ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON ENERGY
February 21, 2017
10:32 a.m.

MEMBERS PRESENT

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

MEMBERS ABSENT

Representative Dean Westlake

COMMITTEE CALENDAR

PRESENTATION: ALASKA ENERGY AUTHORITY AGENCY OVERVIEW

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

MICHAEL LAMB, Interim Executive Director and CFO
Alaska Energy Authority (AEA)
Department of Commerce, Community & Economic Development
Anchorage, Alaska
POSITION STATEMENT: Presented a PowerPoint titled "Alaska Energy Authority Agency Overview."

KATIE CONWAY, Government Relations Manager
Alaska Energy Authority
Department of Commerce, Community & Economic Development
Anchorage, Alaska
POSITION STATEMENT: Presented a PowerPoint titled "Alaska Energy Authority Agency Overview."

KRIS NOONAN, Program Manager
Rural Power Systems
Alaska Energy Authority

Department of Commerce, Community & Economic Development
Anchorage, Alaska
POSITION STATEMENT: Answered questions during the Alaska Energy Authority agency overview.

SEAN SKALING, Assistant Executive Director
Policy & Programs Director
Alaska Energy Authority
Department of Commerce, Community & Economic Development
Anchorage, Alaska
POSITION STATEMENT: Answered questions during the Alaska Energy Authority agency overview.

ACTION NARRATIVE

10:32:12 AM

CHAIR ADAM WOOL called the House Special Committee on Energy meeting to order at 10:32 a.m. Representatives Wool, Spohnholz, Claman, Johnson, Johnston, and Rauscher were present at the call to order.

Presentation: Alaska Energy Authority Agency Overview

10:32:46 AM

CHAIR WOOL announced that the only order of business would be a presentation by the Alaska Energy Authority.

10:33:14 AM

MICHAEL LAMB, Interim Executive Director and CFO, Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development, read from slide 2, stating that AEA's mission was to reduce energy in Alaska. He reported that AEA had been formed in 1976, and then in 1999, the Alaska State Legislature reasserted that AEA was the state energy office. He shared that there was desire at that time for a reuniting of the energy programs and the owned assets. He said that there had been a renewed focus of funding for rural infrastructure. He stated that in 2007 - 8, when oil prices "went exceedingly high", there was a renewed focus by the legislature for renewable energy development and energy planning. At this time, the AEA board changed its bylaws and management structure, separated from Alaska Industrial Development and Export Authority (AIDEA), and AEA focused on the cost of energy, while AIDEA focused on jobs

and economic development. He pointed out that, in 1993, the Alaska State Legislature had consolidated Alaska Industrial Development and Export Authority and AEA. He noted that these organizations had shared services since then.

10:36:52 AM

CHAIR WOOL asked if the two organizations still shared services.

MR. LAMB noted that the agency was outlined in AS 44.83.070, stating that AEA promoted and developed economic welfare, as well as providing a means to finance and operate power projects and facilities. He referenced AS 42.45.900 which was "more on point to the things that we're gonna talk about today." He relayed that the statute stated that "the authority shall provide the technical assistance to help with rural utilities and help with catastrophic prevention." He added that these provided training programs for utility projects to improve efficiency, safety, dependability, affordability, and reliability of the power systems. He relayed that AS 42.45 instructed that "at a minimum, the assistance and training must include" and be related to distribution systems, generators to be more fuel efficient, preventative maintenance, safety inspections, and include priority for contracting with the private industry.

10:40:14 AM

MR. LAMB moved to slide 3, "Alaska Energy Authority Activity Quadrants," which depicted a four quadrant system with two rural quadrants and two urban quadrants for ongoing programs and infrastructure projects. He pointed out that the programs were items in the operating budget and the projects were capital budget items.

10:41:20 AM

MR. LAMB moved on to slide 4, "Presentation Order," which he deemed to be the basics items the committee had requested to cover. He addressed slide 6, "Rural Programs/Services" and spoke about the Power Cost Equalization (PCE) utility training. This was a program for clerks from rural communities for on-site training at the AEA offices. He added that the utility operator training program was hands on, technical training in Seward for individuals from the rural communities who operated the utility systems. He stated that technical assistance was a phone system for the rural communities to call when necessary. He explained

that the circuit rider was when central staff went on-site to the locations.

