or independent system operator. She noted that, although GDS Associates used the term RRC, AEA believed that it focused only on the reliability parts, and that the issue was much bigger than just that. She said that the USO would essentially be a new organization with a variety of functions, even though the terms could be used interchangeably at this earlier stage.

CHAIR WOOL expressed his agreement, noting that this was referenced as a RESA in the proposed bill. He suggested to just refer to it as a system operator at this stage.

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MS. REISER stated that there was agreement for the need to have an independent organization that would represent stakeholders with no majority control and a transparent public process. She stated that AEA would benefit all the ratepayers, as they were "not beholden to the ratepayers" of any of the utilities, but to watch out for the ratepayers in all Alaska. She noted that the formula for payment of the PCE (power cost equalization) program was based on the average Railbelt utility cost. She added that, as AEA administered the PCE program, it was important for the rate in the Railbelt to be the most efficient and reasonable rate as it affected Rural Alaska.

REPRESENTATIVE RAUSCHER asked what role was played by the RCA in this model, slide 12.

MS. REISER explained that the RCA would have the ultimate authority and jurisdiction over the proposed organization.

REPRESENTATIVE RAUSCHER asked what experience had prepared AEA for this critical and complex process.

MS. REISER stated that the discussion by GDS Associates and AEA were all important elements of this proposed organization. She directed attention to slide 12, which compared the proposals by GDS Associates, AEA, and the proposed bill. She noted that all the entities agreed on the functions, and that economic dispatch should be looked at although it still needed a lot of work. She declared that AEA believed that economic dispatch was the reason for this proposed organization, that there was a lot of money to be saved by the ratepayers, that the state had a compelling interest in the benefits, and that the voluntary management had not been successful. She pointed out that GDS Associates felt the form should be a new private entity, whereas the proposed bill suggested that it be a subdivision of the RCA. She reported that AEA had suggested that it house the administrative functions, such as finance and contract management, but that the decision making should remain with the CEO and the Board. She pointed out that all three entities had agreed that for the governance, no stakeholder group should have a majority interest. She noted that there were different proposals for the levels of membership on the board and stated that AEA felt it was more important for the role of the organization and the representation on the board. She suggested that, although there was agreement for a voluntary membership by the utilities, there should be harsh consequences for not participating. She offered her belief that the organization should be under the jurisdiction of the RCA. She moved on to slides 13 and 14 and stated that AEA had been the primary conduit for regional planning both in Rural Alaska and the Railbelt, and could offer assistance with staff, ability, and technical capacity. She stated that AEA was not proposing to act as the USO, and to do it by themselves, slide 15, and they were not proposing a specific structure or to make the rules. She declared that the state needed to play a stronger role and that it was necessary for legislation to push the utilities.

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REPRESENTATIVE JOHNSTON shared that she had a long history in this area and mused that she had seen "a lot of who's on first." She expressed her concerns, noting that AEA had successes and failures. She asked if the leadership from Ms. Reiser would bring AEA to a better place, and whether this new proposed governance entity would require more staff and more funding.

MS. REISER replied that AEA was now a different organization. She relayed that she brought project, engineering, and technical leadership, as well as extensive experience and direct knowledge

with the Railbelt. She added that there was also a change in perspective from the Board, that AEA had not been involved in Railbelt issues to the extent that it should. She noted that there were some structural inefficiencies needing to be addressed at the state level because of a lack of success at the private level. She shared that one reason for her hiring had been to participate in this process. She added that the commissioner [Department of Commerce, Community & Economic Development] was supportive of the efforts to move forward. She offered her belief that the State of Alaska had a compelling interest in the process. She declared that this would be "a different look at the approach to the Railbelt."

REPRESENTATIVE JOHNSTON shared that it was sometimes hard to separate the person from the structure. She asked if this new structure would be independent from Ms. Reiser personally.

