ALASKA STATE LEGISLATURE
JOINT MEETING
HOUSE SPECIAL COMMITTEE ON ENERGY
HOUSE RESOURCES STANDING COMMITTEE
May 7, 2011
10:10 a.m.

MEMBERS PRESENT

HOUSE SPECIAL COMMITTEE ON ENERGY

Representative Neal Foster, Co-Chair
Representative Lance Pruitt, Co-Chair
Representative Bob Lynn
Representative Dan Saddler
Representative Pete Petersen
Representative Chris Tuck

HOUSE RESOURCES

Representative Eric Feige, Co-Chair
Representative Paul Seaton, Co-Chair
Representative Peggy Wilson, Vice Chair
Representative Alan Dick
Representative Neal Foster
Representative Cathy Engstrom Munoz

MEMBERS ABSENT

HOUSE SPECIAL COMMITTEE ON ENERGY

Representative Kurt Olson

HOUSE RESOURCES STANDING COMMITTEE

Representative Bob Herron
Representative Berta Gardner
Representative Scott Kawasaki

OTHER MEMBERS PRESENT

Representative Tammie Wilson
Representative Bryce Edgmon
Representative Mia Costello
Representative Mike Chenault
Representative Craig Johnson
Representative Bill Stoltze

Senator Cathy Giessel

COMMITTEE CALENDAR

Review of Energy Projects in CSSB 46 Version T, Section 4, p.98, line 1 through p. 101, line 27 - Alaska Energy Authority Requests Submitted by the Administration

REVIEW OF ENERGY PROJECTS

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

CHRISTINE KLEIN, Executive Vice President &
Chief Operating Officer
Calista Corporation
Anchorage, Alaska
POSITION STATEMENT: Provided a presentation titled, "Chikuminuk Lake Hydropower" and dated 5/7/11.

JOHN DUHAMEL, Executive Engineer
Copper Valley Electric Association (CVEA)
Glennallen, Alaska
POSITION STATEMENT: Provided a PowerPoint presentation titled, "Allison Creek Hydroelectric Project Copper Valley Electric Association."

RICHARD LEVITT, President
Gustavus Electric Company
Gustavus, Alaska
POSITION STATEMENT: Presented a synopsis of the Falls Hydroelectric Project.

MIKE KLINE, Electric Division Manager
Ketchikan Public Utilities (KPU)
Ketchikan, Alaska
POSITION STATEMENT: Presented the Ketchikan Whitman Lake Hydroelectric Project.

SARA FISHER-GOAD, Executive Director
Alaska Energy Authority (AEA)
Department of Commerce, Community & Economic Development (DCCED)
Anchorage, Alaska

POSITION STATEMENT: Answered questions during the discussion of a review of projects in SB 46.

DARRON SCOTT, President and Chief Executive Officer (CEO)
Kodiak Electric Association, Inc. (KEA)
Kodiak, Alaska
POSITION STATEMENT: Presented the Terror Lake Unit 3 Hydroelectric Project - Facility Expansion.

PAUL BRYANT, General Manager
Metlakatla Power and Light (MP&L)
Metlakatla, Alaska
POSITION STATEMENT: Presented the Metlakatla-Ketchikan Intertie project.

MARLENE CAMPBELL, Director
Government Relations
City and Borough of Sitka
Sitka, Alaska
POSITION STATEMENT: Presented the Expansion to Maximum Capacity of the Blue Lake Hydroelectric Project.

ROBERT DRYDEN, System Engineer
Electric Department
City and Borough of Sitka
Sitka, Alaska
POSITION STATEMENT: Answered questions on the Blue Lake Hydroelectric Project.

JOE GRIFFITH, President, Board of Directors
Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC); General Manager
Matanuska Electric Association (MEA)
Palmer, Alaska
POSITION STATEMENT: Presented Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC) energy projects.

BRAD JANORSCHKE, Vice Chair, Board of Directors
Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC); General Manager
Homer Electric Association, Inc. (HEA)
Homer, Alaska
POSITION STATEMENT: Participated in the presentation of ARCTEC energy projects.

MARK FOUTS, Manager
Corporate Planning and Analysis

Chugach Electric Association, Inc. (CEA)
Anchorage, Alaska
POSITION STATEMENT: Participated in the presentation of ARCTEC energy projects.

MARK JOHNSON, General Counsel
Chugach Electric Association (CEA)
Anchorage, Alaska
POSITION STATEMENT: Answered questions during the discussion of ARCTEC energy projects.

JOHN FOUTZ, Utility Manager
City of Seward
Seward, Alaska
POSITION STATEMENT: Answered questions during the review of ARCTEC energy projects.

ACTION NARRATIVE

10:10:17 AM

CO-CHAIR LANCE PRUITT called the joint meeting of the House Special Committee on Energy and the House Resources Standing Committee to order at 10:10 a.m. Present at the call to order from the House Special Committee on Energy were Representatives Pruitt, Foster, Lynn, Petersen, and Saddler. Representative Tuck arrived as the meeting was in progress. Present from the House Resources Standing Committee were Representatives Feige, Seaton, Foster, Munoz, and P. Wilson. Representative Dick arrived as the meeting was in progress. Representatives Edgmon, Costello, and T. Wilson, and Senator Giessel, were also in attendance.

10:11:52 AM

REVIEW OF ENERGY PROJECTS

[Contains discussion of SB 46.]

10:12:23 AM

CO-CHAIR PRUITT announced that the only order of business would be a review of energy projects in CSSB 46 Version T, Section 4, page 98, line 1, through page 101, line 27: Alaska Energy Authority requests submitted by the administration. He explained the review would exclude weatherization, in-state gas, and renewable energy grant funds. A description of each project

would include answers to 10 questions previously submitted to the witnesses, in addition to: an indication of local support for the project; sources of financial support outside of state funding; the end-cost to ratepayers for power; the scope of the vetting process; challenges of "the 50 percent requirement."

10:14:32 AM

CHRISTINE KLEIN, Executive Vice President & Chief Operating Officer, Calista Corporation, said the Calista Region in Southwest Alaska is served by the Nuvista Light & Electric Cooperative (Nuvista). The Nuvista hydroelectric (hydro) power project would be the first hydro project in this region of the state and - at a cost of $17.6 million - would serve a 59,000 square mile area encompassing 56 villages, many of which are located along the Yukon and Kuskokwim Rivers, and with a population of nearly 31,000 residents. Ms. Klein noted that this region is the poorest in the state and has a dispersed population with a very remote and limited infrastructure. Currently, the cost of power in this region is the highest in the U.S. Nuvista was established in 1995 and its goal is to deliver and reduce electrical cost to residents, and to find solutions to the high cost of energy. Nuvista's members include the region's major stakeholders; in fact, its board of directors represents the major energy users in the region such as the Association of Village Council Presidents (AVCP), the Yukon Kuskokwim Health Corporation, AVCP Regional Housing Authority, Alaska Village Electric Cooperative; Chaninik Wind Group; Middle Kuskokwim Electric Coop.; Lower Yukon Representative Electrical Coop.; Calista Regional Corporation. The project is the result of many groups working together to find a solution to the cost of energy, and to improve the economy of the region.

10:17:49 AM

MS. KLEIN turned attention to page 1 of her written presentation provided in the committee packet. Chart I titled, "Y-K Region Energy Situation," indicated that diesel is the primary fuel used for home heating and electrical generation, and it sold last year at prices ranging from $6.14-$9.50 per gallon. Ms. Klein pointed out that because the fuel is purchased by barge, the prices are unchanged until the fuel is consumed; furthermore, Nuvista expects the price to increase next year. The chart also indicated: the amount of family income used to pay for heating has risen from 50 percent to 75 percent; there are over 40 independent diesel generators generating electricity in the region; conservation measures are routine; the cost of

electricity per kilowatt hour (kWh) is $0.58-$1.05. Because the cost of fuel oil is twice that of Anchorage and Bethel, and the cost of electricity is three to five times that of Anchorage, the Power Cost Equalization (PCE) program is vital to survival in the villages. Ms. Klein provided historical data indicating that beginning in 1975, 21 engineering reports and studies have been conducted in the Bethel area, and since 2006, $2.28 million has been spent by AEA, the Denali Commission, and other agencies, and $650,000 has been spent by Nuvista in the search for solutions. These studies reveal that the electrical demand for Bethel and the surrounding sub-region is expected to be 65 megawatts (MW) by 2020, which is an increase from the current demand of 14 MW. In addition, the studies indicate that coal and hydro have high potential for electrical generation in the region. She called attention to the graph on page 2 titled, "II. Electrical Cost Projections 2002," that illustrated the current cost of electricity is much higher than was predicted in 2002.

10:22:25 AM

MS. KLEIN continued to Nuvista's region-wide alternative energy plan that determined that because the area is immense and very diverse in the population of the villages and their locations, there is no one solution for the region. For example, the coastal villages have wind energy to augment their energy needs, but wind is not a total solution; in fact, nine villages are using wind turbines and saving 140,000 gallons of diesel fuel per year. Therefore, Nuvista is focusing on the energy needs of the Bethel sub-region at this time because it holds over 50 percent of the population and energy demand, and is experiencing the greatest growth. The Bethel sub-region also lacks a transmission system, and the illustration on page 2 titled, "II. Transmission System Needed," proposed a sequenced transmission grid build-out beginning at Bethel, which was identified as "Group 1 Villages." On page 4 a table titled, "II. Previous Alternatives Considered," listed how residents feel about different types of technologies: residents are comfortable with diesel; geothermal is preferred but is unlikely; wind power is preferred but is limited by location and production; hydro is preferred but has a high construction cost; coal is feared because of health risks; nuclear power is troublesome in Alaska. Nuvista reviewed the top three alternatives to meet large-scale, long-term demand: wind turbines, a coal power plant, and hydro power. Ms. Klein advised that wind power can be variable and does not meet the entire demand. Although a coal power plant was found to be very feasible and would provide the lowest-cost

electrical energy, this system was not acceptable to the community. However, 12 hydro sites were determined viable and that the proposed Bethel grid would support a majority of villages in its area, thus the hydro option was seriously pursued.

10:29:18 AM

MS. KLEIN related that a feasibility report commenced in 2009-2010 through a grant from AEA and determined the four most viable options for a hydro site: Chikuminuk Lake Allen River Outfall; Kisaralik River Upper Falls; Kisaralik River Lower Falls; Kisaralik River Golden Gate Falls. She referred to several engineering reports that recommended proceeding with the Federal Energy Regulatory Commission (FERC) permitting of sites on the Kisaralik River. However, in 2010, MWH engineers found the best option to be the site at Chikuminuk Lake. Chikuminuk Lake is 118 miles from Bethel, has a generating capacity of 13.4 MW, and is a year around source of power. Importantly, the Chikuminuk Lake site does not have anadromous fish as do the Kisaralik River sites, which also have historical significance and can only provide power on a seasonal basis. She noted that transmission lines are included in the cost estimate of $391.7 million.