10:43:59 AM

KATIE CONWAY, Government Relations Manager, Alaska Energy Authority, Department of Commerce, Community & Economic Development, directed attention to slide 7, "Rural Projects/Infrastructure" and relayed that she would explain this list of rural energy programs later in the presentation.

MR. LAMB presented slide 8, "PCE Clerk Training (by community) (2012-2016)" and slide 9, "Utility Operator Training (by community) 2011-2016." He said that 37 communities had sent employees to the AEA offices in Anchorage for PCE training, and 92 communities had sent operators for training. He pointed out that, as there was staff turnover, this often resulted in the same community sending employees for training more often.

10:46:45 AM

REPRESENTATIVE JOHNSTON asked if there was any cross training between these two programs.

MR. LAMB said that there was a rural outreach person who talked about PCE.

REPRESENTATIVE JOHNSTON suggested that there could be a cross fertilization connectivity done through the circuit rider.

MR. LAMB offered his belief that everyone in the AEA shop was aware of the PCE program and its critical need to the communities.

10:48:53 AM

CHAIR WOOL asked if there was a requirement that a community which received PCE funding had to receive PCE training.

MR. LAMB replied that, at some point, someone in each PCE community had received the training. He relayed that the difficulty arose when that trained person left, and it was then necessary to get a new person trained.

MS. CONWAY added that rural operators were brought in for training during construction of new power house systems.

MR. LAMB explained that everyone at AEA did whatever was necessary to ensure that the rural communities had the necessary training and help. He directed attention to slide 10, "Utility Remote Technical Assistance (by community) 2012-2016," and reported that 77 communities had used the service, noting that during one three-month period there had been more than 1,000 calls. He reiterated how critically important this program was for rural communities.

10:51:46 AM

MR. LAMB addressed slide 11, "Circuit Rider Assistance (by community) 2011-2016," and slide 12, which reflected the dispersal for the coverage of the AEA programs and services. He moved on to slide 13, and discussed electrical emergency assistance provided by AEA. He opined that this emergency response availability was linked to appropriations, and he pointed out that "electrical emergency" was defined as an imminent danger to life or likelihood of significant disruption of electrical service. He said that this was funded out of the project budget, which he deemed made sense. He pointed out that AEA could respond if there was an imminent danger, whereas in the event that AEA does not receive funding, then the lights have to be out before any other group could respond to the emergency.

10:56:21 AM

MR. LAMB shared slide 14, "Emergency Response Flow" which depicted the sequence of events that happen when there was an emergency. He stated that it was especially directed toward funding, what would happen in the future, and how responsible the state was for a loss of power. He questioned whether there was a dis-incentive for utilities to not maintain equipment in the rural communities, if they were aware that the state would come and fix it. He shared the sequence for a power outage, followed by a phone call to activate the AEA Emergency Response to help diagnose the problem, and then, depending on the nature of the problem, the utility staff, AEA personnel, or a contractor would be engaged for the repairs. Once the problem was fixed and power was restored, the "imminent danger" was over. He declared that this was the point when the AEA role and financial responsibility was finished. After the emergency, it became the responsibility of the utility to do the necessary permanent repairs.

10:58:37 AM

REPRESENTATIVE JOHNSTON asked if the state liability was over once the imminent danger was passed.

MR. LAMB expressed his agreement.

REPRESENTATIVE JOHNSTON asked if a distance response for utilities was this still available to manage the generation from afar.

MR. LAMB replied that the AEA technicians had ongoing monitoring of the utilities.

REPRESENTATIVE JOHNSTON mused that this technology was being used.

MR. LAMB said, yes, to some extent. He stated that, prior to the circuit rider program, there was an average of one catastrophic failure of a generating facility per year; whereas, now there was one catastrophic failure every five years. He stated that the training and the phone calls had "hugely benefited all of the utilities in the state."

CHAIR WOOL asked if AEA billed the community.