MS. REISER acknowledged the concern, and she opined that the same could be said for the utilities, pointing to recent turnovers at the higher levels. She stated that it was "shocking the number of folks with good institutional knowledge and leadership that will be turning over as they retire." She declared that it was important that the staff, the Board of Directors, and the Commissioner all support the program. She explained that this was institutional reform and that the structure was being set up to be self-sustaining and to outlive any one person.

REPRESENTATIVE JOHNSTON expressed her concern that, as she looked back, she had seen a lot of transformation in power generation and in transmission. She cautioned against a structure that was looking backward.

REPRESENTATIVE RAUSCHER asked if she had had talks with the utilities.

MS. REISER shared the process to date, which included conception of the idea, proposal to the board and the approval to move forward, approval from the DCEED commissioner, and discussion with the governor. She noted that the presentation to ARCTEC had been cancelled, and that, although the program had been moving forward conceptually for 2 - 3 weeks, it was necessary to get all the permissions before it could be rolled out.

REPRESENTATIVE RAUSCHER questioned how this could move forward if there had not yet been any discussion with the utilities.

MS. REISER stated that there had been several conversations with the RCA and GDS Associates. She pointed out that the only proposals were from GDS Associates and the proposed bill. She acknowledged that there was intent to speak with all the utilities, although "there's quite a bit of hostility towards AEA for even venturing into these waters, and it's a difficult proposition." She declared that she had no problem with talking to the utilities.

CHAIR WOOL, in response to Representative Johnson, said there would be opportunities for other groups to speak to the committee. He suggested that AEA offered infrastructure assistance and facilitation, instead of governance.

MS. REISER emphasized that this was the beginning of the process and that AEA wanted to continue to work with all the stakeholders to make it work.

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CHRIS ROSE, Executive Director, Renewable Energy Alaska Project (REAP), stated that REAP had been working on renewable energy, energy literacy, and energy efficiency promotion for 14 years and was in support of HB 382. He emphasized that this was a consumer issue that should have been dealt with 10 or 15 years ago. He expressed appreciation that ARCTEC had hired GDS Associates to move the process forward, even though REAP was not convinced that this would move forward as it had failed so often in the past. He declared that a voluntary process will not work, as even legislative attempts had not worked in the past. He urged for institutional reform in the Railbelt. He strongly suggested that members read the RCA letter dated June 30, 2015, as it "really sets the stage for everything we're talking about from the last three years or so."

MR. ROSE paraphrased from a letter dated March 28, 2018 [original punctuation provided] [Included in members' packets], which read:

Renewable Energy Alaska Project is a statewide, non-profit coalition of over 80 dues-paying diverse energy stakeholder organizations. We have been working to promote renewable energy, energy efficiency and energy literacy across Alaska since 2004. I am writing this letter to respectfully encourage the Committee to pass HB 382. There are several important issues that relate to the Railbelt's future contained in the bill:

Reliability Standards

One important issue for the Railbelt is the creation and enforcement of electric reliability standards across the entire region. These standards are essential to ensure that the transmission system, and the "dispatch" (use of) the region's electrical generators is as efficient and safe as possible, including threats against cyber security. In the Regulatory Commission of Alaska's June 30, 2015 letter to the Legislature, the Commission made several findings and recommendations regarding the Railbelt. One of those findings was that region-wide reliability standards were both necessary and lacking in the Railbelt. In its letter, the Commission gave the utilities time to voluntarily come up with uniform regional reliability standards.

It is now nearly three years later and reliability standards have still not been agreed to by the utilities. Four of the six Railbelt utilities that have formed an organization called the "Alaska Railbelt Cooperative Transmission and Electric Company" (ARCTEC) recently hired an outside technical advisor from Georgia called GDS Associates to look at reliability and other Railbelt issues, and make recommendations as to the form and function of a new organization that ARCTEC is proposing to call the Railbelt Reliability Council, or RRC. Note the word "reliability" in the title of the RRC. GDS is over halfway through a process of talking to stakeholders and making its recommendations and is scheduled to wrap up its process near the beginning of May. GDS is hoping to get agreement from a range of stakeholders on a Memorandum of Understanding that would be the beginning of the formation of the so-called RRC.

