

**ALASKA STATE LEGISLATURE  
HOUSE SPECIAL COMMITTEE ON ENERGY**

January 30, 2025

1:03 p.m.

**MEMBERS PRESENT**

Representative Ky Holland, Co-Chair  
Representative Donna Mears, Co-Chair  
Representative Bryce Edgmon  
Representative Chuck Kopp  
Representative Cathy Tilton  
Representative George Rauscher (via Teams)  
Representative Mia Costello

**MEMBERS ABSENT**

All members present

**COMMITTEE CALENDAR**

PRESENTATION(S): Alaska Power Association Transmission and Generation

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

MICHAEL ROVITO, Deputy Director  
Alaska Power Association  
Anchorage, Alaska

**POSITION STATEMENT:** Co-offered the Alaska Power Association Transmission and Generation presentation.

EDWARD JENKIN, CEO  
Railbelt Reliability Council  
Palmer, Alaska

**POSITION STATEMENT:** Co-offered the Alaska Power Association Transmission and Generation presentation.

LOU FLORENCE, Chairman  
Railbelt Reliability Council Board  
Fairbanks, Alaska

**POSITION STATEMENT:** Answered questions regarding the Railbelt Reliability Council during the Alaska Power Association Transmission and Generation presentation.

**ACTION NARRATIVE**

[1:03:15 PM](#)

**CO-CHAIR DONNA MEARS** called the House Special Committee on Energy meeting to order at 1:03 p.m. Representatives Edgmon, Kopp, Tilton, Costello, Rauscher (via Teams), Holland, and Mears were present at the call to order. Representative Edgmon arrived as the meeting was in progress.

**PRESENTATION(S): Alaska Power Association Transmission and Generation**

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CO-CHAIR MEARS announced that the first order of business would be a PowerPoint regarding the Alaska Power Association as part of Transmission and Generation presentation.

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MICHAEL ROVITO, Deputy Director, Alaska Power Association, presented a PowerPoint regarding the Alaska Power Association's focus on transmission and generation, titled "Alaska's Electric Utilities: Powering the Last Frontier" [hard copy included in the committee file]. He showed slide 2, which explained the mission statement of the Alaska Power Association (APA) as being "dedicated to assisting our members in accomplishing their goals of delivering electric energy and other services at the best value to their customers." He briefly summarized the history of the APA and explained that it not only delivered electrical energy but also provided services such as communications and technical assistance. He moved to slide 3, which listed the APA's electric utility members, pointing out the range of utility companies in APA's membership, including what he believed was the smallest electric co-op in the United States, INN Electric Cooperative serving Iliamna, Newhalen, and Nondalton.

MR. ROVITO then showed slide 4, titled "Alaska's Electric Utilities: Powered by Alaskans," which read as follows [original punctuation provided]:

- Alaska's electric utilities serve the people. Their mission is crucial to the economy and life in general.
- Utility leadership lives in the communities and has a vested interest in seeing their communities succeed.
- Every utility in APA's membership is working hard to diversify its generation and increase their sustainability.
- Electric utilities have a responsibility to carefully manage the power grid, and they make decisions deliberately with safety, reliability, and costs in mind

MR. ROVITO showed slide 5 which summarized the five types of utility structures in Alaska. These included cooperative non-profit member-owned; non-profit municipal electric utilities owned by local governments; investor-owned for-profit utilities; tribal-owned electric utilities; and joint action agencies. He explained that despite their differences, the goal they all have in common is to provide safe, reliable, affordable electric power in Alaska.

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MR. ROVITO pointed out that Alaska is unique among the states in the number of Alaskans receiving their power from a not-for-profit compared to the Lower 48. As a result, most Alaska utility companies have a different structure because they take factors into consideration other than simply making a profit. He showed slide 6, titled "By the Numbers," which read as follows [original punctuation provided]:

More than 90 percent of Alaskans receive their power from a not-for-profit cooperative, municipal utility, or a tribally-owned utility.

Compared to the lower 48 with only 28 percent of power produced through cooperative, municipal, or tribal utility (72 percent from IOUs) \*EIA Data

MR. ROVITO described the unique power systems in Alaska, comparing them to rural utilities in the Lower 48 which are accessible by road, and which are interconnected to a larger regional grid. He pointed out that most of Alaska does not have that aspect. He showed slide 7, titled "Alaska's Unique Electric Systems," which read as follows [original punctuation provided]:

Alaska has a unique electric grid system due to its vast and sparsely populated geography. There are more than 150 islanded, stand-alone electrical grids serving rural villages.