MR. LAMB replied, "no."

CHAIR WOOL asked whether the catastrophic failure rate was per year or per community.

MS. CONWAY replied that the rate was per year.

MR. LAMB reported that there were about 244 generating utilities in Alaska.

CHAIR WOOL mused that for these 244 utilities there was about one failure every five years.

MR. LAMB relayed that the bad news was always reported to the board, but not as much of the good news.

11:02:37 AM

MR. LAMB returned to slide 14, and shared that Arctic Village and Diomede had received funding for the necessary permanent repairs. In response to Chair Wool, he said that Diomede had

used money from the CDQ, Community Development Quota, which he called "fish money."

11:03:24 AM

MR. LAMB moved on to slide 15, "Electrical Emergencies FY 06-16 (by community)" and explained that the communities were each color coded to reflect the amount of emergency assistance requested during that time frame. He stated that the amount of assistance was "not as bad as you would think" and that this was trending upward toward fewer emergencies. He addressed slide 16, "Ten Year Average for Emergency Response," and said that, on average about $285,000 per year was paid by the state for work on about $1 billion of infrastructure. He offered an analogy for the cost of roadside assistance per vehicle.

CHAIR WOOL asked about if all the communities had some contact with AEA either through assistance or training.

MR. LAMB offered his belief that, outside the Railbelt, AEA had contact with many communities.

MS. CONWAY touched on slide 17, "Bulk Fuel and Rural Power System Upgrades 2000-2016," stating that these were project oriented programs which worked in tandem with the technical assistance and training in rural communities. She reported that communities with fewer than 2,000 persons were eligible for these programs. She shared slide 18, "Investing in rural energy projects" and stated that Rural Power System Upgrades projects generally increased the efficiency for generating electricity by 10 - 20 percent or more. She declared that it was imperative for these remote communities to have a facility for buying fuel in bulk and thereby lowering the fuel cost. She noted that there had been more than 100 rural power system upgrade projects and more than 100 bulk fuel upgrade projects completed over the past 10 years.

11:11:15 AM

REPRESENTATIVE JOHNSTON asked about soil contamination from oil tank farms.

MS. CONWAY replied that the bulk fuel upgrade program did address contaminated soils and any necessary remediation.

REPRESENTATIVE JOHNSTON asked if there was a fiscal note for this impact.

MR. LAMB explained that AEA did not have responsibility for the individual fuel farms. He shared that, as the older fuel farms were being rebuilt, then higher standards were put into place.

REPRESENTATIVE JOHNSTON asked whether there was any state liability for exposure.

11:12:56 AM

KRIS NOONAN, Program Manager, Rural Power Systems, Alaska Energy Authority, Department of Commerce, Community & Economic Development, in response to Representative Johnston, said that AEA worked with the Department of Environmental Conservation (DEC) if a contaminated site was located in a community, and that DEC was the entity responsible for any clean-up work on a contaminated site. He stated that AEA would work in conjunction with DEC to mitigate as much damage as possible when building a new tank farm.

REPRESENTATIVE JOHNSON asked who owned the land occupied by the tank farm.

MR. LAMB replied "whomever it could be" and, in response, he said that generally it was not owned by the state.

11:14:38 AM

MR. LAMB read an e-mail from Fort Yukon regarding combined heat and power.

11:16:32 AM

MR. LAMB presented slide 20, "Power Cost Equalization (PCE) Communities" which depicted a map of Alaska and the PCE communities. He reported that there were 193 PCE communities as of February 2017. He moved on to slide 21, "Stabilizing Power Rates" which charted the PCE base rate, determined by the average rates in Fairbanks, Juneau, and Anchorage, and the cost per kilowatt to generate and distribute electricity in all the PCE communities. The graph also depicted the effective net rate after payment of the PCE.

11:19:13 AM

SEAN SKALING, Assistant Executive Director, Policy & Programs Director, Alaska Energy Authority, Department of Commerce,

Community & Economic Development, in response to Representative Claman, explained that the least expensive communities portrayed on the graph were in the North Slope Borough and the most expensive communities were [indisc.], those communities with small loads and high costs for delivery.