10:34:29 AM

MS. KLEIN said that the project has been well received by the public and all 56 villages are in support of the Chikuminuk Lake option. As directed by AEA's standard process, Phase II of the project is a detailed feasibility assessment and initial engineering designs. She called attention to a chart on page 6 titled, "IV. Preferred Alternative," that compared the construction cost, design cost, total project cost, estimated 20 year cost/kilowatt hour (kWh), and demand capacity of the four sites. Total construction costs - including transmission lines - for each project are between $350 million and $500 million. To compare projects and determine whether a project is economical, AEA uses diesel models with the cost of oil at $25-$30 per barrel - which is very low - and the net present value over 20 years for the Chikuminuk option would be $554 million, and in 2022 it would be $36.6 million. Ms. Klein explained that the capital investment of the project equates to $17,262 per capita, which is similar to that of the Railbelt at $16,200 per capita. Of the four options, the Chikuminuk site has the lowest non-diesel net present value. She noted the reconnaissance and feasibility phase of the project is completed and the public and

the Nuvista board of directors have made the decision to proceed. Next, the Nuvista board will hire a project manager and begin the preliminary application for the FERC license. Also, the AEA Project Phase II process of detailed feasibility and design will begin. She called attention to the chart on page 7 of the document in the committee packet titled, "IV. Next Steps: Capital Request," which listed the specific tasks and their costs that itemize the capital request. Step "1a" is the detailed feasibility work, geotechnical work, FERC licensing, field surveying, and gathering the preliminary financial options at a cost of $5.88 million. Step "1b" is the preliminary engineering design, site field investigations, and specifications at a cost of $11.75 million. If the project were begun today, electricity will be available in 2022, as long as the project is sequenced; in fact, the abovementioned tasks are combined into one field season to save time and money. Ms. Klein cautioned that the legislative appropriation process dictates that "money is not accessible until the middle of a construction season which makes it a little difficult to proceed ahead effectively." She concluded that the capital request by Nuvista to complete the detailed feasibility report, the remaining field investigations, hydrologic monitoring, surveys, stream gauging, permitting, and engineering plans, is $17,630,000, an amount which is "well in line" with the 4 percent commonly accepted for a final feasibility and design effort.

REPRESENTATIVE TUCK stated his support for hydropower and asked if there is support from the administration.

MS. KLEIN said the project has been reviewed by AEA.

10:45:11 AM

REPRESENTATIVE SADDLER asked whether the cost of the entire build out system of transmission lines to all six of the village groups is included.

MS. KLEIN said she was unsure.

10:45:38 AM

REPRESENTATIVE SADDLER asked for more details on the financing arrangements with the U.S. Department of Interior (DOI) and bonds for rights of way.

MS. KLEIN answered that at this time she did not know what agencies would provide funding; however, Calista Corporation has briefed federal agencies on the project. In fact, there are a number of options at future stages for funding through DOI, Bureau of Indian Affairs (BIA), and Bureau of Land Management (BLM) due to the socioeconomic and/or cultural history of the region. In addition, support from the Alaska Congressional delegation has been solicited.

10:48:11 AM

REPRESENTATIVE SADDLER further asked about U.S. Department of Energy (DOE) bonds for construction funds.

MS. KLEIN advised financial arrangements must wait for the final feasibility report; however, she is researching a mixture of funding sources such as grants and very low-interest loans through the Department of Commerce, Community & Economic Development, Alaska Industrial Development & Export Agency (AIDEA) and the DOE Tribal Energy program.

10:49:54 AM

CO-CHAIR PRUITT asked how much money the project will need from the state in grants and investment.

MS. KLEIN restated that is unknown at this time.

10:50:59 AM

CO-CHAIR FEIGE asked for the combined baseload of all of the villages.

MS. KLEIN said she was unsure.

10:52:13 AM

CO-CHAIR FEIGE observed the project seems expensive in terms of dollars per MW: $34 million-$35 million dollars per MW, as compared to the Susitna dam project which is projected to cost $3 million per MW. Because the villages are widely dispersed, interconnection may be considerably greater than estimated; in fact, he doubted if the cost would be under $1 billion to connect the villages as planned. Representative Feige asked why Calista did not partner with the proposed gold mine at Donlin Creek, which would be a large electrical consumer, to build a power plant in Bethel.

MS. KLEIN advised the "coal options" were significantly explored in 2002 and 2004. The Donlin Creek mine has been in the exploration mode for over 16 years and inquiries by Calista Corporation found that delays with the mine were holding up energy plans for the region and projects in some villages. Furthermore, coal was dismissed by the population. She added that the permitting process for the mine would take years and making the mine a utility cooperative would affect its permit.

10:55:46 AM

CO-CHAIR FEIGE opined the mine would be a customer for a coal-fired power plant, which over a period of 30 years, would pay a significant portion of the cost of a power plant in Bethel, in addition to saving hundreds of miles of transmission lines.

MS. KLEIN pointed out that the Donlin Creek mine could purchase power from this project or from a coal power plant. She restated that the community of Bethel studied the option of building a coal power plant and "said 'no,' so it's been taken off the table."

10:57:00 AM

CO-CHAIR FOSTER called attention to the Chikuminuk project's estimated 20 year cost per kWh of $0.58-$0.70, and asked whether that projection is inclusive of transmission line maintenance and operation (O&M).

MS. KLEIN said the projection includes only the cost of construction; however, operation and maintenance of hydropower is very low when compared to diesel. She opined the projection is very conservative in that she expects an increase of demand after heating plants are converted from diesel to electric.

CO-CHAIR FOSTER observed the demand in Western Alaska is growing.

10:59:35 AM

REPRESENTATIVE P. WILSON ascertained the Bethel community's concern about coal was related to health issues.

MS. KLEIN answered yes and advised that public meetings in 2004 stopped the project, but she was unclear about the exact reasons. In further response to Representative P. Wilson, she

said the plant proposed using imported coal from British Columbia. Other potential mines in the region are the Niak and the Platinum.

11:03:55 AM

REPRESENTATIVE PETERSEN assumed the life of the project is beyond 20 years, and after the pay-off the cost of electricity goes down.

MS. KLEIN said he was correct. The life-cycle of most hydro projects is typically 50 years, and it is not uncommon to exceed that.

11:04:50 AM

REPRESENTATIVE PETERSEN asked what type of generating plant will be built.

MS. KLEIN explained that the 20-mile long lake would be dammed by a 100- to 160-foot-high dam with a 91-foot head, and consisting of a rock-fill, concrete-face dam structure with penstock. In further response to Representative Petersen, she said there are no known anadromous fish in the lake.

11:06:33 AM

REPRESENTATIVE TUCK was pleased that the project will help meet the state's energy policy of 50 percent renewable by 2025. Hydropower is cost effective and maintenance-free after construction costs and loans are paid off, and low-cost and reliable energy spurs economic development. He asked when the most recent survey of residents' opinions was conducted.

MS. KLEIN answered that the most recent public meeting on all of the options was March 2011, in Bethel. The findings were reviewed by about 150 people from throughout the region, and the Chikuminuk Lake Hydropower option was chosen.

11:10:46 AM

REPRESENTATIVE TUCK surmised the decision was determined by public hearings, not a mail or phone survey.

MS. KLEIN said he was correct.

11:11:20 AM

CO-CHAIR SEATON asked whether there will be excess power available for other communities such as Dillingham.

MS. KLEIN acknowledged that this site has the potential to be significantly expanded.

11:12:37 AM

CO-CHAIR SEATON recalled that coal-fired plants have had problems with permitting in Alaska and are being phased out in the Lower 48. He compared the cost of $3 million per mWh at Susitna displacing $0.06 avoided cost power, with $30 million per mWh at Chikuminuk displacing $0.80 avoided cost power, and opined Chikuminuk is more cost efficient than Susitna in that aspect. He cautioned against not "look[ing] at the full equation of what we are getting away from, and that is very expensive power ...." Co-Chair Seaton expressed his support, although more information in needed on the use of this power by villages, transmission, how many villages will benefit, and on the generation of constant baseload power.

11:15:29 AM

MS. KLEIN reviewed some of the benefits of the project such as the displacement of 10 million gallons of diesel per year, the reduced carbon footprint, the stability of hydropower, the savings to PCE, the low O&M costs, the electrical support to a minimum of 14 villages as indicated on the map provided in the committee packet, and the potential to expand electrical support to other villages throughout the region.

CO-CHAIR FOSTER asked for the population of the Calista Region.

11:17:52 AM

MS. KLEIN estimated between 21,000-24,000 residents. In further response to Co-Chair Foster, she estimated 148 miles of transmission lines would connect all of the villages in the region.

11:18:41 AM

CO-CHAIR FOSTER then asked for a side-by-side comparison of the basic information for Susitna Hydro and the Chikuminuk Lake project, especially regarding a financing plan and final costs to rate-payers.

11:19:41 AM

REPRESENTATIVE MUNOZ asked for the distance between the proposed Donlin Creek mine and the project.

MS. KLEIN answered that Donlin Creek is in the upper Kuskokwim River area which may not be a part of this project due to river crossings. In further response to Representative Munoz, she said other large scale customers for power generated by this proposal would be the school district, two fish plants, the airports, and other commercial enterprises.

11:21:27 AM

REPRESENTATIVE MUNOZ stressed the importance of working with potential large-scale commercial customers; for example, in Juneau the Hecla Greens Creek Mining Company (HGCMC) agreed to purchase surplus power from Alaska Electric Light and Power (AEL&P) which enabled AEL&P to pay off the bonds from the Lake Dorothy Hydroelectric Facility. She urged Ms. Klein's organization to "reach out to Donlin Creek and other commercial entities."

MS. KLEIN said she was very familiar with the operation of the proponents of the Donlin Creek mine. She pointed out that the major stakeholders in the area, such as the hospital, are represented on the Nuvista board of directors.

11:23:11 AM

REPRESENTATIVE MUNOZ asked what type of power plan is proposed for the Donlin Creek mine.

MS. KLEIN explained the project is looking at a gas pipeline because of the tremendous amount of power needed. In further response to Representative Munoz, she opined the demand from a mine of that size would exceed the capacity of the Chikuminuk project.

REPRESENTATIVE MUNOZ further encouraged Ms. Klein to "look at that opportunity," as "this would be a great ... common effort and opportunity to benefit both organizations."

MS. KLEIN acknowledged the hydro project is expandable.

11:24:56 AM

REPRESENTATIVE SADDLER verified that the Nuvista board of directors was unanimous in its choice of the project. He asked how the failure to secure AEA funding will affect the project.

MS. KLEIN acknowledged that lack of funding would have a tremendous impact. In further response to Representative Saddler, she said that other energy projects proposed by Nuvista throughout the region have a lower priority but are being studied.

11:27:09 AM

REPRESENTATIVE SADDLER asked whether any state park land would be affected by the project.

MS. KLEIN stated that the Calista Region is entirely surrounded by federal and state park land. The Chikuminuk site is located in Wood Tikchik State Wilderness Park and the Kisaralik sites are located in the Yukon Delta National Wildlife Refuge.

11:27:48 AM

REPRESENTATIVE P. WILSON supported working with the proposed mine.

MS. KLEIN estimated that the proposed development needs 200 megawatts, which is three to four times the capacity of the project. Technologically, it is possible to connect with the system at any time.

11:30:12 AM

REPRESENTATIVE P. WILSON asked whether the proposed dam is designed to provide power for all six village groups.

MS. KLEIN explained that the power capabilities are based on the flow of water and the number of generators; the initial design will call for sufficient "slots" so appropriately sized generators can be added in future years.

11:30:54 AM

JOHN DUHAMEL, Executive Engineer, Copper Valley Electric Association (CVEA), said his responsibilities as an executive engineer at CVEA include environmental and regulatory issues and he is the program manager for the Allison Creek Hydro Project.

Copper Valley Electric Association (CVEA) has 3,700 members and operates an isolated grid independent of the Railbelt and without the benefit of PCE. At CVEA, power is generated by four power plants, three generating power by burning fossil fuel and one hydroelectric facility. The CVEA's vision is to reduce its dependence on fossil fuel in order to stabilize power rates. Mr. Duhamel pointed out that CVEA began its study of the Allison Creek project in 2007, and is prepared to file its license application to FERC in August. He described three earlier iterations of the project and their shortcomings. After a reevaluation of the Allison Lake Basin, the CVEA board of directors chose Alternative 4-Run of the River (ROR), as the best alternative. This project locates a diversion structure away from the mouth of Allison Lake that "splits the water" between Allison Creek and a 42-inch penstock which continues to the powerhouse. There is no need for a road, but only an access trail for the construction of the penstock. This design includes two 3.25 MW turbines for a combined peak production of 6.5 MW. Mr. Duhamel related that many risks were eliminated or reduced by moving to the Alternative 4 option, such as seepage and liquefaction; access issues; avalanche risk; environmental impacts to fish and the Valdez Marine Terminal; furthermore, operational and project costs were reduced. He provided further comparisons between Alternative 3C and Alternative 4 and noted the cost of Alternative 4 is $39 million with a cost of power of 21.3 cents per kWh. He pointed out that CVEA will have excess power in the summer and if additional summer industry were found, the rate would drop to 14.6 cents per kWh.