The largest transmission grids are in Southeast Alaska and the Railbelt. Although these serve a vast majority of Alaskans, they are significantly smaller than grids in the rest of the country and are all islanded.

Due to the state's electric reality, utilities are pioneers in microgrid operation and technological innovation. From batteries to renewables to time-tested operational expertise in harsh unforgiving conditions.

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MR. ROVITO showed slide 8 [mis-labeled 7], "Generation Sources Across Alaska," which listed Alaska's sources for generating electricity and read as follows [original punctuation provided]:

Natural Gas 47%  
Hydropower 26%  
Petroleum (diesel,naptha) 13%  
Solar >1%  
Wind 2%  
Coal 11%

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MR. ROVITO agreed with Representative Edgman's observation that these numbers will be fascinating in 10 years because of continuing advances in technology. In response to Representative Edgman's questions concerning the frozen funding for clean energy grants and the Grid Resilience and Innovation Partnerships (GRIP) matching funds, Mr. Rovito explained that APA is tracking and working with the National Rural Electric Cooperative Association as well as Senator Murkowski's office. He described the adverse effects of the funding issues resulting from the President's executive orders to pause funding on renewable energy projects.

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MR. ROVITO moved to slide 9, titled "Potential Future Generation Sources," which included micronuclear, tidal, other hydrokinetic, geothermal, biomass, and "something we haven't heard of yet." He briefly discussed each of these energy sources and their potential in Alaska.

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MR. ROVITO addressed a series of questions posed by Representatives Costello, Holland, and Mears regarding micronuclear power generation. He explained that the technology is evolving, and the startup costs are still very high. He described micronuclear as a potential game changer with vast differences from older nuclear generators, commenting, "It's not your grandfather's nuclear." A pilot project is being planned for Eielson Air Force Base.

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MR. ROVITO explained that Alaska electrical utilities are looking at different ways to move away from a single source of fuel because there is increased energy security when a community has diversified energy sources. This is especially true of rural communities that have been entirely reliant on oil. He showed slide 10, titled "Alaska's Electric Utilities Continue to Diversify," which read as follows [original punctuation provided]:

- Diversification of electric systems has been underway for some time.
- Rural and Railbelt utilities are integrating solar, wind, batteries and looking at other clean energy sources in ways that are technically and economically feasible.
- Diversification can lead to increased energy security.
- Diversification Projects consist of both utility-built and electricity purchased from independent power producers (IPPs).
- Focus on reliability, economic, and technical feasibility.
- Important to note - renewable energy is not always a cheaper alternative.

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MR. ROVITO responded to questions from Co-Chair Holland and Representative Costello regarding clean coal and decarbonization. He stated that APA is "generation source agnostic" and is in favor of whatever generation source is the right one for the membership. He said he understands there have been advances in clean coal, but he could not speak to the technology. As to decarbonization, a number of the electric cooperatives have adopted carbon reduction goals.

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MR. ROVITO responded to a question from Representative Kopp concerning sources of power for the Railbelt utilities by explaining that a number of fuel sources are being considered and that no solutions should be taken off the table. The goal is to keep power reliable and affordable.

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MR. ROVITO addressed the issue of power generation in rural communities, agreeing with Co-Chair Mears' comments regarding the fragility of systems reliant entirely on deliveries of diesel to remote sites. He pointed out that as certain technologies advance, they may well become part of the solution for rural villages. He described the decision matrix that goes into adding different sources of power. He showed slide 11, titled "Considerations for Integrating Renewables," which read as follows [original punctuation provided]:

- It's more complicated than just putting up wind and solar.
- Electric utilities must consider:
  - Grid stability and reliability - Ensuring intermittent resources don't upset the balance of the grid.
  - Infrastructure upgrades - Enhancing transmission lines and other grid management systems.
  - Energy Storage - Manage variability and storage of excess energy.
  - Economic considerations - Cost of integrating renewables, backing up intermittent renewables with base load power and the cost of new infrastructure, etc.
- Baseload Power = the minimum level of continuous power required to meet the constant demand for electricity on the grid.

Alaska Powerline Podcast - May 2, 2024, episode  
Understanding the Challenges of Variable Energy

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MR. ROVITO responded to questions from Co-Chair Holland and Representative Kopp regarding power integration and storage by explaining that the APA utility organizations are looking closely at these issues. He discussed research into seasonal storage using batteries that would be advanced enough to store energy from solar panels during the long summer months for use during the dark months. He commented that some of the national labs and technology companies are coming to Alaska because "if it can work in Alaska, it can work anywhere." The National Renewable Energy Laboratory (NREL) has an office in Fairbanks because it wants to test the technologies.