CHAIR WOOL asked if some of the communities depicted were not receiving PCE.

MR. LAMB explained that there was a formula, and that a low effective rate did not always allow for PCE.

11:21:00 AM

MR. LAMB addressed slide 22, "Electric Sales in PCE Communities (kWh)," a pie chart which showed that 71 percent of all kWh (kilowatt hours) were not PCE eligible, this would increase local pressure to ensure low rates. He reminded the committee that each residential household only qualified for PCE for the first 500 kWh.

MS. CONWAY, in response to Representative Johnston, said that community facilities were determined dependent on use.

11:23:16 AM

[indisc]

11:23:46 AM

CHAIR WOOL offered his belief that, if 29 percent of kWh were eligible for PCE, then the rate referred to on slide 21 should not be reduced by more than this amount.

MR. LAMB explained that slide 21 was not a depiction in dollars, but rates per kilowatt.

CHAIR WOOL reiterated his question. He asked if PCE was a disincentive to trying alternative energy.

MR. LAMB pointed out that slide 21 represented the effective kilowatt rate and did not represent the actual dollars charged and collected. He noted that, although the residential customer benefited, the bill was paid by the state and the residential customer. He reported that a rural household used far less electricity than an urban household, often less than the 500 kWh.

CHAIR WOOL surmised that, as the rate went so high after 500 kWh, the rural household was more cognizant of use. He suggested that the way PCE worked was not as obvious to an urban dweller.

MR. LAMB relayed that the cost per kWh was whatever it was, and that rural residents would not haphazardly use electricity because they would have to pay full rate beyond 500 kWh. He said that the cost was a huge incentive, and that it was still very high, even with PCE. He moved on to slide 23, and said that renewable energy fund (REF) projects did not penalize PCE recipients. He explained that, from a savings by an REF project, there was a savings to community PCE-ineligible kWhs, to the PCE program through reduced disbursements, and to the kWhs already subsidized through PCE.

11:31:06 AM

MR. LAMB, in response to Chair Wool, explained that 95 percent of the utility cost under $1, was used to calculate the PCE level.

CHAIR WOOL said that the higher the energy cost or the kWh rate, the more the subsidy would "kick in."

MR. LAMB added "until you hit a dollar. So any of those communities that are over a dollar... "

CHAIR WOOL reiterated that this was not a flat fee discount, it was dependent on the price of the energy.

MR. LAMB expressed his agreement, and moved on to slide 24, "Alaska Energy Authority Rural Services/Programs," which depicted the aforementioned programs on the map of Alaska.

11:32:45 AM

MS. CONWAY presented slides 26 - 27, "Urban/Statewide Programs/Services" and mentioned the technical assistance and energy technology, energy policy work, and programmatic work on Railbelt assets. She addressed slide 28, "Technical Assistance - energy technologies," and stated that this was a different type of technical assistance than discussed earlier. She listed the five most critical technology areas: end-use efficiency, hydro, biomass, wind, and heat recovery, and stated that these were of the most critical importance. She relayed that work had

been moving forward in full recognition for the necessary adaptations to the changing fiscal climate. She listed the "lighter touch" technology areas, those without an AEA program manager, which included energy storage, heat pumps, solar PV, transmission, solar thermal, and advanced grid. She relayed that there was a unique situation at AEA, as there was expertise for the appropriate and achievable energy solutions for a whole community, tailored to the specific needs of that community. AEA funded on-going technical support in these areas, which included program and project development, stakeholder engagement through technology working groups, and grant writing for competitive federal dollars.

11:36:03 AM

MS. CONWAY moved on to slide 29, "Village Energy Efficiency Program 2005-2016." She said that a commonly heard mantra was "Energy Efficiency First," as the necessity for "more bang for our buck" was recognized. She reported that AEA had managed building energy efficiency programs in almost 150 communities for both electric and heat programs.

REPRESENTATIVE JOHNSTON asked if AEA was the project manager or the technological assistant.

MS. CONWAY replied that AEA served both roles. She explained that each of the iterations of the village energy efficiency program was managed a bit differently.

