

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

March 26, 2024

10:18 a.m.

**MEMBERS PRESENT**

Representative George Rauscher, Chair  
Representative Tom McKay  
Representative Thomas Baker  
Representative Stanley Wright  
Representative Mike Prax  
Representative Calvin Schrage  
Representative Jennie Armstrong

**MEMBERS ABSENT**

All members present

**COMMITTEE CALENDAR**

PRESENTATION(S): THE RAILBELT TRANSMISSION GRID: NOW AND FUTURE

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

GWEN HOLDMANN, Senior Researcher  
Associate Vice Chancellor for Research, Innovation, and Industry  
Partnerships  
University of Alaska Fairbanks  
Fairbanks, Alaska

**POSITION STATEMENT:** Gave the Railbelt Transmission Grid: Now and Future presentation.

**ACTION NARRATIVE**

[10:18:21 AM](#)

CHAIR RAUSCHER called the House Special Committee on Energy meeting to order at 10:18 a.m. Representatives Rauscher, McKay, Baker, Wright, Prax, Schrage, and Armstrong were present at the call to order.

**PRESENTATION: THE RAILBELT TRANSMISSION GRID: NOW AND FUTURE**

[10:19:28 AM](#)

CHAIR RAUSCHER announced that the only order of business would be the Railbelt Transmission Grid: Now and Future presentation.

[10:21:01 AM](#)

GWEN HOLDMANN, Senior Researcher, Associate Vice Chancellor for Research, Innovation and Industry Partnerships, University of Alaska Fairbanks, gave the presentation, titled "The Railbelt Transmission Grid: Now and Future," [hardcopy included in the committee packet]. She began on slide 2, which described a future vision for the Railbelt's transmission grid and its ability to deliver power to customers on it. She continued to slide 3, which displayed a historical map of the Railbelt region of Alaska and gave a brief history of the Railbelt's past infrastructure projects and plans. She moved to slide 4, which explained both the political history of the Railbelt and how problems with the Railbelt have been historically addressed.

[10:30:26 AM](#)

MS. HOLDMANN, in response to a question from Chair Rauscher about why Alaska is not using its power optimally, explained that the utilities have been working to optimize the current transmission system, and she used the Golden Valley Electric Association (GVEA) and the Bradley Lake Hydroelectric System as examples of utilities companies that are succeeding with the current system. In response to Representative Prax, she said that privatization of the Railbelt is a direction that many people along the Railbelt would like to see happen, and that would be dependent on the cost-competitive nature of differing energy projects and generation methods. She noted that future projects along the Railbelt's transmission line would be completed by private sector enterprises. To a follow-up question regarding clean energy tax subsidies, she said that pertains to planning systems used to construct new projects along the Railbelt grid.

[10:38:28 AM](#)

MS. HOLDMANN resumed the presentation on slide 5, which explained federal funding opportunities being utilized along the Railbelt grid. She moved to slide 6, which described the current series of constraints on development and progress that the Railbelt grid is experiencing. In response to a question

from Chair Rauscher, she explained that there is a Railbelt Reliability Council that sets the reliability standard, coordinates joint planning, and ensures interconnection protocols for independent utilities that want to use the grid, and that organization would need more time to determine the downstream effects of Senate Bill 123, passed during the Thirty-First Alaska State Legislature. To a second question, she said that there are limited opportunities for economic dispatch currently. She described the specific roles each utility along the Railbelt grid plays in maintaining operations.

[10:47:50 AM](#)

MS. HOLDMANN, in response to questions from Representative McKay, relayed that currently the Railbelt grid serves a bit over 500,000 people. She said Alaska is different from other states because of the geographic challenges it faces. She cited Hawai'i and Iceland as better examples to compare to Alaska's power grid.

[10:50:12 AM](#)

MS. HOLDMANN resumed the presentation on Slide 7, which described the practical realities that the railbelt grid faces in its current operation. She moved to slide 8, which emphasized that the location of a generation source could change in the future. She continued to slide 9, which outlined three goals for the railbelt grid to achieve as a whole, as follows [original punctuation provided]:

1. Eliminate pancaking wheeling rates and establish a framework for how transmission costs will be recovered and allocated
2. Create an organization that can oversee, manage and develop backbone transmission assets and that is subject to appropriate regulation
3. Re-imagining a planning process that uses a whole-system approach (transmission, generation, and distribution)

MS. HOLDMANN, in response to Chair Rauscher, she explained that the term "pancaking" is used to describe the stacking costs across different parts of the system together with the fixed costs of the system. To a second question, she confirmed that the number figures used in the presentation were current rather than historic.

[10:58:16 AM](#)

MS. HOLDMANN resumed the presentation on slide 10, which gave ideas as to how the legislature could establish a framework to recover and allocate the costs of the Railbelt. She moved to slide 11, which elaborated on the first of the three previously mentioned goals and continued to slide 12, which explained cost recovery efforts being made under the Railbelt's current model of funding and allocation.

[11:02:10 AM](#)

MS. HOLDMANN, in response to questions from Representative Prax, said costs to the ratepayer are about power versus energy value; energy is the legal metric being used to determine the value and cost to a ratepayer on the Railbelt. Different users have different criteria for how they use the grid, she explained, and emergency calculations would depend on the type of user on the grid.

[11:08:46 AM](#)

MS. HOLDMANN resumed the presentation on slides 13 and 14, both of which described the second of the three previously mentioned goals by explaining and giving examples of their application in other countries. She moved to slide 15, which described the final of the three previously mentioned goals by outlining the development of a plan for the entire Railbelt. She concluded the presentation on slide 16, which gave a final overview of the three previously mentioned goals for the Railbelt grid.

[11:14:45 AM](#)

MS. HOLDMANN, in response to Representative McKay, advised that power cost equalization (PCE) has been directly tied to the cost of Cook Inlet Gas and explained how that would correlate with a higher cost of energy along the Railbelt.

REPRESENTATIVE MCKAY commented that there is a need for the State to address the military's need for reliable power.

[11:20:34 AM](#)

MS. HOLDMANN, in response to a question from Chair Rauscher as to how a transmission line upgrade would help balance the initial costs of infrastructure upgrades to the Railbelt grid, explained that there would be a higher value associated with the

construction of Railbelt assets because of their expected longevity. She said that there is still a significant need to de-constrain the current generation points on the Railbelt, and she shared her belief that the lack of gas in the Cook Inlet Region is more concerning for home heat generation than for power generation along the Railbelt grid.

[11:24:45 AM](#)

MS. HOLDMANN responded to questions from Representative Prax. She said that the proposed upgrade wouldn't apply to the northern part of the system and explained how the upgrade would affect the south part of the system. She explained that the current intertie is the limit of the power that GVEA can purchase, and she shared her hope that upgrades to the northern part of the system would come along sooner rather than later.

CHAIR RAUSCHER commented that Curtis Thayer of the Alaska Energy Authority had said that the upgrades are proposed to be complete between 2030 and 2032.

MS. HOLDMANN responded that the current funding secured through the grid resilience innovation partnerships (GRIP) program are more related to the existing projects that need more cashflow. In response to a question from Representative Prax regarding phase 2 and 3 of the Railbelt grid's upgrades, she said the project would move forward whether or not there were federal funding. She emphasized that it is important for the federal government to know that the utilities and local governments have a plan in place to construct and use energy produced by any given grant.

[11:30:58 AM](#)

#### **ADJOURNMENT**

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 11:31.