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MR. ROVITO spoke of the importance of renewable energy for Alaska and how the state can be an investment partner with Alaska's electric utilities. He showed slide 12, titled "Renewable Energy Fund (REF)," which read as follows [original punctuation provided]:

- State grant program designed to reduce and stabilize energy costs through the development of renewable energy projects.
- APA supports full funding of the grant program in the FY26 budget.
- 2023 Report findings (AEA):
  - 60% of grants used to support the creation of a new project.
  - 90% of grants used for fuel displacement purposes.
  - 94% of grants have achieved this goal.
  - Offset approx. 85 million gallons of diesel fuel.
- REF grants lower impact on rates and can help advance projects quicker.

MR. ROVITO discussed the importance of diversifying power generation to meet the challenges of rural Alaska which has the most remote communities in the United States. He showed slide 14, titled "Alaska's Rural Electric Utilities," which read as follows [original punctuation provided]:

- Alaska's rural utilities are the most isolated in the United States.
- This makes reliability even more crucial.
- For most rural communities, there is no neighbor to draw power from in an emergency.
  - Rural utilities often rely on diesel generators due to their lack of connection to larger grids.
- Ongoing efforts to integrate renewable resources like wind, solar, hydropower, and batteries to reduce dependence on diesel.

MR. ROVITO moved to slide 15, titled "Rural Utilities Challenges and Opportunities," which read as follows [original punctuation provided]:

Challenges:

- High cost of fuel and transportation, especially in remote areas.
- Harsh weather conditions and geographic isolation.
- Lack of interconnection.
- Small ratepayer base.

Opportunities:

- Dedicated and talented workforce putting solutions into play.
- Federal and state investment in infrastructure.
- Technologies becoming more feasible in rural communities.
- Preservation and continuation of Power Cost Equalization Program.
- Seeing more collaboration with other entities now in the energy space.
- More relationships with IPPs.

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MR. ROVITO emphasized the importance of the Power Cost Equalization (PCE) program in rural Alaska. He moved to slide 15, titled "Power Cost Equalization," which read as follows [original punctuation provided]:

"The Monetary Infrastructure for Rural Alaska"

- Economic Assistance - The PCE program provides economic assistance to rural communities where the cost of electricity can be three to five times higher than in urban areas.

- Sustainability - By lowering electricity costs, the program helps ensure the sustainability of remote economies that depend on reliable, centralized power.
- Continued Support - The PCE program remains a critical component of Alaska's energy strategy, supporting rural communities and promoting economic stability.

MR. ROVITO showed slides 17 and 18, titled "Railbelt Electric Utilities," which read as follows [original punctuation provided]:

- Four cooperatives and one municipal utility
  - Golden Valley Electric Association, Matanuska Electric Association (the oldest co-op), Chugach Electric Association (the largest co-op/electric utility), Homer Electric Association, City of Seward
  - Incorporated as co-ops in the 1940s.
  - The Railbelt serves about 75 percent of Alaska's population.
  - The grid is a mix of energy sources:
    - Natural gas
    - Hydropower - Bradley Lake provides 10% of Railbelt electricity
    - Solar
    - Wind
    - Diesel
    - Coal
  - Working with Alaska Energy Authority to upgrade and modernize the grid.
    - This is crucial for maximum use of large-scale energy projects.
  - Working with IPPs to add diverse energy options.
  - Constructing community solar projects to allow more Alaskans to invest in solar energy.
  - Railbelt energy costs impact PCE rate for rural communities.
- Above all - keeping safety, reliability, and costs paramount.

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MR. ROVITO referred to Representative Costello's previous question about the Railbelt's transmission lines and the grid upgrades, explaining that work is underway to modernize the transmission grids. He showed slide 17, titled "The importance

of an unconstrained grid," which read as follows [original punctuation provided]:

- Electric utilities across the country are working to upgrade their transmission grids.
- Increased Capacity: Upgrading the grid allows for the integration of more renewable energy sources, which are often located far from where the power is needed, and increases the ability to transfer electricity from one area of the grid to another in a reliable manner.
- Grid Flexibility: Modernized grids can better handle the variability and intermittency of renewable energy, ensuring a stable supply.
- Continuous Power Supply: Redundancy ensures that there are multiple pathways for electricity to flow, so if one path fails, others can take over, reducing the risk of outages.
- Resource Efficiency: Allows for a more effective use of resources to reduce costs and use of limited and often expensive fossil fuels.
- Investment in upgrading the transmission infrastructure of the Railbelt will lead to more opportunities for diversification and energy security

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MR. ROVITO, in response to a question by Representative Edgmon, clarified that "grid" refers to the infrastructure and the "transmission line" that the GRIP grant refers to is just the line itself. He then moved to slide 18, titled "How can the legislature help?" which read as follows [original punctuation provided]:

- Do not take any solutions off the table.
- Work closely with electric utilities to craft legislation that promotes reliability and affordability.
- State should be an investment partner on electric infrastructure upgrades.
- While electric utilities have the same mission, they face different circumstances.
- It is important to consider the unique aspects of individual utilities when writing legislation.