While REAP appreciates the effort that ARCTEC (as well as non-ARCTEC utilities Homer Electric Association and Anchorage Municipal Light and Power) are making through the GDS process, unfortunately REAP does not believe that the voluntary process that the RCA has requested the utilities to engage in will ultimately be successful. There is simply too disagreement amongst the utilities. As mentioned, two of the six utilities are not aligned enough with the others to

even belong to ARCTEC, and the utilities repeatedly fail to speak with one voice. More importantly, each of the six utilities has a fiduciary responsibility to its respective members, and not to the region. Since none of the utilities has an explicit responsibility to the region, it is REAP's belief that the legislature must declare that reliability and other standards be established through the proposed Railbelt Electrical System Authority, or RESA, contained in HB 382. There is no disagreement that the region needs reliability standards - the real question is how we are ever going to get there from here. The RESA would ensure that standards are set, and then enforced by the RCA.

Economic Dispatch

For at least the last four years, the driving force behind the formation of a new entity in the Railbelt has been saving consumers money by ensuring that the most efficient generators in the region are being run in a logical order, from the most efficient generator first, to the second most efficient second, the third most efficient third, and so on, as the electrical demand in the region goes up and down. This is known as "merit order economic dispatch." At present, merit order economic dispatch is not being done in the Railbelt region. Instead, each respective utility is balancing supply and demand of electricity in their own respective service areas. Since today the utilities are connected by transmission lines, as opposed to when they were first established over 70 years ago, economic dispatch in the entire region is technically feasible. However, despite some bilateral contracts and the sharing of state-owned resources like the Bradley Lake hydro facility, the six Railbelt utilities are not dispatching their respective generation assets on a regional basis. This is inherently inefficient. It means that less efficient generators are being run in the region when they could remain idle, allowing the sale of more economic energy to flow from the most efficient generators. This inefficiency unnecessarily consumes more fuel. Burning more fuel in inefficient generators costs Railbelt consumers money.

The need for merit order dispatch was recognized and called out by the RCA in its 2015 letter to the legislature. In that letter, the Commission set the utilities on a course to voluntarily come up with a model for merit order economic dispatch of the region's generation assets, instead of the utilities continuing to balance supply and demand in their respective, smaller and suboptimal, service areas.

Almost three years after the Commission's letter to the legislature, there is still no economic dispatch in the Railbelt. Over a year ago, Chugach Electric Association, Anchorage Municipal Light and Power and Matanuska Electric Association announced to the Commission that those three utilities that serve parts of Anchorage were going to form what they called a "tight power pool" as a precursor to region wide economic dispatch. They told the Commission they would need an additional year to sort out how they would settle the sharing of their generation assets. That additional year has now come and gone and there is still no tight power pool in the Anchorage area. Furthermore, there is little consistency and transparency about how those negotiations are going. Instead, the public hears one story from one utility about how the pool is progressing, and another story from another utility. The "pool" has no designated spokesperson.

While there may be some disagreement about how much merit order dispatch can be done in the entire region that stretches from Homer to Fairbanks without transmission upgrades to the north and south from Anchorage, the RCA and the public were told that the tight power pool would be possible, and indeed operating, by a few months ago.

What should be very disturbing to Railbelt electric consumers is the fact that ARCTEC's consultant GDS is no longer recommending that the so-called Railbelt Reliability Council that it is formulating for the utilities even include the function of economic dispatch. The reason that GDS gave to the Commission at a RCA public workshop held March 16, 2018 is that there is fundamental disagreement among the parties about the basis for economic dispatch. This is still another example of how conflict among the six

utilities hurts the region as a whole. REAP believes that merit order dispatch of the region's generating assets must be a function of any new entity that is established for the Railbelt.

