ALASKA STATE LEGISLATURE
HOUSE EDUCATION STANDING COMMITTEE
April 4, 2022
8:08 a.m.

MEMBERS PRESENT

Representative Harriet Drummond, Co-Chair
Representative Andi Story, Co-Chair
Representative Tiffany Zulkosky (via teleconference)
Representative Mike Cronk
Representative Ronald Gillham

MEMBERS ABSENT

Representative Grier Hopkins
Representative Mike Prax

COMMITTEE CALENDAR

PRESENTATION: SCHOOL DISTRICT ENERGY COSTS IN ALASKA

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

DIANE HIRSHBERG, PhD, Director
Institute of Social and Economic Research
University of Alaska Anchorage
Anchorage, Alaska
POSITION STATEMENT: Co-presented a PowerPoint, titled "School District Energy Costs in Alaska."

CHRIS MCCONNELL, Director
Alaska Network for Energy Education and Employment;
Renewable Alaska Energy Project
Anchorage, Alaska
POSITION STATEMENT: Gave comments and answered questions about energy usage and efficiency in Alaska's school districts.

TIM MEARIG, Facilities Manager
School Finance and Facilities Section
Department of Education and Early Development

Juneau, Alaska
POSITION STATEMENT: Gave comments and answered questions about energy usage and efficiency in Alaska's school districts.

NATHAN GREEN, Research Professional
Alaska Center for Energy and Power
University of Alaska Fairbanks
Juneau, Alaska
POSITION STATEMENT: Co-presented a PowerPoint, titled "School District Energy Costs in Alaska."

ACTION NARRATIVE

8:08:54 AM

CO-CHAIR HARRIET DRUMMOND called the House Education Standing Committee meeting to order at 8:08 a.m. Representatives Gillham, Cronk, Story, and Drummond were present at the call to order. Representatives Zulkosky arrived (via teleconference) as the meeting was in progress.

PRESENTATION: School District Energy Costs in Alaska

8:09:42 AM

CO-CHAIR DRUMMOND announced that the only order of business would be a presentation on school district energy costs in Alaska.

8:10:45 AM

DIANE HIRSHBERG, PhD, Director, Institute of Social and Economic Research (ISER), University of Alaska Anchorage, presented a PowerPoint, titled "School District Energy Costs in Alaska" [hard copy included in the committee packet]. She said that ISER publications and presentations are solely the work of individual authors and should not be attributed to ISER, the University of Alaska Anchorage, or the research sponsors. She gave an overview, stating that energy costs in Alaska school districts are high because of remoteness, limited options for heat and electricity, and the climate. She suggested that investments in renewable energy and energy efficiency would address costs; however, the data is insufficient to estimate the savings. She stated that per capita energy consumption in Alaska is the fourth highest in the nation. She attributed this to the small populations, harsh winters, and energy intensive industries. She added that the average price of electricity in

the state is the second highest in the nation and twice the national average, with the highest costs in the stated being in remote areas. She stated that school district costs for heating oil are determined through annual contracts which are renegotiated each year. She explained that, if oil prices fall mid-year, no savings are possible, and if a district underestimates fuel needs, on-the-spot purchases could incur significant costs.

8:15:55 AM

DR. HIRSHBERG noted that according to the 2021 energy audits of 156 public schools, the schools could save an average of $33,300 per year if energy efficient retrofits were implemented. She said this would have an upfront cost of $125,000. She estimated there would be a return on the investment in about four years; however, no schools have implemented upgrades. She reported that 50 percent of electricity generated in Alaska comes from natural gas, which is limited to communities on the Railbelt and nearby, like in Utqiagvik. She added that 27 percent of Alaska's energy comes from hydroelectric power, which could be impacted by drought. She stated that off-road communities use heating fuel, diesel, or biomass plants for heat. She indicated that there is not a comprehensive list of energy sources for schools.

8:18:56 AM

DR. HIRSHBERG said 74 percent of energy in 2014 had been used to heat buildings. The remaining usage included heating water, ventilation, refrigeration, and cooking. Many factors impact energy usage, including size, age, and construction of buildings. She said there is significant variation between district budgets and the percentage spend on energy. For example, the Yukon Flats District used 10 percent of its budget on energy due to extremely harsh winter conditions, while 6 districts spent 8 percent, 4 districts spent around 7 percent and 11 districts spent between 5 percent and 6.8 percent of its budget on energy. She moved to slide 10, which showed a comparison of energy costs in areas divided into climate zones and on-road versus off-road areas. She explained that energy costs vary because of the age and quality of the buildings in different districts, and this impacts energy needs differently.

8:25:29 AM

DR. HIRSHBERG stated that ISER currently does not know the areas of energy inefficiencies; however, to better understand energy usage, efforts are underway to install energy monitoring systems across school districts. She stated that the Department of Education and Early Development (DEED) is collecting data from the districts which are applying for retrofit funds; however, to understand the full picture of energy costs and usage, more data is needed. She observed that Alaska's climate and remoteness cannot be changed, so to address the high cost of energy, the state would need to consider factors within its control, including energy efficiency and renewable energy. She stated that to estimate savings, there needs to be more systematic data collection. She stated that school business officers have helped to provide information about primary heating sources; however, energy audits are beyond the scope of this staff. She suggested that a coordinated effort by energy-audit experts would create a more complete picture. She also discussed the possibilities of removing energy costs from the funding formula, because the volatility of energy costs harms districts, even when more funding is granted.