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MR. ROVITO, in response to a question from Co-Chair Holland about the Governor's Task Force on Energy Security, stated that the recommendation with the most impact was the Railbelt transmission system upgrade. He explained there are many challenges in the state, and a variety of solutions will be needed.

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The committee took a brief at-ease at 2:04 p.m.

[2:05:24 PM](#)

CO-CHAIR MEARS announced that the next order of business would be a PowerPoint regarding the Railbelt Reliability Council (RRC) as part of Transmission and Generation presentation.

EDWARD JENKIN, CEO, Railbelt Reliability Council, presented a PowerPoint, titled "The Railbelt Reliability Council (RRC) Presentation to House Energy" [hard copy included in the committee packet]. He described the importance of diversifying generation sources to meet the needs of the Railbelt grid. He showed slide 2 which was an outline of the presentation. He explained the term "bulk electric system" includes both transmission and generation resources and that the mission of the RRC is to develop a regional plan for integrating Railbelt resources. He moved to slide 3, titled "The Railbelt Bulk Electric System," which read as follows [original punctuation provided]:

- An interconnected network of ~700 miles of highvoltage transmission lines, providing a physical path to serve approximately 750 MW peak load from ~2 GW of installed generating capacity
- Operated by 5 interconnected public utilities, 1 DoD contractor, and the State of Alaska.
- Encompassing three regions connected by single transmission lines with stability limits of about 10% of the peak load.
- Providing electricity for nearly ¾ of Alaska's population.

MR. JENKIN discussed the challenges of creating a network from interconnected utility systems operated by five different companies. These companies provide a "day ahead dispatch service" on a schedule to ensure that load and generation matches at all times. As long as they balance, they run at

60herz (Hz) which is what the system is designed for, and the protection systems assume a 60hz load. Each of the utility companies are responsible for putting together a schedule and operating at reasonable similarity in order to maintain the integrity of the system. Automatic systems monitor those systems on a four-to-six cycle basis, much less than a second, and adjustments are frequently sent to the generators to make sure 60hz is maintained. Significant collaboration must occur within the Railbelt to maintain the system. Through the direction of the regulatory commission of Alaska, Chugach Electric Association and Matanuska Electric Association formed a single operating entity, so they would have a single load balancing area. This simplifies the coordination of the system. He noted that utilities are jointly looking at single generation resources and looking forward to the Railbelt Integrated Resource Plan (RIRP) to consolidate and create efficiency while looking at larger projects moving forward.

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MR. JENKIN responded to a question from Co-Chair Mears regarding the issue of maintaining balance and regulating loads. He explained that every load-balancing area must maintain enough reserve to operate their system, and if there is an issue, they can respond in order to get the system back to 60hz. If the load deviates there must be enough regulation available to manage that deviation.

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MR. JENKIN, in response to a question from Representative Kopp, explained that 60hz is the frequency of the power system used by the United States and Canada, and it is what all the appliances use. He explained what happens when a power system has both less and more than 60hz and what it means to "shed load" to rebalance to maintain 60hz. All the utilities monitor the loads to maintain 60hz. He described the issue of stability limits with a single transmission for the Railbelt and what types of events trigger a line to "trip out" and cause an outage. He explained that increasing interconnections between locations will improve the strength of the system and improve the transfer limits.

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MR. JENKIN described the events that led to the creation of a regional organization which would look at overall resource

planning and necessary transmission improvements. This took place when the Railbelt utility companies started to replace older generation with new more economic systems which increased efficiency. He showed slide 4, titled "Why the RRC - Reduce Long-Term Costs," which read as follows [original punctuation provided]:

- Generation Planning
  - Utility Generation
    - CEA 2013 - 200MW 3X1 Combined Cycle Facility (w/ ML&P)
    - MEA 2014 - 171MW Reciprocating Engine Facility
    - ML&P 2016 - 129MW 2X1 Combined Cycle Facility
- Transmission System Concerns

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MR. JENKIN, in response to a question from Representative Edgmon, described the funding issues facing the Railbelt utility companies as they seek to improve transmission and satisfy the needs of their consumers. He discussed the regional approach to the issue as well as what is currently funded and what is not.