Non-Discriminatory Open Access to Transmission

There are at least two problems with the way new entities or projects can currently try to access the Railbelt transmission system.

First, today each single utility handles interconnection within their respective service area. There are six utility transmission owners in the Railbelt, along with the Alaska Energy Authority. This means the process that an independent power producer must go through to send power into the grid from a project varies from utility to utility. There is no region-wide, consistent and transparent set of rules for accessing the transmission system, a system that has been constructed entirely from public money of one sort or the other (federal, state, municipal or cooperative). This lack of predictability chills investment from the private sector that Alaska sorely needs.

Second, there is not one single tariff, or charge, to move electrons across the Railbelt. In fact, in some cases there are what is referred to as "pancaking" transmission tariffs. This is a situation where the movement of electrons from A to B incurs multiple tariffs from different transmission owners that are stacked (or pancaked) on top of each other. Such redundant costs to transmit electricity have serious economic consequences for consumers.

Region-Wide Planning

REAP believes that region-wide planning for the Railbelt is one of the most important functions that a new Railbelt Electrical System Authority could handle. The Railbelt has never been planned as one region. One recent result of this lack of planning has been the overbuilding of generation assets in the Railbelt. In its 2015 letter to the legislature, the RCA noted that the Railbelt utilities have collectively built \$1.5 billion dollars of new generation projects in the last

several years. With the exception of the Southcentral Power Plant that Chugach and ML&P built together, none of those new generation assets were built with a regional approach in mind. This lack of regional planning also extended to how new generation assets are impacting the existing transmission system. It is also worth noting that in comparison to the \$1.5 billion the utilities spent on new generation, those same utilities spent next to nothing on transmission system upgrades.

Now that the lack of regional planning has resulted in more new electric generation in the Railbelt than what was necessary for the region as a collective whole, Railbelt consumers are on the hook to pay for those capital expenditures. Each of the respective utilities that built power plants committed their members to pay back those expenditures for the next 25-30 years. Incredibly, this was done without either MEA or HEA having any long-term contracts for natural gas, and both Chugach and ML&P likely to run out of the gas reserves they now own long before the new generation assets are paid for. You might ask why the RCA did not prevent the utilities from building unnecessary generation, or generation that is vulnerable to fuel price volatility? The answer is that the RCA does not have what is known as "siting authority" over each respective utility's decision to build new generation. If the Commission had siting authority, it could pre-approve new generation projects before power plants were built. Instead, without siting authority, the RCA's hands are tied until after a utility has already made its decision to plan, finance and construct a new power plant. Only after the power plant is built and the utility and its consumers are committed to paying for it does the RCA have a role. That role is to hear the utility's request to charge a tariff to its customers to pay the investment back. This lack of siting authority by the Commission has forced it to allow those tariff requests in case after case because to deny the tariff would cause financial havoc for a utility that has already built a power plant.

Regional planning would take into account what new generation assets the entire region needs, and therefore avoid a repeat in the future of the overbuilding that has recently happened in the

Railbelt. Regional planning would also take into account where potential renewable energy assets could be located, both relative to the resource's proximity to the need for power, and its proximity to transmission. Giving a new Railbelt Electrical System Authority the ability to plan for both new generation and transmission assets allows generation and transmission asset decisions to be made in the context of each other, and on a regional basis. This is far more effective than making generation decisions for each Railbelt utility service district in isolation of what the neighboring utility has decided to do, or not do. It is also more efficient to plan for the regional electrical system as just that, a system that includes generation assets and the transmission assets necessary to move the electrons efficiently to market. Having the Railbelt Electrical System Authority objectively decide which transmission projects are a priority for the region also protects consumers from the impacts from a future, for-profit transmission utility building transmission that does not have positive long-term benefits relative to its cost. Regional planning means that the best possible decisions get made for the entire Railbelt, saving consumers money. However, region-wide planning must include stakeholders besides the six Railbelt utilities.