11:42:19 AM

MR. DUHAMEL called attention to a chart on page 5 titled, "Allison Creek is Green-Fuel Savings," which illustrated savings to members of $1.163 million per year when fuel oil is $4 per gallon. Regarding the financing of the project, he explained that the project analysis is based on borrowing funds at 7 percent interest with 100 percent commercial financing; every 1 percent drop in the interest rate reduces the cost of power by 1.7 cents per kWh, and every $1 million in grant funds reduces the cost of power by 0.5 cents per kWh. He provided two graphs showing that power from Allison Creek would reduce the use of diesel from 23 percent to 11 percent.

11:45:25 AM

MR. DUHAMEL addressed the first written question previously submitted by the committee and stated that the project has

received a tremendous amount of support from the local community as shown by letters of support provided in the committee packet. In addition, 400 members attended CVEA's annual meeting and responded to Alternative 4 with positive comments. In answer to the second question, he responded that a bank cooperative indicated that CVEA has the capacity to borrow 100 percent of the financing; however, financial assistance from the state will improve the economics of the project. In answer to question three, he said the total cost of the project is $39 million. In answer to question four, he said the state has contributed $1 million and the Renewable Energy Fund contributed $2.8 million, thus CVEA's Capital Project Submission and Information System (CAPSIS) document is for $35 million, of which 50 percent is requested from the state. In answer to question five, CVEA's funding plan for the next five years shows rapid progress; in fact, power is expected from the project within four to five years. The license application to FERC will be submitted within four months - although FERC's approval may take two years - during that time, CVEA will finalize any remaining design and environmental issues in order to be ready for construction, which is expected to take two seasons. In answer to question six, he said the project is finished with the scientific research, has established the liabilities and weaknesses, and is moving toward final design. He assured the committees that the cost of $39 million includes all of the studies and license submission, and the construction of the diversion structure, powerhouse, and connection to CVEA's system. In answer to question seven, Mr. Duhamel said ratepayers are expected to pay $0.21 per kWh, although a grant for 50 percent of the project drops the cost to ratepayers to just over $0.11 per kWh, and a grant of $10 million drops the cost to ratepayers to $0.16 per kWh. In answer to question eight, he said his community does not have an active regional energy planning body; however, local organizations are in support of the project. In answer to question nine, he said AEA has vetted the project, in fact, since 2007 AEA has assisted with the feasibility studies and license application, and CVEA will be applying for Round 5 Renewable Energy Fund grants.

MR. DUHAMEL summarized that Allison Creek Hydro is a long-term solution; although the capital investment is high, the project will produce power for 50-100 years, and he described the low maintenance that is required on CVEA's existing turbine generator. He attributed a drop in the census in his community to the cost of living, and expressed CVEA's desire to lessen the cost of living and eliminate the use of at least 1 million gallons of diesel, 19,000 tons of greenhouse gases, and 10,000

tons of hazardous pollutants per year. The design of the project calls for the diversion of water, but the water is returned to the stream for salmon and accommodations will be made for Dolly Varden trout. He closed by saying that the project is ready to go and advance CVEA's use of hydro from 51 percent to 66 percent.

11:54:20 AM

REPRESENTATIVE TUCK asked for CVEA's current energy demand.

MR. DUHAMEL responded that the current load is 12-14 megawatts, which varies depending on the amount of electricity needed by commercial customers. In further response to Representative Tuck, he said diversions are not uncommon, in fact, in Cordova there is a successful ROR project underway. Furthermore, AEA has provided the project as much support as possible during the pre-phases and design.

REPRESENTATIVE TUCK asked why this project was not included in the governor's capital projects.

MR. DUHAMEL said he did not know.

11:56:20 AM

CO-CHAIR PRUITT asked for clarification on the amount of CVEA's request for funding.

MR. DUHAMEL confirmed CVEA's CAPSIS request is for a 50 percent match, although the amount in the bill is $10 million.

11:56:42 AM

CO-CHAIR SEATON clarified that the total cost is $39 million and the project has received about $4 million and requests an additional $10 million.

11:57:13 AM

CO-CHAIR FOSTER asked for a definition of anadromous fish.

MR. DUHAMEL explained that anadromous fish spend part of their time in both freshwater and saltwater such as salmon and Dolly Varden trout. It is important not to interrupt the waters that facilitate their ability to breed and thrive, he said.

11:58:25 AM

CO-CHAIR PRUITT announced the meeting was recessed until 12:55 p.m.

12:58:45 PM

CO-CHAIR PRUITT reconvened the meeting at 12:58 p.m. Present at the call back to order from the House Special Committee on Energy were Representatives Pruitt, Foster, Lynn, Tuck, Petersen, and Saddler. Present from the House Resources Standing Committee were Representatives Seaton, Feige, Dick, Foster, Munoz, and P. Wilson.

12:59:16 PM

RICHARD LEVITT, President, Gustavus Electric Company, informed the committees the hydroelectric project submitted by the Gustavus Electric Company is a completed project that has been online since July 2009, and generates 96 percent of the electricity needed by the community. He stated that prior to that, electricity in Gustavus was 100 percent generated by diesel fuel. The project cost $8,400,000 and was funded by $2,800,000 from the Denali Commission, $1,500,000 from the U.S. Department of Agriculture Rural Utility Service, $1,450,000 from state capital appropriations, and $750,000 from the Renewable Energy Fund grant program. The remainder of the financing is outstanding balances on $1,000,000 in loans from AEA, $300,000 in private investor loans, and $400,000 in equity from Gustavus Electric Company. Mr. Levitt noted that the outstanding loans were for construction costs and do not include 25 years of pre-construction costs for permitting and FERC licensing. He advised that the cost of electricity to the residents of Gustavus has been reduced by 30 cents per kWh through the cost-of-power adjustment and tariff filed quarterly with the Regulatory Commission of Alaska (RCA). Currently, Gustavus Electric Company is paying approximately $100,000 per year in principal and interest on the loans, and is requesting relief of the debt, the repayment of which is not included in the rates charged to its ratepayers at this time. Based on the amount of kWhs sold per year, recovery on $100,000 per year is just over $0.06 per kWh to residents, although the company has been paying on the loans for three years out of its revenues. He was urged by Representative Thomas to request relief of the debt rather than raise the rates. If debt relief is not forthcoming, the company will file a new revenue requirement with the Alaska Public Utilities Commission to add the debt to the rate base

which will add $0.06 per kWh. Currently, the electric rate is $0.26 per kWh, which is down from the highest diesel rate of $0.70 per kWh, and Gustavus is blessed to have the hydro project; however, he said this is the last chance for any kind of rate reduction for the residents of Gustavus. Mr. Levitt provided supporting documents from the Gustavus City Council seeking debt relief. In conclusion, he pointed out that the 2004 Gustavus Strategic Plan identified the high cost of energy as the highest priority in the community, and the lower cost from the hydro facility will benefit economic development, state agencies, the school, the Department of Transportation & Public Facilities, and the airport, in addition to large savings to the Power Cost Equalization (PCE) program.

1:06:48 PM

CO-CHAIR SEATON surmised most of the construction was paid for by grants and the total amount obligated by the utility is $1.3 million. Further, the hydro project dropped the utility rate from $0.60 to $0.32, and the requested amount to fully fund the project will drop the rate to $0.25.

MR. LEVITT answered yes.

1:07:52 PM

CO-CHAIR SEATON asked whether residents receive PCE.

MR. LEVITT answered yes, residents still qualify.

1:08:13 PM

REPRESENTATIVE MUNOZ asked about plans for the National Park Service to convert from diesel.

MR. LEVITT explained that the headquarters for Glacier Bay National Park is eight miles from Gustavus. The park service has a diesel generating system and he proposed installing a transmission line to provide power to the park, but it refused. The hydro plant is sized to supply the park and Gustavus Electric Company would like them to participate because they are burning diesel and the increase in sales would help with the cost of operation and maintenance of the plant. The park service recently expressed interest in connecting to the power plant, however, at this time nothing has happened.

1:11:29 PM

REPRESENTATIVE MUNOZ offered her assistance.

MR. LEVITT related that the Alaska Congressional delegation and legislators have urged for a response.

1:12:09 PM

CO-CHAIR PRUITT observed that $4.3 million of federal money helped build the hydro plant. He asked how the park service participation would affect the cost per kWh to the ratepayers.

MR. LEVITT gave two possible options: the park could buy excess hydro power for a fixed price when it is available; Gustavus Electric Company could provide all of the park's power and supplement with diesel at a higher cost when necessary. He said other options are possible, but the park service has not responded to his efforts to meet.

1:14:30 PM

CO-CHAIR PRUITT clarified that the $1.3 million requested from the state would pay off AEA and any private investor loans, but that the utility rate is adjusted for the administration and maintenance of the facility.

MR. LEVITT explained the entire distribution and generating system of the electric company - except for the hydro plant - was built with zero public funds, thus the rates include the diesel plant, which will be retained as back-up generator. In further response to Co-Chair Pruitt, he said the year around population in Gustavus is 500, and double that in the summer.

1:16:53 PM

CO-CHAIR FOSTER asked for the electrical demand of the park service.

MR. LEVITT offered its average demand is 50 percent of that of Gustavus.

1:17:22 PM

REPRESENTATIVE P. WILSON asked how much the residents receive in PCE money.

MR. LEVITT estimated "a few cents." In further response to Representative P. Wilson, he said $0.26 is the base rate and residences with PCE pay about $0.19 for the first 500 kWhs per month.

1:18:51 PM

REPRESENTATIVE P. WILSON asked what the reduction would be as a result of adding the park service to the system.

MR. LEVITT said he was unsure, but different scenarios would lower the rate to all of the ratepayers. In further response to Representative P. Wilson, he said any estimate of the effect of the park service would be based on assumptions.

1:21:50 PM

CO-CHAIR SEATON asked for the capacity of the hydro project.

MR. LEVITT responded one megawatt. In further response to Co-Chair Seaton, he said the electric company has to supplement with diesel in periods of low flow as happened last winter; however, this was predicted in the analysis of the project.

CO-CHAIR SEATON observed the electric company would have to supplement with diesel a higher percentage of time if it is supplying the park service.

1:23:54 PM

REPRESENTATIVE P. WILSON questioned why the park service would buy electricity if it could generate its own.

MR. LEVITT advised that 65 percent of the time the electric company could provide with all of the park's needs with hydro.

1:24:56 PM

CO-CHAIR PRUITT asked for clarification on power usage.

MR. LEVITT restated that 65 percent of the time the electric company could provide all of Gustavus and the park with hydro power. In further response to Co-Chair Pruitt, he said the park service's estimate to connect is $5 million.

1:26:22 PM

REPRESENTATIVE SADDLER surmised the state support is not critical.

MR. LEVITT responded that without debt relief, the loan payments will continue for 30 years and rates will increase. In further response to Representative Saddler, he said there is no time limit on the new rate filing with the RCA.

MR. LEVITT, in response to Co-Chair Pruitt, said the percentage rate with AEA is 4.8 or 4.7.