8:36:21 AM

CHRIS MCCONNELL, Director, Alaska Network for Energy Education and Employment, Renewable Alaska Energy Project, stated that energy savings contracts are available to school districts. This involves an energy audit from a contractor, with retrofits implemented into the school district as part of the paid service. He mentioned that many school districts are capable of auditing and retrofitting themselves through incentives within the maintenance departments. Doing this would ensure the savings be reinvested in new efficiencies for the district, instead of employing an outside organization.

8:41:22 AM

TIM MEARIG, Facilities Manager, School Finance and Facilities Section, Department of Education and Early Development, affirmed that districts are aware of energy performance contracting, and some districts have already engaged in this. He stated that these contracts help reduce energy consumption and result in energy savings; although, a significant portion of the savings are passed on to the energy company which makes the initial investments. He continued that there is an upfront cost, but once energy contractors have made money, savings would be passed to the districts. Dependent on the specifics in the contract,

he said, using a contractor would lengthen the amount of time for a district to accrue savings.

8:48:23 AM

MR. MEARIG expressed the opinion that, in general, districts are doing a great job paying attention to energy costs. He said that in 1999 and 2000, at the direction of the legislature, DEED implemented facility requirements to ensure school buildings were being properly cared for. If met, these requirements would help qualify the districts for state aid for major maintenance and school construction projects. To be eligible for state aid expenditures, he stated that districts are required to track consumption of energy for every building on a month-to-month basis. He stated that low level auditing of energy usage has highlighted potential disparities between school districts. He added that DEED has implemented a stringent energy efficiency standard for new projects with state aid. Regulations have also been implemented requiring a demonstration of retro commissioning of existing buildings, with energy-use intensities tracked in these buildings. In relation to energy performance criteria, energy-tracking analysis will help DEED to determine when to increase energy efficiency by implementing tune-ups or installing new energy-saving technologies.

9:04:15 AM

DR. HIRSHBERG expressed the concern that modifications to the Power Cost Equalization Program will create higher energy costs for Alaskans "on the edge." She said ISER is working with the Energy Transitions Initiative Partnership, but there is a burden on villages to apply for funding, which is difficult because staff are already overwhelmed.

9:12:43 AM

NATHAN GREEN, Alaska Center for Energy and Power, University of Alaska Fairbanks, mentioned his involvement in the presentation had been on the "technical side" and less to do with the context of the data.

9:14:50 AM

MR. MERIG noted the challenges because of the lack of data on districts' work to increase energy efficiency. He stated that data exists in relation to some energy improvements within state funded projects; however, few of these projects are solely

related to energy efficiency. He pointed out that there are success stories throughout the state concerning energy efficiency initiatives, but these are in relation to school boards and are not necessarily reported to DEED. He stated that school boards are aware of local energy costs and are taking steps to reduce those costs through energy reduction projects; unfortunately, it would take a lot of time and effort to amass all the energy efficiency projects across the state.

9:19:41 AM

DR. HIRSHBERG mentioned that an updated geographic cost differential study would need to be done to give more accurate information about the cost of living in the state. She expressed the opinion that energy issues will always be tricky because costs are so volatile, and calculations to determine the geographic cost differential could be impacted very quickly. She gave the example of Southeast Alaska during a drought. She explained that normally Juneau uses hydropower, but if a drought hits, Juneau must swap to diesel power. Energy costs may change after an updated geographic cost differential, as it is currently a less reliable source of data. She reiterated the possibility that the cost of energy could be removed from school budgets and addressed separately. She maintained that everyone benefits when school districts and communities have more efficient buildings and more access to renewables.

9:23:38 AM

MR. MCCONNELL responded to Representative Cronk's request for district reporting of energy improvement projects. He emphasized that facilities and maintenance employees have many responsibilities, including keeping track of energy usage. He stated that, in his experience, facilities maintenance workers occupy most of the workday "putting out fires."

9:27:02 AM

CO-CHAIR STORY mentioned that the Alaska Association of School Business Officials oversees budgets in individual districts and could be a better pathway to find the information needed to obtain data about energy efficiency in each district. She suggested that the Alaska Association of School Boards annual meeting could be a good time and place to get in touch with this organization.

9:30:51 AM

MR. MEARIG mentioned that there are 97 projects on the current fiscal year 2023 list. Each project is validated by DEED. He stated that the cost of state aid funded projects is $197 million, with a grand total of $260 million. He explained that over half of the projects listed include elements of energy efficiency and repairs to aging energy systems. New roofing projects include insulation which will have a significant impact on energy efficiency for those buildings.

9:35:44 AM

MR. GREEN thanked the committee.

9:36:30 AM

ADJOURNMENT

There being no further business before the committee, the House Education Standing Committee meeting was adjourned at 9:36 a.m.