Diverse Governance Structure

The governance structure of the proposed Railbelt Electrical System Authority is perhaps the most important part of HB 382. Without the proper balance of independence and stakeholder input from other sectors of Alaskan society besides the six Railbelt electric utilities, Alaskans will see no real change in the way business is done in the Railbelt.

Seventy-seven years ago, when my local electric utility in the Matanuska Valley was formed, I think the concept of a local cooperative meant something very different to the citizens of Palmer than it does today. Though Matanuska Electric Association is still a cooperative, most of its members do not participate in its governance. In fact, in the Railbelt it is pretty typical for utility board elections to draw less than 20% of a cooperative's eligible voters. Ask

the average electric consumer today what kind of legal structure their electric utility is and they are likely to say they don't know. In contrast, when MEA was formed in 1941, there wasn't any electricity in Palmer. People were joining together to provide it, with an assumption and social compact that they would remain accountable to each other.

Since the six Railbelt utilities were formed decades ago, road systems, electric transmission lines, and telephone and internet service have all come to the region. The RCA itself has stated that if we were start over today, we would certainly have just one utility in the Railbelt. For context, the combined average electric load of all six Railbelt utilities is just over 600 MW. In contrast, a typical power plant (not utility) in the Lower 48 is around 1,000 MW. While REAP is not advocating for all six utilities to be made into one, what the Railbelt Electrical System Authority would do is make sure that all six utilities take full advantage of the fact that today they are connected. The region's future prosperity depends on it.

Besides the transmission, road and communication infrastructure that has been built over the last decades, there are other changes and trends that the current system of six independently operated utilities cannot effectively address. For example, over the decades there has been an increase in the number of commercial and industrial electrical consumers in the region. Those consumers are a stakeholder group that should have input into planning the region's electrical system. Another change has been the meteoric drop in the cost of renewable electricity from wind and solar, even as the efficiency of those technologies continues to increase. For example, in 1990, the average price of wind power in the United States was 65 cents/kWh. Today, the average unsubsidized price for wind in the Lower 48 has dropped to under 5 cents/kWh, making it competitive with natural gas and coal. Likewise, the price of utility-scale solar has dropped precipitously in the last 10 years, with the average unsubsidized price now also down to around 5 cents/kWh. In 2017, nearly half of all new generating capacity additions in the United States were wind or solar. In the rest of the world,

most of those wind and solar installations are being developed by independent power producers, companies that specialize in those technologies and are therefore most often in the best position to build projects as efficiently as possible. Independent power producers are another constituency that must be at the table when plans are made for our electric future.

There are other trends that are not being effectively addressed or represented in the current system of six utilities that make decisions independent of each other. One is the increasing use of "distributed" power. This refers to both an accelerating number of people in the Railbelt who are putting cheap solar panels on their homes, and businesses who are finding it more economical to generate their own power on-site, often coupled with energy storage. Those businesses and consumers need a seat at the table.

Another major trend is energy efficiency. As more consumers have been made aware of how energy efficient lighting and appliances can save them money, the demand for electricity in the Railbelt has actually been decreasing, even as the region as a whole has overbuilt generation. Fortuitously, another trend that can counter that decrease in demand is electric vehicles, or EVs. EVs, and the lithium ion batteries that run them, are coming down in price so fast that many experts, investors, nations and car companies are betting on them to completely change the way we transport ourselves. The cost of operating a Chevy Bolt or Tesla Model 3 with a range of over 200 miles that one can purchase today for about \$35,000 (before a federal tax credit of up to \$7,500) is half of what it costs to operate a standard car with an internal combustion engine. Even with the Railbelt's relatively expensive 20 cent/kWh power, a Chevy Bolt can go 200 miles on \$12 worth of electricity. In contrast, a person with a car that gets 25 mpg and uses \$3/gallon gasoline would spend \$24 to go the same 200 miles. EVs also have only about 20 moving parts, as opposed to roughly 2,000 moving parts in the internal combustion engines of today, making EVs cheaper to maintain and likely to last much longer. As the price of EVs continues to drop every year, a transportation revolution is brewing. It is imperative that the governance structure of a new Railbelt Electrical

System Authority also have people and entities on the governing board who understand how the trends of energy efficiency and electric transportation fit together so they can help the Railbelt prepare for its future.