1:27:23 PM

MIKE KLINE, Electric Division Manager, Ketchikan Public Utilities (KPU), read the following [original punctuation provided]:

> Ketchikan Public Utilities (KPU) serves 7,600 electric residential, commercial and industrial accounts supporting a population of approximately 13,000 people. Ketchikan Public Utilities generates approximately 40 percent of its own electrical energy and purchases 60 percent from the Southeast Alaska Power Agency (SEAPA). Both KPU and SEAPA generation is hydro with KPU diesel being used when hydro energy runs short. Current and planned development in Ketchikan as well as heating conversions, driven by the rising cost of oil, results in a projection that Ketchikan may need as much as 30 million kWhs of additional energy beyond the current consumption level in the next several years. This is an 18 percent increase over the 170,000 million kWhs generated and purchased in 2010. Significant components of this increase are expansions and processing changes of fish processors, business expansion by Alaska Ship and Dry Dock, large heating conversions by the school district, a new community pool, and a new Alaska Marine Highway System administration and yard facility at Ward Cove. Efforts have begun to encourage other heating technologies to reduce this demand projection. Conservation and demand response mechanisms are being considered but additional generation is still needed. The Whitman hydro project will help address this supply need. Whitman is a 4.6 megawatt project that will supply an additional 16 million kWhs annually. In 2011 to date, in spite of KPU and SEAPA starting with full hydro reservoirs ahead of the winter heating

season, KPU and SEAPA were short of hydro energy by mid-April requiring 3.1 million kWhs of diesel generation support. Ketchikan Public Utilities has just completed three weeks of diesel generation to meet local power consumption. The Whitman project will displace over one million gallons of diesel annually. Just the fuel cost of producing 16 million kWhs with diesel would be $0.26 per kWh, to be passed to customers, at the current price of $3.93 per gallon. If constructed with the funding as currently proposed, the cost of production from Whitman would be in the $0.06-$0.07 per kWh range. This is similar to KPU's current purchased power rate and would be neutral in terms of pressure on customer rates. Total project cost in $19.4 million and approximately $2.7 million has been spent to date to permit, license and develop the project. Of this, approximately $1 million has been local funds while $1.7 million has been from AEA Renewable Energy grants. Pending approval of Whitman within the capital budget under consideration, the city will bond for the balance needed to complete the project and satisfy the 50 percent maximum state investment criteria of SB 46, Version T. This funding will complete the project by 2016 and no further funding requests are anticipated. The amount of $2.3 million has been granted to the project to date by the AEA Renewable Energy Grant Fund. Another $700,000 is under consideration from this fund in this budget cycle. On this basis, this project has been vetted with AEA. Efforts to build this project started prior to 1997. As is typical with almost all hydro projects, the licensing process took well beyond the five year process defined. The FERC license was finally issued in February 2009 starting the two year clock to begin construction. An extension was requested by Ketchikan and granted by the FERC in late 2010 such that construction must now start by February of 2013. Only one such extension is granted by the FERC. Failure to start construction will result in loss of the license. Should construction not start by February 2013, the only potential remedy would be a stay of the license by the U. S. Congress. The license now requires completion of the project in early 2016. Assuming construction starts in 2013, operation is anticipated in late 2015. The Whitman hydro plant will be constructed using an existing dam. The transmission corridor requirements

are minimal due to the plant location being less than a half-mile to KPU's transmission which also provides interconnection to the other SEAPA interconnected communities. The Whitman project is near shovel ready. Engineering is nearly final. The FERC license is in place. The equipment specifications are ready. KPU will initiate contracting efforts when funding is finalized. This project is supported by the Ketchikan City Council and Ketchikan Gateway Borough and is the number one project for the Community of Ketchikan as agreed upon by the Ketchikan Gateway Borough, the City of Ketchikan, and the City of Saxman. Letters of support have also been issued by the Ketchikan School District and Oceans Alaska, a marine science center under development in Ketchikan. Whitman has been identified by the IRP Working Group as one of the projects that should move ahead of completion of the IRP and is identified in that resolution.

1:34:10 PM

REPRESENTATIVE SADDLER asked for clarification on the amount of grant funds from AEA.

MR. KLINE explained that $1.7 million has been expended from total grant funds of $2.3 million.

1:35:02 PM

REPRESENTATIVE TUCK recalled that in 2009 the governor vetoed all but $1 million for the project. He asked what that allocation was used for.

MR. KLINE stated that in the beginning, a portion of that money was used towards design; however, the project is now "sitting on the edge" and facing loss of the FERC license. In further response to Representative Tuck, he said the funding will come from AEA grants, $1 million from the City of Ketchikan, approximately $8 million from the state, and $8 million in bonds by the city.

1:36:51 PM

CO-CHAIR PRUITT clarified that the original submission was for $15,680,000, but $8,025,000 is in the capital budget.

1:37:01 PM

REPRESENTATIVE MUNOZ inquired as to the relationship between KPU and SEAPA.

MR. KLINE responded that KPU is a member of SEAPA and purchases 65 percent of its energy from SEAPA; in fact, KPU sits on the SEAPA board of directors, and interacts with them to manage energy. The power sales agreement (PDA) between SEAPA and its member communities allows the communities to generate their energy locally, and purchase more from SEAPA on demand. This creates a "very tight, close, working operational relationship." In further response to Representative Munoz, he said SEAPA controls the Swan Lake to Tyee Lake asset.

1:38:00 PM

REPRESENTATIVE MUNOZ asked if this project would connect with the Swan Lake to Tyee intertie.

MR. KLINE answered the Whitman hydroelectric project would tie in to the KUP transmission system which is connected to SEAPA's system. In further response to Representative Munoz, he said that other proposed projects in the area include the Mahoney Lake project - in which Saxman in a partner - and others which are being considered under the integrated resource plan (IRP) and will have access to the intertie, subject to operational and engineering studies.

REPRESENTATIVE MUNOZ concluded the other projects will not be prevented from having access to the intertie.

MR. KLINE observed these questions would be for the SEAPA board of directors to answer; KPU may not prevent a connection, but may charge a rate to move power between the SEAPA system and Mahoney.

1:39:41 PM

REPRESENTATIVE MUNOZ asked whether KPU intends to extend its long-term contract with Alaska Ship & Drydock, Inc. to supply power for an industrial rate.

MR. KLINE said the existing contract is for a term of 30 years.

1:40:13 PM

CO-CHAIR SEATON reviewed the current and projected costs and asked for the current rate to customers in Ketchikan.

MR. KLINE answered that Ketchikan's residential rate is 9.58 cents per kWh and the SEAPA portion is 6.8 cents per kWh. If Whitman is financed by a 50/50 partnership with the state, there will be no increase on rates as a result of its construction. In further clarification to Co-Chair Seaton, he said the 9.58 cents rate is exclusive of diesel, and the city adds a surcharge, spread over six months, in addition to the 9.58 cents when using diesel.

1:42:27 PM

REPRESENTATIVE SADDLER referred to the project's use of an existing hydro dam and asked what components will be constructed.

MR. KLINE responded that the project will build a powerhouse, penstock, and a diversion dam.

1:43:20 PM

REPRESENTATIVE P. WILSON asked whether the project would satisfy the FERC deadline to begin construction before March 16, 2013 without the requested funding.

MR. KLINE indicated no. In further response to Representative Wilson, he opined the chances of obtaining a new license if the existing one expires are remote.

1:44:43 PM

REPRESENTATIVE TUCK asked for KPU's "back-up" or contingency plan.

MR. KLINE cautioned the back-up will be an increasing use of diesel.

1:45:07 PM

REPRESENTATIVE PETERSEN asked whether the diversion of water will have any effects on the Whitman Lake hatchery.

MR. KLINE said no. The design of the project is "hatchery sensitive," and will maintain the temperatures necessary to the hatchery; in fact, the hatchery has provided a letter of support

for the project. He stressed that protecting the hatchery is critical to the economy of the region.

REPRESENTATIVE P. WILSON cautioned that SEAPA gets its first choice for power, and Ketchikan is secondary. In addition, the other member communities are growing, she said.

MR. KLINE agreed. In fact, since 2009, the three member communities of Wrangell, Petersburg, and Ketchikan have used 16 percent more energy, he said. He affirmed that Wrangell and Petersburg have the first option for the water from the Tyee reservoir.

1:47:49 PM

CO-CHAIR SEATON expressed interest in knowing how state funding for the project will lower the consumer rate.

MR. KLINE estimated that if the project is funded without state participation and is fully bonded, the rate is affected by 11-13 cents per kWh.

1:49:05 PM

CO-CHAIR SEATON surmised if that were the situation, KPU would not go forward with the project.

MR. KLINE deferred to the Ketchikan City Council.

1:49:29 PM

REPRESENTATIVE TUCK referred to the $10 million in AEA's Southeast Energy Fund and asked whether the Whitman hydro project could apply for a portion of those funds.

MR. KLINE said he did not know.

1:49:40 PM

SARA FISHER-GOAD, Executive Director, Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development (DCCED), with respect to the $10 million for the Southeast Energy Fund, responded that if the appropriation stands AEA will develop a criteria and application process for potential grantees. She cautioned that it will take time to go through a full regulatory process before grants could be issued. She mentioned that the working group of the Southeast Integrated

Resource Plan (SEIRP), led by AEA, suggested that some projects should move forward without waiting for the SEIRP due to their advanced stages of permitting and licensing. She expected the use of the $10 million would be to ensure that concepts from the SEIRP are integrated for grantee applications. She anticipated that the project and others would be recommended for funding, but was uncertain if the timing was appropriate and cautioned that Southeast Alaska is a large area so $10 million would not go very far. She thought the circumstance might be similar to one AEA uses with the Renewable Energy Fund grant program in that a $2 million and $4 million cap is used to ensure adequate spreading of projects throughout the state. Ms. Fisher-Goad opined the project was likely eligible, but she could not state whether the project would receive full funding.

1:52:28 PM

REPRESENTATIVE TUCK said that according to the Southeast Electrical Intertie Study, the Southeast Conference would like to see six projects move forward without waiting for the SEIRP. He inquired as to whether all of the projects are supported by AEA.

MS. FISHER-GOAD answered by detailing the status of the six projects that were mentioned in the SEIRP's advisory work group resolution. She reported that the Blue Lake Hydroelectric Project is subject to the capital budget, and that AEA's involvement with the Blue Lake project has not been through the Renewable Energy Fund grant program, but to manage a $12.5 million grant that was provided to the City and Borough of Sitka several years ago. Regarding the Kake-Petersburg Intertie, she said this complicated project has several grants and AEA has been working through issues with the grantee. She stated the Metlakatla-Ketchikan Intertie is another project that AEA has been involved with that is subject to SB 46. The Reynolds Creek Hydroelectric Project is a project that has had significant loans approved by the legislature last year and this year. Additionally, this project received both Renewable Energy Fund grant funding and some designated grants, including one through Southeast Conference. She also reported that the Thayer Creek Hydroelectric Project is part of Renewable Energy Fund Round 4 funding, and the sixth project is Whitman Lake. In further response to Representative Tuck, she answered that the projects have not been ranked by the advisory group that recommended all of the projects should move forward.

1:55:15 PM

CO-CHAIR PRUITT asked for clarification on whether the cost to users is based on the $4 million gap between the estimated cost of the project and the funding; basically, whether the $4 million would be applied to make the potential $0.03 per kWh cost because the remaining would have been covered by other state funding. He restated: The difference between the estimated construction cost and the funding cost is about $3.5 million, which is what the $0.03 per kWh cost is based upon.

MR. KLEIN agreed, except the amount is in the $.06 to $.07 range.

1:56:58 PM

CO-CHAIR PRUITT continued, relating that the proposed funding is less than KPU initially requested thus KPU would need to obtain bonding. He inquired as to the cost to the consumer if this project is funded in the current capacity, and KPU needed to bond for the remaining portion.

MR. KLEIN reiterated that it would be in the $.06 to $.07 per kWh range. In further response to Co-Chair Pruitt, he said this is the final request on the Whitman Lake project. He said, "Our backs are against the wall." He related that depending on what the legislature decides, and if the bond amount is higher than $8 million, the local government will need to make the final determination.