11:37:21 AM

CHAIR WOOL asked about management for each of the five critical technology areas listed on slide 28.

MS. CONWAY replied that there was a program manager for each, with the same program manager for Biomass and Heat Recovery.

CHAIR WOOL asked about the other six "lighter touch" technology areas.

MS. CONWAY replied that there was an assortment of experience from the project managers already on staff who have historically worked on these types of projects. In response to Chair Wool, she stated that the five critical technologies were more important and any support with technical assistance, project development assistance, and appropriate achievable financing could bring these projects to fruition. She noted that the six

"lighter touch" technology areas were not as mature or prevalent in Alaska.

11:38:57 AM

MS. CONWAY moved on to slide 30, "Renewable Energy Fund Grants Rounds 1 - 9," which showed all 287 project applications funded to date through the Renewable Energy Fund (REF). She pointed out that some projects had multiple applications. Directing attention to slide 31, "70 Projects Operational," she reported that these were operational projects which resulted from the Renewable Energy Fund investments. She added that 21 more projects had secured funding through construction and would be coming on line. She explained that PCE reimbursed eligible expenses, and, if an REF project was funded entirely through a grant, there would not be any cost. This did not hurt the PCE and was still a benefit to the community. She declared that the two programs were synergistic, not oppositional.

REPRESENTATIVE JOHNSTON asked about the two geothermal projects, directing attention to a geothermal project east of Homer and another near Juneau.

MR. SKALING said that these projects were ground source heat pumps.

11:42:09 AM

REPRESENTATIVE SPOHNHOLZ referred to slide 31, asking if the 21 additional projects were funded but not yet operational.

MS. CONWAY said that was correct, and pointed out that not all funding, in order to get to construction, came from the REF, and that many projects had supplemental funding.

REPRESENTATIVE SPOHNHOLZ asked if there would be 91 operational projects.

MS. CONWAY replied, "in theory, yes, barring the unexpected."

CHAIR WOOL asked for clarification to the relationship between electricity and heat, that although PCE would subsidize the electrical portion, a utility could produce and sell both.

MR. LAMB offered his belief there was a benefit for lower heat cost.

11:44:55 AM

MS. CONWAY returned attention to slide 32, "AEA Energy Projects are Effective," and pointed out that the Renewable Energy Fund (REF) had not had money for the last year. She declared that the program served a very important function, and would continue to do so for the Alaska energy landscape. She reported that the investment of $257 million had jumpstarted the renewable energy market in Alaska, had proven that these projects do work, and had provided good case studies for how, why, where, and when. She added that the REF had leverage hundreds of millions of federal and private dollars, and displaced a tremendous amount of diesel use annually. The 31 million gallons of diesel displaced in 2016 had a dollar equivalent savings of about $63 million.

REPRESENTATIVE JOHNSON asked if was there had been an evaluation of towns for which renewable energy could replace diesel.

MS. CONWAY replied that the Alaska Affordable Energy model was a planning tool which could be used.

MR. LAMB opined that there were slides which showed potential hydro and wind power, and that there was a lot of opportunity across the state.

CHAIR WOOL questioned the availability of funding.

MS. CONWAY replied that this depended on what was considered funding, as financing could be a form of funding.

REPRESENTATIVE JOHNSON shared that it was of critical importance for small villages to have the opportunity to move beyond diesel.

11:47:49 AM

MS. CONWAY pointed to slide 33, "Benefits and costs perspectives differ," and shared that the required economic analysis carried different perspectives, dependent on the costs and benefits considered. As the state took a universal approach, all costs and all benefits were counted regardless for who paid or benefited. However, at the local community level or for a project developer, not everything would be included, such as the value of the grant funds or the reduction of PCE payments. She directed attention to the chart on slide 33, which listed the state perspective with a benefit cost ratio of 0.8, which was

lower than the community perspective with a benefit cost ratio of 1.4. She offered examples of the benefit cost ratio to other REF projects.

CHAIR WOOL addressed various line items of the benefit cost ratio, noting that the state may include some, whereas the community would not.