Besides different types of electric consumers, independent power producers, and renewable, efficiency and electric vehicle stakeholders, other entities that should be represented on the governance structure of the Railbelt Electric System Authority include the Alaska Energy Authority (AEA), the RCA itself and a representative of any new transmission utility that might be formed in the future.

Just two weeks ago, ARCTEC's consultant, GDS Associates, made a preliminary recommendation in front of the RCA that the governing board of ARCTEC's proposed Railbelt Reliability Council be made up of nine members, with just three seats held by Railbelt utilities. This preliminary recommendation is further evidence that a diverse group stakeholders, not just the same six utility players, must guide the Railbelt's future. It is also consistent with the language in HB 382, which states that no more than 40% of the governing board of the Railbelt Electrical System Authority come from the six existing Railbelt utilities.

If the governance structure of the Railbelt System Authority did not include the wide array of Alaskans that have a stake in how the region plans for and then produces and transmits electricity, Alaskans will see more of the same conflict among the utilities who are now running the show, and Alaska will continue to lag behind other states and nations that have embraced regional electric systems and renewable energy. A wide variety of non-utility stakeholders are part of the governance in those so-called Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) in other jurisdictions.

The Railbelt needs a vision of our future that is based on objective reality, not six often competing versions of it. Indeed, it is utility disagreement over what the region needs that GDS pointed to when it told the RCA on March 16th that it was not including

the function of economic dispatch in ARCTEC's proposed Railbelt Reliability Council. Instead, GDS is currently proposing that the RRC be stood up first, and then a wide group of stakeholders could design still another study to determine whether it makes sense to have only the most efficient generators operating in the Railbelt at any one moment in time.

By not including economic dispatch in the RRC's functions, GDS is essentially saying that Alaskans need to spend more time and more money on more studies to determine what common sense tells us is true: that consumers will save money if natural gas is not burned inefficiently. This conclusion by GDS underscores why we need a Railbelt Electrical System Authority now, and why the utilities cannot control it. If Alaska is going to do what other jurisdictions have now done for decades and make the planning and operations of our electrical system more efficient on a regional basis, we cannot afford to continue to wait for the utilities to address these issues voluntarily.

Conclusion

Today we are at an important crossroads for the Railbelt, and for the state. If Alaska is going to diversify its economy, the Railbelt will have a major role to play. Energy efficiency, electric vehicles, renewable energy and distributed energy are all making what was for many decades a relatively static electric industry one of the most dynamic and fast changing industries on the planet. The Railbelt Electrical System Authority is necessary for the Railbelt's six independent utilities to come together to meet today's trends and challenges. Today, the six Railbelt utilities still do not speak with one voice, in large part because their respective fiduciary duties are to their own members, and not to the region. While efforts to pool generation resources around Anchorage, and to look at new models like an RRC are commendable, consumers cannot wait any longer for the utilities to voluntarily put something together with the requisite functions and governance structure. Consumers are already on the hook for more generation capacity than the region as a whole needed, and the resulting higher electricity prices in the Railbelt will impact consumers all over the state as the target electricity

price for the Power Cost Equalization program rises higher and higher.

Alaska can also no longer afford to operate with a balkanized Railbelt electricity system. We need regional planning, economic dispatch and reliability standards to protect consumers and transparent and consistent interconnection standards to attract investment. Most importantly, we need a governance structure for the Railbelt Electrical System Authority that does not rely on utilities alone to plan the region's future. Consumers and investors have waited long enough for voluntarily action. The utilities' RRC model will not get us to where the region must go. Instead, REAP respectfully suggests that you, the elected representatives of the state's consumers, take the required action to establish the Railbelt Electrical System Authority. Thank you very much for your consideration of this critical issue. I am always available to answer any questions that you may have, or to provide background materials.