1:57:50 PM

DARRON SCOTT, President and Chief Executive Officer (CEO), Kodiak Electric Association, Inc. (KEA), stated that KEA is working hard to fulfill its vision which is to endeavor to produce 95 percent of its energy sales with cost effective renewable power solutions by the year 2020. Kodiak Electric Association does not include diesel in its future; in fact, power generation at this time is about 80 percent hydro, 9 percent wind and 11 percent diesel. Terror Lake Hydro Facility was built in the early '80s with two 11.25 megawatt hydro units. However, the penstock was designed with a third outlet ready to accept a third unit. Today, Kodiak's electrical needs are growing and the project would add the third turbine and the associated equipment which would expand the capacity of the hydro plant by 50 percent to 33.75 MW. The Kodiak system supplies power to the community of Kodiak, the U.S. Coast Guard (USCG) base, and the communities of Port Lyons and Chinak, which

have a combined peak load of about 26 MW. As the peak output for Terror Lake hydro is currently 22 MW, the additional power needed is generated by expensive diesel fuel. The installation of a third turbine will eliminate the need for diesel during peak loads, and would also provide the redundancy needed to perform maintenance on the hydro units. Furthermore, because newer hydro units are more efficient, KEA should increase to 3 million kWhs from this expansion. Finally, this project would provide grid stability to KEA since the power from hydro is increased as the wind power declines; in fact, the hydroelectric power is dispatchable and counted on "to keep the lights on," as the wind fluctuates.

MR. SCOTT explained that wind energy is the most cost-effective, renewable energy source for Kodiak's future; however, three hydro turbines on the electrical grid working together are necessary to take full benefit from future wind projects. He stated that AEA has vetted the project, and it is currently in the Renewable Energy Fund grant program Round 4 for $3.75 million, ranked very high; for example, the economic analysis showed a cost benefit of 2.21, based on last fall's diesel prices. In addition, he noted Pillar Mountain Wind Farm Phase 1 provides 4.5 MW of wind power and Phase 2 will add another 4.5 MW of wind to the system. Mr. Scott opined it will be highly problematic to put the additional wind from Phase 2 on the system without the third turbine. With the additional turbine and Phase 2, Kodiak residents could save 17 cents per kWh, and could add 17 million kWhs of power per year to its system, saving the community nearly $3 million in year one of the project. He characterized the community's support of renewable energy as "ecstatic," and noted additional support from the City of Kodiak, the Kodiak Island Borough, the USCG, and the Kodiak Chamber of Commerce. In terms of status and schedule, the project is well underway in the FERC permitting process and has obtained numerous waivers from other agencies, including U.S. Fish and Wildlife, the Alaska Department of Fish & Game, and U.S. Army Corps of Engineers,. He reported that the agencies have not found any negative environmental impacts since the plant was built for expansion. He relayed that KEA has begun some of the transformation construction and anticipated it will purchase the generator and turbine this fall so that installation will begin during the summer of 2013. Regarding the funding source, he restated the project's high position with AEA, adding that KEA has secured low-interest financing for the remainder of the project through the federal Clean Renewable Energy Bonds (CREBs) program.

MR. SCOTT concluded that KEA is excited about the project and the grid stability it would bring to Kodiak. Additionally, adding the third turbine is imperative to help KEA reach its 95 percent renewable energy goal.

2:08:13 PM

REPRESENTATIVE PETERSEN informed the committee that he was impressed after seeing the Pillar Mountain Wind Farm Phase 1. He asked whether the expansion of Pillar Mountain Wind would double the wind generation.

MR. SCOTT indicated yes. He explained that in conjunction with the hydroelectric expansion, KEA would like to add three more wind turbines to the site.

2:09:01 PM

REPRESENTATIVE PETERSEN related his understanding that the Terror Lake expansion provides the best way to integrate the wind into the system.

MR. SCOTT agreed, noting that KEA needs the stability, capacity, and horsepower of hydro to utilize the power. For example, during a day using 23-24 MW, there may be plenty of water but because the wind fluctuates it is necessary to have the hydro power to cover the load. He pointed out that the third turbine at Terror Lake alleviates this issue. Kodiak's power load has increased so it is becoming more imperative to add the third turbine.

REPRESENTATIVE TUCK asked for the price difference between wind and hydro power per kWh.

MR. SCOTT advised that the hydro turbine would price the power at 6.8 cents per kWh, and the existing and future wind sources at Pillar Mountain would provide power for 12 cents per kWh.

2:10:49 PM

REPRESENTATIVE TUCK asked which type of project he would prefer: wind or hydro.

MR. SCOTT stated "if all things stayed exactly even, hydro you can count on." However, after examination by KEA, due to the capital and installation costs of hydro, wind power was the most

cost effective. He reiterated that he would prefer hydro power, but the two sources work very well together.

REPRESENTATIVE TUCK asked for the rationale behind expanding the wind farm before the third turbine was added.

MR. SCOTT explained the process as a parallel process. In fact, KEA began working on the third turbine at Terror Lake in 2007-2008, but the primary focus was on Pillar Mountain Wind Farm, Phase 1, because it was the most cost-effective. He opined the two sources work together to amplify their benefits saying, "One is good. The other is good. Together they're great." Kodiak Electric Association considered other hydro projects that were separate, but the projects were not as cost effective. Furthermore, until two years ago, SEAPA owned Terror Lake as part of the Four Dam Pool; after KEA took ownership, it moved forward with adding the third turbine.

2:13:34 PM

REPRESENTATIVE TUCK related his understanding that wind needs hydro or some other means as a main generator and that hydro power is cheaper once the projects are finished. He inquired as to whether hydro can stand alone or if it needs wind.

MR. SCOTT answered no. He acknowledged that "in the grand scheme of things" hydro costs are cheaper, but the available resources also have to be considered. He responded that the Terror Lake third turbine can stand on its own completely, will be cost effective, will bring more efficiency, and add to the grid stability and the peak load capacity. On the other hand, adding wind in the future will make the system better. He stressed that the expansion will be a great project for Kodiak and will last for 50 to l00 years.

2:14:53 PM

CO-CHAIR SEATON understood that the Terror Lake project would provide electricity for a produced cost of 6.8 cents and wind at 12 cents. He inquired as to the consumer price for electricity.

2:15:34 PM

MR. SCOTT affirmed the production cost for hydro, after the third turbine is installed, will be 6.8 cents per kWh, and wind power is 12 cents per kWh. The residential rates are 13.8 cents plus a surcharge for diesel fuel at 4.2 cents for a total of 18

cents per kWh. In further response to Co-Chair Seaton, he confirmed that the 4.2 cent surcharge is added to everyone's bill for each kWh used, primarily due to KEA's diesel usage.

2:16:46 PM

REPRESENTATIVE DICK understood that wind power is "wonderful" but sporadic. He inquired as to whether it is possible to use wind power to pump water up for storage.

MR. SCOTT answered that the process he has described is referred to as "pumped hydro" and is utilized in some areas around the world. However, he related some inefficiency exists with the process. Essentially, although the water is not pumped, the concept is used in Kodiak since when there is more wind, less hydroelectric power is used and the water is saved in the lake. When the wind subsides the saved water is used. He reiterated that the pumped hydro is a process currently used but it is more expensive.

2:18:52 PM

CO-CHAIR PRUITT related his understanding that KEA would share the cost with the state at a ratio of 50:50. He inquired as to whether KEA will achieve its 50 percent obligation with the current capital budget request.

MR. SCOTT answered yes, including the $3.75 million in the capital budget and the additional $3.75 million in the Renewable Energy Fund Round 4 budget as well. He said that would push the project to the 50:50 split considering the KEA's bonding and the state's participation. In further response to Co-Chair Pruitt, he answered that this would be the only funding request and the project should be completed by summer of 2013.

2:21:21 PM

PAUL BRYANT, General Manager, Metlakatla Power and Light (MP&L), explained the proposed Metlakatla-Ketchikan Intertie is a 16-mile transmission line to intertie Metlakatla Power & Light (ML&P) with Ketchikan's power utility. Metlakatla Power & Light would sell approximately 8 million kWhs of excess hydro energy to Ketchikan Public Utilities (KPU) and/or the Southeast Alaska Power Agency (SEAPA). Construction on the overhead line portion along 14 miles from the newly constructed Walden Point Road began last summer; permitting and construction or a one-mile submarine cable will commence pending future funding. He noted

the cost of the project is estimated at $12.7 million, and KPU and MP&L have been working on the project since 1999. A feasibility study completed for KPU in 1999-2000 estimated the intertie project could be built in a two-year construction period for about $3.4 million. However, MP&L received $820,000 from the Renewable Energy Fund grants Round 1 for the final design, and through that process derived a cost projection of $12 million.

MR. BRYANT mentioned that the immediate benefit of the project would be to displace the use of diesel in the communities of Ketchikan, Petersburg, and Wrangell. Eventually, after construction of a Kake-Petersburg intertie, MP&L's excess hydro power could be transmitted to Kake. In addition to this funding request, three other hydro projects have been identified to complete the overall framework of the system, which would potentially increase the capacity of power from 8 million kWhs to 9.8 megawatt (MW), or 33 million kWhs. He reiterated the project status by relating that the overhead line is under construction. Over the past 10 years there has been unanimous support for the project from Ketchikan and the Metlakatla Indian Community Council and Executives. Furthermore, the project has been vetted by the AEA; in fact, the project is listed as one of the six projects recommended for funding this year by the by the Southeast Integrated Resource Plan (IRP). The Round 1 Renewable Energy grant included a stipulation for matching funds of $160,000, and MP&L has expended close to $200,000 thus far. The sources of existing funding include appropriations of $500,000 from the Denali Commission for pole line hardware for the present construction project, a $2,000,000 appropriation from last year's governor's budget, and $820,000 in Round 1 funding from the Renewable Energy Fund. He pointed out that the project is on the priority list for the area's regional plan, although he was unsure of its ranking. Finally, the project has been vetted by AEA, he said.

2:27:19 PM

REPRESENTATIVE PETERSEN asked for the consumers' power rate in Metlakatla.

MR. BRYANT answered 9.2 cents per kWh. In further response to Representative Petersen, he agreed the intertie has the potential to reduce rates.

2:28:00 PM

REPRESENTATIVE PETERSEN recalled that helicopters are sometimes required to bring in poles and to aid in line construction. He inquired as to whether that would be necessary for this project.

MR. BRYANT responded no. The overhead portion is being constructed along the new Walden Point Road so the project will not require the use of helicopters.

2:28:46 PM

CO-CHAIR SEATON pointed out a number of proposed projects for Southeast. He inquired as to whether MP&L will sell hydro power to nearby Ketchikan or if Ketchikan will be fully supplied.

MR. BRYANT related that Ketchikan is very quickly expending its hydro resources so MP&L will be in the position to supply power to Ketchikan and to the SEAPA customers of Petersburg and Wrangell.

2:30:01 PM

REPRESENTATIVE P. WILSON understood that Metlakatla can currently meet its peak power needs. She inquired as to whether this intertie project is necessary to reduce future power costs to customers, and whether MP&L will make money on this project.

MR. BRYANT answered that the initial impetus for this proposed project was to provide a revenue stream for Metlakatla. In 1999, Metlakatla's primary employer, the Annette Hemlock Mill, closed due to impacts from federal rulings, and left Metlakatla with an 80-90 percent unemployment rate. His company recognized it had excess energy due to the mill closure, so it began to explore how to market it. Although the initial reason to consider the project was to create a revenue stream, the project will also lower rates for the consumer base in Metlakatla.