MS. CONWAY noted that this resulted in the different perspectives, and could cause some disagreement for what should be funded with state dollars.

MR. LAMB declared that, when money was involved, there could be friction.

11:51:19 AM

MS. CONWAY addressed slide 34, which depicted the "Energy Planning Regions" across Alaska. She stated that regional energy planning was a way to determine energy priorities and formulate a concrete, implementable, fundable energy plan. She shared that electricity, heat, and transportation plans had been completed for every region in the state. She said that regional energy plans were, primarily, bottom up planning initiatives which relied on extensive stakeholder engagement to produce a list of projects to lower energy costs. Some of the categories for recommended actions included utility management and operations, building efficiency, electricity, heating, transportation, and ongoing planning. She reminded that the Alaska Affordable Energy Strategy was a set of recommended policy, regulatory, and statutory changes to make it possible to reach the energy project goals outlined in the regional energy planning process.

11:52:42 AM

MS. CONWAY presented slide 35, "Alaska Affordable Energy Strategy" and declared that there was a strong relationship between the regional energy plans and the strategy. She reported that a critical piece of the strategy was the stakeholder engagement foundation based, primarily, on the regional energy planning initiative. She said that regional energy plans provided the basis for policy research, which were the strategy recommendations. She pointed out that the chart on the slide showed the interplay between community and regional planning, statewide planning and policy development, and project implementation. As recommended by the Alaska Affordable Energy

Strategy, this system relied on strong data collection and continuous stakeholder engagement, as well as an effective project funding mechanism, which was not exclusively grant funding.

MS. CONWAY shared an example of the multi-agency coordination of planning and policy work with the leveraging of resources for the feasibility of development for a regional power pool that would provide management and operational support to small, single site electric utilities in Rural Interior Alaska.

MS. CONWAY said that a broad group of staff contributed to energy policy work, which was largely dictated by legislative mandates, as well as occasional policy initiatives from other bodies such as the governor's office.

11:55:17 AM

MS. CONWAY pointed to slide 36, "AkAES: Targeted Review," and listed the one-stop-shop Community Energy Fund for Alaska, on-bill financing, empowering the RCA to have siting authority, and establishing a universal service charge.

CHAIR WOOL suggested, as time was limited, to limit the discussion to the One-Stop-shop and the universal service charge.

MS. CONWAY reported that the Alaska Affordable Energy Strategy research had found that, although many communities and utilities were in the position to take on more debt, they needed more flexibility for funding opportunities to better address their needs and assistance for access to these opportunities; hence, the Community Energy Fund for Alaska (CEFA), a one-stop-shop, to allow communities to more effectively tap into the resources.

11:57:26 AM

MS. CONWAY, in response to Chair Wool, spoke about establishment of a universal service charge, as the statute which created the Alaska Affordable Energy Strategy also required a way to pay for projects. She said that a universal service charge would secure a reliable funding stream that did not rely on government appropriations to address industry specific issues. The recommendation only specified for how to collect the funds, and the projects and programs that could be supported. She reported that, in many parts of the country, the utility industry was responsible for the administration of energy programs and

projects designed to lower costs for the consumers. She emphasized that the report did not recommend for any communities within the Railbelt. In response to Chair Wool, she stated that the universal charge would be a small percentage collected per kilowatt hour, or per gallon. She reported that the study did not suggest any amount, only the concept as a way to generate revenue to pay for projects and programs. She said that determination for the best way to implement this policy concept would be part of the public and deliberative process. She added that this concept had worked in other places, often areas with much larger utilities.

12:00:09 PM

MS. CONWAY concluded with slide 48, "AEA is Relevant to Alaska," and declared that there was a lot of growth potential for energy efficiency, hydro, biomass, and wind project development work. She declared that there was hardly a community or utility in Alaska that was not touched by an AEA program or project, and that these efforts were comprehensively improving energy safety, stability, reliability, and affordability with the benefits shared across rural and urban Alaska, utilities and consumers alike. She reiterated that there was a lot of growth potential, as the resources were abundant and there were opportunities to find financing through the federal government and the private sector.

12:01:29 PM

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 12:01 p.m.