[2:46:24 PM](#)

REPRESENTATIVE JOHNSON asked to ensure that the RCA was given some credit.

MR. ROSE replied that this was not intended to disparage the RCA.

REPRESENTATIVE JOHNSTON asked if this would be a loaded economic dispatch due to all the generation plants that were beholdng to the co-op membership. She suggested that this could force some of the utilities into bankruptcy.

MR. ROSE pointed out that, as the expenditures for the power plants were already included in the rates, those jurisdictions were already paying for it. The concept of economic dispatch would allow any of those utilities to buy power from someone else cheaper than they could produce the power. He said that moving forward this could reduce the cost of operation because power was bought cheaper.

REPRESENTATIVE JOHNSTON declared that she was 100 percent behind economic dispatch. She asked whether, as the operation of the plant was a labor agreement, this was forcing the situation.

2:50:27 PM

MR. ROSE opined that the power plants had a relatively small labor force, as most of the labor force maintained the transmission lines, which would need to be kept operating. He pointed out that the utilities would not go away, but that there would be one single system operator to dispatch all the generation units in a merit order in which the most efficient would go first. He stated that this was a consumer issue and the question was really for when. He referenced the \$1 million study in 2010 for a regional integrated resource plan which was supposed to be enforced by proposed legislation. He stated that there was work still to be done, and he supported that AEA wanted to keep this project moving. He declared that it was necessary to have a neutral facilitator. He pointed out that, over time, there had not been any agreement from the utilities. He opined that the aforementioned letter from the RCA in 2015 had been a request to the legislature to do something if the voluntary efforts requested from the utilities did not happen. He expressed his agreement that the inherent problem was that the six utilities each had fiduciary duties to its membership and not to the region. He declared that, as the RCA, AEA, and the university had all called for a regional approach, it was incumbent for the legislature to consider a way to work it out. He stated that the lack of economic dispatch was a problem for REAP.

REPRESENTATIVE JOHNSTON stated that the cost for future changes to transmission would push changes to the system.

MR. ROSE expressed his agreement, although a roadblock for transmission was a lack of reliability standards. He opined that there was now less demand with the changes in technology.

2:56:38 PM

CHAIR WOOL acknowledged that economic dispatch was an issue, noting that the presentation by GDS Associates referred to it as a sticking point among the utilities. He asked if most parties agreed that there was some savings, although there was disagreement for how much would be saved.

MR. ROSE expressed his agreement and noted that the other issue was for the cost of setting up a system operator to dispatch versus how much would be saved. He pointed out that every new addition for transmission would potentially offer more savings.

CHAIR WOOL offered an understanding that the utilities would not take on an endeavor that would lessen their return, due to their concern solely for service areas and not a system wide concern.

MR. ROSE stated that although change was hard, there would be a transition process and the longer the wait, the harder it would be. He declared the need for a "hammer" to implement the changes.

CO-CHAIR WOOL asked if it had been made easier for other states with the integration of nearby states, or had it been necessary to have legislation to force the issue.

MR. ROSE replied that it varied and stated that there were other independent system operators and regional transmission organizations. He pointed out that Alaska was trying to change a system for 500,000 people whereas a change on the East Coast would be for 60 million people. He pointed to the transition over time in Texas. He declared that it was necessary to get this transition to a true independent system operator completed in Alaska, as there were other pressing energy issues.

REPRESENTATIVE RAUSCHER offered his understanding that economic dispatch was in progress and that the utilities would be filing with RCA in the next few months. He asked what was the fear.

MR. ROSE declared that REPA did not believe it, that economic dispatch was not happening and that nothing had been filed. He declared the need for a referee for all these disputes.

[3:02:18 PM](#)

[HB 382 was held over.]

[3:03:01 PM](#)

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 3:03 p.m.