2:32:04 PM

MARLENE CAMPBELL, Director, Government Relations, City and Borough of Sitka, summarized that the expansion of the Blue Lake Hydroelectric Project would expand the hydro facility to its maximum energy capacity and is the first priority of the community of Sitka and the City and Borough of Sitka (CBS), which serves approximately 9,000 people. This project been studied by AEA, the Southeast Conference, and the local CBS utility since the '80s. Currently, CBS has exhausted its hydro resources, and to illustrate this she detailed the past winter's

experience when the electric utility issued a "red alert" to advise citizens to conserve energy to minimize the CBS's diesel generation. Load studies predict up to 5 million gallons of fuel oil for use in supplemental diesel generators will be required prior to completion of the Blue Lake Expansion Project, based on an annual load growth at 1.2 percent. However, since 2007, the electric system has seen unprecedented growth averaging 3.8 percent annually. The community has been courting economic development without having the means to provide any additional power. She related that developers of a new fish plant have been interested in locating in Sitka, but cannot do so due to a lack of power. She reiterated that the lack of power makes it less attractive for other new industries to relocate in Sitka.

MS. CAMPBELL explained the proposed Blue Lake project would raise the height of the existing dam by 83 feet to an elevation of 425 feet and construct a new intake structure and new penstock to supply a new powerhouse adjacent to the existing powerhouse. The new powerhouse would replace the existing two 3 MW generators with three 5.3 MW generators which will increase the installed capacity from 7.5 MW to 17 MW. This would increase Sitka's total annual electric energy production by approximately 32,000 mWh, or by 29 percent of its existing capacity. Sitka has aggressively engaged in the preliminary engineering and licensing phase of the expansion, she said, with a goal to complete construction and bring on the additional hydro capacity online by 2015. This capital funding request is for $28.5 million which would fully fund the state's interest in the $100 million Blue Lake Hydroelectric Project Expansion. Further, CBS plans to more than match the state's assistance by financing the project with 50 percent state funds and 50 percent municipal funds. Ms. Campbell advised that local community strongly supports the proposal as evidenced in public hearings, and the project also has strong support from the CBS Assembly, the Sitka Conservation Society, and environmental groups. This project has undergone a public process, and she noted that bonds for the project were supported by an 80 percent public vote. The overall project cost estimate is for $100 million and CBS has provided $5 million in cash, has bonded for $21 million, and received $20.5 million in state funding previously approved via the AEA process. The current funding request is $28.5 million, which will fully satisfy state funding, thus CBS will need to bond an additional $25 million. Of the total $100 million, CBS will provide 51 percent, and this request is for 49 percent from the state. She recapped the CBS funding plan: CBS has about $42 million available for the studies, engineering, licensing,

and the major equipment, and which is anticipated to last until the beginning of construction in mid-summer 2012; the balance of funds would be spent over the construction period ending in December 2014. Additionally, approximately $2 million will be spent in tune-up and clean-up activities in 2015-2016. The completion of this project will complete the Blue Lake Hydro facility, and no other electric projects, except for long-term development needs, are planned in the next 10-15 years. The project has undergone the environmental work, public hearings, the preliminary design phase, and the geologic investigation activities, and the dam design has been approved.

MS. CAMPBELL reported that the FERC license amendment application was submitted in November 2010, and is expected to be approved by November 2011. Construction will begin in the summer of 2012 with project completion late in 2014. She related that the current funding request, matched by the CBS bonding, will be used for the construction phase of the project. Upon completion, CBS expects the current retail rate of approximately 9.5 cents per kWh - with little diesel generation - will change. The city has reached its hydro production limits and will need to add supplemental diesel later this year and subsequently until the Blue Lake Hydroelectric Expansion Project comes on line in 2015. This project will displace approximately 2.3 million gallons of diesel per year at a cost of $8.5 million in current dollars, as well as provide adequate power to enable economic expansion. Until the project is complete, the anticipated diesel cost is anticipated at 36 cents per kWh which could raise the rate to 20 cents or more per kWh. With the bonds sold, the debt service on the existing hydro debt has been paid and the level of debt service to be assumed for the Blue Lake expansion will be comparable. No new personnel will be required due to the expansion; in fact, CBS anticipates the rates after project completion will be 10 percent or higher than rates paid today - primarily because of inflationary pressures - which could be around 12 cents per kWh. The project fits very well into the system expansion without substantial increases in debt service or operational costs. A move to diesel-generated power would increase rates to residents and will discourage economic development. Sitka currently uses approximately 99 percent renewable energy and would like to stay that way. This project was selected as a priority project by the Southeast Conference, AEA, and the advisory Group for the SEIRP, in addition to being Sitka's number one priority for several years. She said the present state funds are administered through AEA and CBS keeps AEA informed of its progress. The assigned AEA project manager attends critical meetings with FERC and the

consultants, and has visited the site. Ms. Campbell concluded that the requested appropriation of $28.5 million, added to the existing appropriations of $20.5 million, totals $49 million, or 49 percent of the overall current project estimate, leaving CBS to fund the remaining 51 percent of the project.

2:42:53 PM

REPRESENTATIVE P. WILSON referred to the document provided in the committee packet which indicated the total energy requirements of Sitka are currently being met by 80 percent oil and 20 percent hydro. She inquired as to how those figures would change upon completion of the project.

2:43:27 PM

ROBERT DRYDEN, System Engineer, Electric Department, City and Borough of Sitka, clarified those figures relate to the community-wide use of energy; however, CBS is 99 percent renewable energy and after the project would remain 99 percent renewable until pushed again to diesel fuel by rising load. Sitka currently generates about 20 percent of all the energy the community needs. In further response to Representative Wilson, he stated that about 99 percent of the electrical energy is generated by hydro power, but Sitka is pretty well at capacity and will need diesel to supplement the power, which will raise the cost substantially. Mr. Dryden continued to explain that the load growth seems inevitable. Moreover, Sitka is about 10 to 15 years away from the development of another hydroelectric facility at Takatz Lake.

2:45:00 PM

CO-CHAIR SEATON appreciated the conundrum since the legislature is considering hydro projects not just to produce electricity, but to handle the load growth from offsetting diesel usage in home heating. He stated that all of Alaska's communities intend to offset diesel. He expressed his interest in the projects being put forward, recognizing that the goal is renewable energy offsetting residential diesel use, as well as electricity to operate lights and computers. He recapped that the legislature is trying to help communities advance whatever type of alternative energy is available to them.

2:46:32 PM

REPRESENTATIVE SADDLER referred to the CAPSIS request, noting that the overall project cost has increased. He asked for clarification on the increase.

MR. DRYDEN responded that the project cost always changes as the project is refined. He explained that the original estimate of $60 million was a very preliminary number. Since the project is currently in the final dam design stage, the cost estimate reflects all of the specific requirements of the project. Mr. Dryden advised that $100 million reflects the best estimated cost and does not mean that the project changed in scope, but is a refinement of the initial estimate as the project went through the design and investigation processes.

2:48:04 PM

CO-CHAIR PRUITT asked whether CBS is fairly certain that it will receive the federal funding request of $12.5 million.

MS. CAMPBELL answered that CBS is fairly certain it will not receive this funding. She said for several years federal requests for assistance have included a federal component and CBS had hoped for three-way partnership between city, state, and federal governments. However, she indicated this has now become unrealistic and it is more likely that the project will be a state and city project. She reiterated that CBS would match the state's 49 percent with its 51 percent of funding.

2:49:20 PM

CO-CHAIR PRUITT understood the 12 cent per kWh rate would include the $12.5 million.

MS. CAMPBELL answered no. She responded that the budget figures presented are expected to be borne by CBS through additional bonding if no federal funding is received.

CO-CHAIR PRUITT then surmised that instead of passing through the project cost to ratepayers, CBS taxpayers will fund the costs associated with the bonding debt.

2:50:30 PM

MR. DRYDEN related that the utilities are an enterprise division and stand alone; therefore, no funds can change hands between a municipality and an enterprise division. This is "straight-up" utility business and although the bond is co-signed by CBS and

arranged for by the city, the total debt service associated with bonding is applied directly to the utility rates. The advantage of this particular project is that the debt service recently ended for the Green Lake Project is comparable to the debt service that CBS will assume with this expansion. Thus, the cost to the ratepayer is about the same. He anticipated that increases in other costs would likely push up the rate by a penny or so by 2015.

REPRESENTATIVE SADDLER noted that some of these projects are being touted as fulfilling the state's energy policy. He pointed out that the first principle in the policy requires energy efficiency. He inquired as to whether CBS and its residents are working to use energy efficiently.

2:52:52 PM

MS. CAMPBELL answered that CBS has worked hard to become more efficient by efforts such as converting heating systems to heat pumps, and she emphasized that nothing is as efficient as hydro power.

MR. DRYDEN agreed that CBS and the utility work to encourage heat pumps since because they can use electrical energy to amplify the effect of displacing oil by a factor of 3 to 1 over resistance heat. The utility has been working to restructure its rates to encourage the use of heat pumps and discourage the use of electric space heaters. He further stated that the utility works with citizens and businesses in a proactive manner, and citizens' groups in Sitka have been "raising awareness."

2:54:12 PM

The committee took an at-ease from 2:55 p.m. to 3:04 p.m.

3:05:10 PM

JOE GRIFFITH, President, Board of Directors, Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC); General Manager, Matanuska Electric Association (MEA), called the committees' attention to a letter in the committee packet from Rick Schikora, Chairman of the Board, introducing ARCTEC. Mr. Griffith stated the first ARCTEC energy project is the Anchorage to Quartz Creek Transmission Maintenance and Repair project which is a crucial transmission link that ties the heart of the Railbelt to Bradley Lake Hydro. The project scope includes

repairing portions of the transmission line that are at the highest risk of failure. The first segment would run 11 miles from Anchorage to Powerline Pass and 12 miles between Johnson Pass trailhead and Ingram Creek. He said this line is nearly 50 years old and is wearing out. Mr. Griffith stressed that it is crucial to get Bradley Lake and Cooper Lake power to the Railbelt because all of the utilities use the reserves and the benefits that those two hydro projects provide. He said ARCTEC ranked this project as very near the top.

3:08:30 PM

CO-CHAIR PRUITT asked for clarification on how ARCTEC prioritized the energy projects it chose to submit to the legislature.

MR. GRIFFITH explained that the ARCTEC Board of Directors reviewed studies done by the Railbelt Electrical Grid Authority (REGA), the Railbelt Integrated Resource Plan (RIRP), and pertaining to the proposed Greater Railbelt Energy & Transmission Company (GRETC), and each of the projects listed were identified as crucial links in the provision of power across the Railbelt. Furthermore, the projects were forwarded by the general managers of the participating utilities to the ARCTEC board, which approved them. Mr. Griffith advised that the projects represent the position of the electric utilities that serve nearly 75 percent of Alaska's population.

3:09:56 PM

CO-CHAIR PRUITT observed that ARCTEC has identified a list of projects it deemed as highest priority projects. However, individual utilities also have presented projects for consideration. He inquired as to why all of the projects are not proposed by ARCTEC.

3:10:42 PM

MR. GRIFFITH said ARCTEC, as a recently formed organization, felt putting all of the projects together would create an "overwhelming" need. Thus the board tried to parse out projects that were most important to the entire Railbelt region for ARCTEC support. If a utility had a project that did not benefit the entire Railbelt, the project could be completed by the individual utility and submitted separately, or could be held over for consideration by ARCTEC next year. This process did not mean a specific project not on the list did not have

support; in fact, this list just "bubbled out of the pot when we turned the heat up," he said.

REPRESENTATIVE P. WILSON inquired as to whether the $25 million funding request for the transmission line repair is for the total cost or if there is another source of funding.

MR. GRIFFITH indicated that is not the total cost. He recalled the last time he prepared an estimate for repair to the line was about 8-10 years ago, and the cost was $50 million. He then pointed out that the $50 million is for one single line; if the project is done correctly it would have two lines that would cost as much as $200 million. In further response to Representative Wilson, he agreed that additional funds are necessary, and are allotted for maintenance and operation to keep the lines maintained, given the fact it is a 50-year-old line that has never been fully replaced. The segment that brings Bradley Lake power north is also in various stages of disrepair. He reiterated that ongoing funds will be needed.