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MR. JENKIN discussed additional concerns faced by the Railbelt utilities and the necessity for development of standards including the need for critical infrastructure protection standards, protection from cyber-attacks, and the need for unified standards so the utilities are working with the same standards and generation models to maintain 60hz. He moved to slide 5, titled "Why the RRC - Ensure Reliability," which read as follows [original punctuation provided]:

Reliability Standards Development and Enforcement

- System Modeling
- Generation and Load Balancing
- Facilities Interconnection
- Transmission Planning
- Monitoring and Enforcement

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MR. JENKIN responded to a question from Representative Costello by summarizing the technicalities of capacity and reserves. He touched on how the technology of batteries has improved the ability to store reserves. He pointed out that reserves are

primarily for identified contingencies and integrated resource planning.

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MR. JENKIN responded to a question from Co-Chair Holland by discussing the resource planning aspects of the budget. He pointed out that there would likely be a temporary increase in budget for implementation of the integrated resource planning and bringing on additional resources. Those investments should result in future decreases in the budget.

[2:39:50 PM](#)

LOU FLORENCE, Chairman, Railbelt Reliability Council Board, responded to a question from Representative Holland by describing the process the RRC goes through to set the budget. It is a formalized budgetary process with detailed line-items. The budgets from 2024 and 2025 had to be submitted to the Regulatory Commission of Alaska which goes to a public docket for comment. There is a balancing mechanism so that if the allocated money is not spent, then the following year it will result in a surcharge adjustment. This process has a good deal of scrutiny, so there is confidence in that work. There will be a ramp up in 2025 in order to implement the integrated resource plan. That is projected to peak in 2026, and then the RRC will see a longer-term change in the budget.

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MR. JENKIN showed slides 6, 7, and 8, briefly summarizing each. The slides were titled "Who is the RRC," and read as follows [original punctuation provided]:

Legislatively Established Electric Reliability  
Organization

- Establish reliability standards through an open and transparent public process (AS 42.05.765).
- Monitor and enforce compliance with reliability standards, including investigation of alleged and possible imposition of penalties for confirmed compliance violations (AS 42.05.775).
- Develop and adopt a comprehensive Integrated Resource Plan (IRP) for the applicable Bulk Electric System (AS 42.05.780).

Commission Regulated

- The commission shall adopt regulations governing electric reliability organizations (AS 42.06.770)

#### Who Pays for the RRC

- The RRC is funded through a surcharge that is allocated to load-serving entities (Railbelt utilities) through the ERO tariff.
- As public-power utilities, the only way to pay for these costs is through consumer electric rates or operating margins.
- As anticipated in the regulations, most LSEs have implemented a transparent per-KWh line item on customer bills, similar to the Regulatory Cost Charge.

#### A stakeholder organization

- The RRC is governed by a thirteen voting-member :
  - 6 utilities (CEA, GVEA, HEA, MEA, Seward, Doyon Utilities)
  - Alaska Energy Authority
  - 2 Independent Power Producers
  - 1 seat advocating for residential-small commercial interests (Alaska Public Interest Research Group)
  - 1 seat advocating for large commercial and/or industrial users (Fairbanks Gold Mining Inc./ Kinross)
  - 1 seat representing electricity consumers who advocate in support of the reduction of environmentally harmful greenhouse gas emissions and/or other environmental concerns regarding the Railbelt electric system (Renewable Energy Alaska Project)
  - 1 independent, non-affiliated member
- The RCA and RAPA each hold one non-voting, ex-officio seat on the Board

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MR. JENKIN moved to slide 9, titled "Who is the RCC," and provided a summary of the staff, the technical advisory group, and the working groups comprised of stakeholders. He advanced to slide 10, titled "Program Status - Integrated Resource Planning," which read as follows [original punctuation provided]:

- Integrated Resource Planning
- Staffing

- Policy Development
- Independent Technical Expertise
- 2026 Completion

MR. JENKIN completed his presentation with a brief summary of slide 11, titled, "Program Status - Standards" which read as follows [original punctuation provided]:

Standards Development

- Weekly operational standards working group meetings
- Four standards before the RCA for approval
- Additional standards before the RRC Board for transmittal
- Critical Infrastructure Protection standards development started
- 28 Standards to be completed in 2025

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MR. JENKIN addressed questions from Representative Kopp and Co-Chair Holland by acknowledging that the work will be transformative. He explained that the work between rural Alaska and the Railbelt is a shared venture. The work done in rural areas regarding integrating smaller generation can also be applied to the Railbelt.

[3:00:24 PM](#)

**ADJOURNMENT**

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 3:00 p.m.