3:14:28 PM

REPRESENTATIVE P. WILSON asked whether significant maintenance has been done in the past and if money is set aside for that purpose.

MR. GRIFFITH answered no. He deferred to Chugach Electric Association (CEA) but recalled that as much as CEA desired to set aside funds, that little working capital was available for maintenance due to a low rate of return.

REPRESENTATIVE P. WILSON inquired as to the cost delivered to customers per kWh.

MR. GRIFFITH estimated that Matanuska Electric Association (MEA) and Chugach Electric Association (CEA) deliver electricity for about 12 cents per kWh; Golden Valley Electric Association (GVEA) is substantially higher, and he was not familiar with Seward Electric Department's rate. He offered his belief that Municipal Light & Power (ML&P) is about 30 percent less because natural gas costs less.

3:16:21 PM

REPRESENTATIVE P. WILSON assumed the cost to ratepayers will go up once the repairs were completed to cover the maintenance and repair costs.

MR. GRIFFITH expressed ARCTEC's intent to keep costs down which is possible with the state's assistance. The biggest fear of the utilities in the Railbelt has been the rising fuel costs. Because this is an aging system with "huge generation plants coming online," the system needs to be funded in the same as is infrastructure. Electric lines "provide[s] the grease for our economy," he said.

3:17:50 PM

REPRESENTATIVE P. WILSON stated that other funding organizations such as the Denali Commission are starting to require that maintenance costs are included. She cautioned entities that receive state funding that there is going to be more accountability required of them in terms of maintenance.

BRAD JANORSCHKE, Vice Chair, Board of Directors, Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC); General Manager, Homer Electric Association, Inc. (HEA), said project six, which is the Quartz Creek to Soldotna Transmission Maintenance and Repair, is similar to the first project Mr. Griffith described. He acknowledged that the issue of maintenance is important; however, utilities struggle because Alaska is a big state with population centers separated by great distances. For example, the distance between the Kenai Peninsula and Anchorage does not lie on a straight path since it winds through Cooper Landing. Homer Electric Association has put a significant amount of money into the maintenance of lines, particularly in the mountainous east section of its system. He noted that HEA works to first serve local customers, but will put in about $200 million of its own funds over the next three years to ensure that the service on the Kenai Peninsula stays reliable and affordable. It becomes a financial challenge for HEA and other utilities to not only accommodate the local needs of their system, but the public lines between service areas. He pointed out that most of the projects listed are those that are trying to get Bradley Lake Hydro power and Kenai Peninsula power tied to Southcentral Alaska. Mr. Janorschke said that the utilities attempt to address the operation and maintenance for systems, but some areas are expensive.

MR. FOUTZ informed that committees that CEA is in a similar situation in that its first priority was to build new efficient gas turbines to save money on gas. He acknowledged that maintenance is needed but has been continually deferred because CEA has to invest over $250 million in new generation. He

pointed out that although CEA owns the line, the line is critical infrastructure that allows the Bradley Lake hydro power to move north for the benefit of GVEA, ML&P, and CEA. With the natural gas constraints in Cook Inlet, it is more important that the Bradley Lake power moves north. He emphasized that this project is overdue, needs to be done, and funding will be very much appreciated.

3:23:15 PM

CO-CHAIR SEATON asked for clarification on the organization of ARCTEC. He further asked if after projects are funded, the utilities as a whole will incorporate a rate base dedicated to the operation and maintenance of upgraded lines and facilities.

MR. JANORSCHKE envisioned ARCTEC as a united entity to forward large-scale renewable energy projects - that are too big for an individual utility to build - for the benefit of each of its members. Secondly, ARCTEC recognizes it must focus on large projects that are needed by all, but that do not "jump on the top of our individual lists." He said he foresees a regional transmission organization that will garner support for projects such as the tie-line between Kenai and Anchorage, which are vitally important to the entire Railbelt. He stressed the benefit ARCTEC brings to strengthen the utilities' positions. He discussed ways to recoup investments through a cooperative; for example, when HEA invests in its lines and other parties use them, the parties are charged a fee to spread the cost of operation and maintenance. In addition, all of the rates are reviewed through the Regulatory Commission of Alaska (RCA), which sets the methodology. This is the process by which the utilities recover any investments that are made.

3:26:43 PM

CO-CHAIR SEATON pointed out that the legislature is in the process of making significant investments in these projects. He offered his belief that the utilities would not work to recover the costs paid by the state on projects that are owned by individual utilities. He questioned whether a utility will depreciate a facility the state has invested in without providing for its maintenance. He inquired as to whether the maintenance of projects is the responsibility of ARCTEC, the RCA when it sets the rates, or of the utility, and asked for assurance that the legislature would not be approached for funding "when [the project] falls down."

MR. JANORSCHKE answered that through the RCA's methodology the utilities can recover all of the operating and maintenance expenses as well as depreciation. None of the utilities "pre-fund" to replace an asset, but must borrow. He related a scenario in which HEA owns a line and invests $200 million in the transmission line and is "borrowed out." He characterized it as though someone would go to the bank but has maxed out their credit cards. He would not want to put the utility in the position of doing so.

3:29:12 PM

CO-CHAIR PRUITT asked whether the RCA set regulations that limit or prevent utilities from setting aside money for future operations, facilities, or generating capacity.

MR. GRIFFITH said, "You're not allowed to do that. If it's grant-funded, you don't get it."

CO-CHAIR PRUITT clarified that his question was whether the RCA prevents a utility from investing in future electrical utility capital projects.

3:30:56 PM

MARK JOHNSON, General Counsel, Chugach Electric Association (CEA), said he served as a commissioner on the RCA from 2003-2009. He explained that nationwide standard regulatory practice does not permit a utility to roll into the rate base "contributed plant," which are grants from the government. He agreed that an explicit mechanism does not exist to recover and collect operating expense from ratepayers for future maintenance. Mr. Johnson advised that this creates an acute problem in many rural areas where the legislature has funded a utility water and sewer plant with grant money, and the mechanism does not exist to recover the costs. However, the RCA was created by the legislature and has the ability to step in and change the rules, and he reiterated that this is a long-standing regulatory problem that could benefit from a solution.

3:32:22 PM

CO-CHAIR PRUITT understood the legislature is creating a future problem by not allowing utilities to replace facilities on a going-forward basis.

3:32:57 PM

MR. JOHNSON opined the legislature did not intend to create this problem, but the regulatory practice in Alaska does not permit this.

3:33:22 PM

CO-CHAIR PRUITT pointed out the effect of these limitations on utilities.

REPRESENTATIVE P. WILSON emphasized that the problem is compounded when the state has less money to spend on its citizens. She said she was alarmed by this situation and urged action during the next legislative session so that utilities can "charge your ratepayers ... so that you know you can always maintain and that you have money ...."

MR. JOHNSON observed this issue greatly contributes to problems between constituents, the utilities, and the RCA.

CO-CHAIR PRUITT pledged the committee's work on this issue.

3:37:15 PM

REPRESENTATIVE PETERSEN asked whether the transmission lines from Anchorage to Quartz Creek are new lines with additional capacity.

MR. FOUTS said the transmission lines will be upgraded from 115 volts to 138 volts in order to provide more security for higher voltages.

3:38:13 PM

REPRESENTATIVE PETERSEN surmised this project will not create redundancy, but will keep the current lines producing without worry of failure.

MR. FOUTS reiterated that a portion of the line is 50 years old; in 2007, CEA performed aerial and field inspections that revealed two of the seven segments are critically in need of repair. The requested funding is for repair to the two critical segments. If further work can be delayed until 2015-2020, the RCA may allow CEA to recover "prudent expenditures," and the utility would pay for the additional line upgrades; however, these lines have needed replacement for ten years. He concluded

that the most optimum investment for the utility right now is to reduce the cost of gas, which has taken up its line of credit.

3:41:32 PM

REPRESENTATIVE TUCK recalled 8-10 years ago some of the transmission line was replaced.

MR. FOUTS acknowledged the line was replaced along Turnagain Arm. In further response to Representative Tuck, he said the only sections that have been done are along Turnagain Arm, because the other sections are difficult to access, so replacements are made in a major project, not pole by pole.

3:43:18 PM

REPRESENTATIVE TUCK agreed sections of the line look old. He opined there is a nationwide concentration on building new plants to meet the demand for more power, but transmission lines are neglected because they do not reduce utility rates. Representative Tuck said it is important for the state to have the ability to fund projects in the future, and suggested the state provide - not grants - but 1-2 percent low-interest loans which would provide seed money and "pay-back" to the state. He pointed out that long-term loans are not always available from financial institutions, but historically, the government has provided them. He cautioned that the state will not be able to sustain this level of funding for projects in the future.

CO-CHAIR PRUITT opined more understanding of the legislature's role is needed.

3:48:37 PM

CO-CHAIR PRUITT turned to Battle Creek Diversion Project, which he explained would add additional capacity to Bradley Lake Hydroelectric.

MR. JANORSCHKE agreed that the Battle Creek Diversion Project, funding request would increase the capacity of Bradley Lake Hydro. Bradley Lake Hydro is operated and maintained by Homer Electric Association (HEA) and has a maximum output of about 120 MW, producing power at a cost of about 4.2 cents. The rate is extremely attractive. However, one drawback is that when the facility is operated at its highest capacity it will run out of fuel in about four months. Thus, it does not operate at its highest and cheapest capacity and is limited to usage for a

peaking unit but cannot use the full capacity and efficiency. Thus, the investment for the 120 MW capacity benefits at about the 60 MW level. The Battle Creek Diversion project would divert some water from Battle Creek into Bradley Lake, and at 4.2 cents and represents the cheapest option in the Railbelt to add fuel for new generation.

3:50:42 PM

REPRESENTATIVE P. WILSON asked for the location of the diversion.

MR. JANORSCHKE answered that it is pretty close.

3:51:16 PM

MR. FOUTS, in response to Representative Saddler, answered the total cost of the project is estimated to be $3l.5 million. Other funding sources are this grant and bonds issued by the utilities. Construction is scheduled for five to ten years, and the pay-back period would depend on future gas prices. The project is at the preliminary concept level, without detailed design or permits, and the state money would be used for design and construction. Finally, the project has been vetted by AEA.

3:53:07 PM

CO-CHAIR PRUITT asked whether ARCTEC "could handle" the shortfall between the $20 million requested and the $15.5 million in the budget.

MR. FOUTS advised the funding plan is for 50 percent funding by grant and the six utilities would seek bonding for the balance.

3:53:34 PM

REPRESENTATIVE P. WILSON questioned the effect to the project of the limitation on the state's capital investment to 50 percent.

MR. FOUTS said based on what is known today, the project will cost $31.5 million and the intent is to get 50 percent funding from the state. If the estimated cost changes, the grant amount may change. However, the project has economic value and the utilities are highly motivated to complete the project.

3:55:53 PM

CO-CHAIR PRUITT restated the question.

MR. FOUTS, returning to the Anchorage to Quartz Creek Transmission Maintenance and Repair, said the request is to rebuild two segments of line for $25 million. The other five segments of line will be addressed in the future.

3:57:03 PM

REPRESENTATIVE P. WILSON was unsure whether grant recipients are aware of the 50 percent limitation.

MR. GRIFFITH affirmed that the utilities are aware of the limitation. He said, "No way we could afford to do that on all of these."

REPRESENTATIVE P. WILSON stated, "Some of us would like to get rid of that wording, and so we're just wanting on the record, your concerns."

CO-CHAIR SEATON confirmed that Battle Creek Diversion is a 50 percent to 50 percent investment, but Anchorage to Quartz Creek Project is 100 percent state funding. He requested that ARCTEC specify which proposals are 50 percent matches.

MR. FOUTS answered that the $25 million Anchorage to Quartz Creek request is for 100 percent grant funding as it's a transmission line that serves the entire Railbelt. The Battle Creek Diversion project was a 50 percent request and the Cook Inlet Gas Gathering System Remodel is a 100 percent request.

3:59:25 PM

JOHN FOUTZ, Utility Manager, City of Seward, related that Seward has spent "close to 50 percent" funding on the Dave's Creek to Seward Transmission Line Completion. However, he asked whether the qualifying funds were "previous funds or future funds."

CO-CHAIR PRUITT referred to page 99, lines 18-19, which read,"50% of the total investment required to fully complete each project."

MR. FOUTZ confirmed the City of Seward has spent 50 percent of the required matching funds.

4:00:06 PM

MR. JANORSCHKE advised that the Girdwood and Sterling Substation Improvement is a request for 100 percent of the cost of components. The projects are larger but this component is to put in a ring bus which would allow them to switch on and off the transmission line without interrupting the flow of electrons. In further response to Co-Chair Pruitt, with respect to the request for the Quartz Creek to Soldotna Transmission Maintenance and Repair project, he clarified the request is for 100 percent of the cost of upgrading a section of the line to which ARCTEC has already made improvements.

MR. FOUTS explained the Seward Power Plant Integration request for $4 million, which is 50 percent of the cost.

MR. GRIFFITH said the Soldotna to Quartz Creek Transmission Study Design and Permitting request is for 100 percent of the design function, but not of the whole project, and the Teeland to Healy Substation Improvements and Repair request is for 100 percent of the completion of the project.

MR. GRIFFITH added that the Teeland to Healy substation improvements and repair project request for $5 million would be in addition to a prior related project that was paid by the state, which he thought was funded at $10 million.

4:01:45 PM

CO-CHAIR SEATON explained the quandary since Ms. Fisher-Goad, AEA, asked for clarification on the language that requires a 50 percent state investment and related confusion on whether this percentage related to segment cost or total cost. He agreed legislators are unsure of exactly what the wording means and the final outcome on clarification.

CO-CHAIR PRUITT said he understood.

4:02:25 PM

REPRESENTATIVE SADDLER returned to the Battle Creek Diversion, and asked whether AEA assisted in the conceptual design.

MR. GRIFFITH answered yes. In further response to Representative Saddler, he said he was not aware of whether state leases or permits were received.

4:03:26 PM

MR. FOUTS explained the Cook Inlet Gas Gathering System Remodel affects the pipes in Cook Inlet that serve Anchorage. The current pipelines run from Kenai to Anchorage and from the west side of Cook Inlet to Kenai. Currently, there is not a means to physically get gas from the Kenai to the Matanuska-Susitna Valley. This worked fine for 30 years when gas supplies were on the west side of Cook Inlet, but now all the gas production is headed toward the east side so it would be costly, up to $2 million to do so. This $2 million project would reduce check values and compression and move gas on the west side, similar a transmission structure. Over the past several years the gas burned at power plans was bundled with transportation costs. Now that the Cook Inlet gas supply has diminished over the years, the producers are willing to produce the gas but require transportation be arranged. This project has been identified for about five years but needs to be done next year. Currently, the project is in the design and permit phases which should be completed by October. The total project cost would be $2 million. The funding sources are utilities, Chugach Electric, Alaska Municipal Light & Power (AML&P), and Enstar. The project would be completed in one year. He envisioned a permanent compression fix in the future would require additional funding. The cost, if not grant funded, would be recovered from ratepayers. He said the purpose is to provide stability and reliability of natural gas from Cook Inlet. The AEA has not been involved in this project, which has been limited to the three utilities that need natural gas delivered that have supported the project.

4:06:58 PM

CO-CHAIR SEATON asked whether remodel referred to a reconfiguration which would be a construction project or whether it would be a study on how to perform the project.

MR. FOUTS explained that the project would involve replacing a one-way valve with a two-way valve and to install rental compression to boost up pressure on the line to prevent disturbances to other users on the pipeline. Thus, this project would be to upgrade the pipeline to make it bi-directional.

4:07:45 PM

REPRESENTATIVE PETERSEN related his understanding that this project would increase access to gas for Anchorage and the Matanuska-Susitna Valley.

MR. FOUTS answered yes. He related that if Anchorage experiences really cold weather and additional natural gas could not be shipped via the Kenai pipelines to Anchorage, the only gas available would be from two primary natural gas fields via pipelines and the two-way valve could be completed by October. In further response to Representative Petersen, he agreed that this project would create redundancy and security during extremely cold weather.

REPRESENTATIVE TUCK inquired as to whether the natural gas storage on the Kenai would help alleviate the issue.

MR. FOUTS answered that the storage is located on the Kenai Peninsula. He said one way to transport the gas is via existing lines but gas storage would not solve the problem since the natural gas still must travel across Cook Inlet. He characterized this as a gas transportation problem.

REPRESENTATIVE TUCK asked whether this project was part of the Railbelt Integrated Resource Plan.

MR. FOUTS said he thought that plan focused mostly on the electric issues.

JOHN FOUTZ, Utility Manager, City of Seward, explained the Dave's Creek to Seward Transmission Line Completion. He detailed that Seward receives power from Chugach Electric through a single line that runs from Anchorage to Seward. The line has been updated and repaired. The line was upgraded from 69 to 115 kV. That project was never completed and falls a few blocks short of the substation. This funding of $1.5 million would bring upgrade the line to the substation. He answered the general questions, noting the project has local support and several resolutions have been passed by the city council in support of the project. In 2010, the City of Seward spent $1.27 million on upgrading, rerouting and repairing the transmission line. He noted that nearly $2 million has been spent on repairing the line. He reviewed funding sources such that state and federal funds started the project and bonding and city funding has since been utilized. The ARCTEC funding request of $1.5 million would complete the project this year. The entire line from Dave's Creek to Seward is 40 miles and less than a mile remains. If the rates were allocated to ratepayers it would have happened thirty years ago so he was uncertain whether that occurred. The local population is relatively small and could not absorb the additional costs. The project was vetted by the AEA and listed in the RIRP but not one of the top

priorities. With respect to the 50 percent matching funds, in 2010 the City of Seward spent $1.27 million to maintain, upgrade, and repair the line.

4:15:54 PM

REPRESENTATIVE P. WILSON asked for clarification on whether this project would add a few more blocks of access to electricity.

MR. FOUTZ answered that thirty years ago the process to upgrade the transmission line from 69 to 115 kV. Currently, the line transmits power but not to the highest capacity. In further response to Representative P. Wilson, this project would allow for a higher voltage, not additional distribution line. The transmission line transmits power from point "A" to point "B." The distribution lines would distribute power from point "B" to the residential home. More specifically, the project takes power from Anchorage to Seward at a higher voltage, which offers benefits. The biggest benefit is obtained since the larger the voltage capacity the lower the line loss, he said.

REPRESENTATIVE TUCK commented that he worked for Norcon, Inc. in 1992, when the 115 kV transmission line was built. He related a scenario that illustrated the problems with some residents who objected to the line.

REPRESENTATIVE SADDLER inquired as to whether the 50 percent cap would limit the state to providing only $1.27 million since that is the amount the City of Seward contributed as matching funds.

4:18:41 PM

MR. FOUTZ agreed that an additional $130,000 to reach the 2010 match. He was unsure of how the match would be appropriated. He expressed confidence that reviewing expenses over the thirty years of the project expenditures would reach $130,000. Additionally, the City of Seward has right-of-way and maintenance issues to contend with so the city should be able to reach its matching funds this year.

REPRESENTATIVE SADDLER acknowledged that the legislature is also waiting to see how the match would work. He clarified this project provides the last upgrade to the transmission line, not that a gap exists in the transmission line.

REPRESENTATIVE DICK provided an example for Representative Wilson to further clarify the upgrade.

4:20:25 PM

MR. JANORSCHKE reviewed the $4 million request for funding for the Girdwood and Sterling Substation Improvements. This project would entail splitting the funding into two segments: $2 million for Girdwood and $2 million for Sterling. The Sterling funding would reduce voltage for distribution in substations to supply the power to communities. One method is to use a doughnut type of connection, which would allow the power to come into the doughnut and out the other side. This type of distribution allows a "T" anywhere along the doughnut to serve the substation. The advantage to this type of connection is it allows work to be done to the substation without disruption of power. Additionally, if any issue arises on either side of the ring or doughnut the line can be serviced with minimal disruption. Thus, this project would provide greater reliability. Homer Electric Association, Inc. (HEA) has currently been working to design the Sterling substation, which should be completed next year. The design work is using a "T." He recalled discussions with other utilities that used a "T" and regret not using the ring or doughnut configuration since it is more expensive to convert later. He agreed the ring design should be done but HEA cannot afford to do so at this time. He related his understanding that Girdwood is expanding and are tying into the same line. He reiterated that this project is needed for reliability.

4:23:22 PM

REPRESENTATIVE SADDLER asked him to address the listed questions.

MR. JANORSCHKE related the total cost is $4 million for the improvement. He said the Sterling substation costs are estimated at $6 million excluding the improvement. After conferring, he agreed the costs at Girdwood would be similar. Without the funding sources, the HEA would not be able to make the ring configuration at this time. He related that all the Railbelt utilities have been unanimous in their support. He restated that the Sterling project is in the design phase, that it would move to civil engineering phase during before the end of this construction season. He anticipated that it would be completed and online by the next construction season. In further response to Representative Saddler, he indicated the AEA has not been involved so far.

4:25:03 PM

MR. JANORSCHKE outlined the Quartz Creek to Soldotna Transmission Maintenance and Repair. He explained that this project would be similar to the Quartz Creek to Anchorage project. He indicated this particular section of the transmission line is 50 years old and traverses through Kenai Wildlife Refuge. This has created some challenges to conduct the ongoing maintenance program since the needs of the refuge and utility are appropriate but different. He related that from a utility's perspective a 100-foot clear cut is preferable but that approach understandably does not work in the refuge. This project would complete the last section of the utilities' maintenance program on the east side of the Kenai Peninsula. He identified that some soggy conditions exist so work has typically been conducted during the late winter after heavy freezes using snow roads. The work also would require off road rigs and helicopters for access, which is very costly. He noted that the current rate for helicopters is $1,000 to $1,200 per hour. Thus far all the funding has been provided by the utilities, he stated. The utilities' costs will be borne by users and participants including all Railbelt utilities. In the event this project does not receive funding the project could likely be funded in-house, but it would need to be done over a longer timeframe. The Railbelt utilities all support this project since Bradley Lake power cannot be transmitted from the Kenai Peninsula if the line goes down.

4:27:42 PM

REPRESENTATIVE P. WILSON inquired as to whether 100-foot wide breaks would be sufficient for firebreak.

MR. JANORSCHKE answered that there is not any guarantees but the 100-foot firebreaks improve fire protection and provides quick access.

4:29:13 PM

MR. FOUTZ reviewed the Seward Power Plant Integration project for $4 million. He explained that the City of Seward has diesel fuel back up generation. The city has six generators that basically resemble the ones on World War II submarines. Each generator provides 2.5 MW for a total capacity of 15 MW of power. He explained that Seward's maximum load is 10 MW so the six generators provide an "n minus 2" capability. Seward could experience maintenance issues with two of its generators yet

still maintain the load. He described the benefit of having 5 additional MW is that it would provide power during emergency situations to "push power up the line" to other areas not normally served such as Moose Pass and Cooper Landing, which are served by Chugach Electric Association (CEA). Two years ago, the City of Seward initiated a project to increase Seward's capacity by adding two generators. He said when he became utility manager that he reviewed the project to "get the most bang for the buck." This project would provide a full-size building to house four generators and switch gear for two new generators. This $4 million project would move the two additional generators to a new building and upgrade switching components for all six generators. The new switch gear would allow the utility to bring generators on-line quicker during emergency situations in the event of a blackout, avalanche, or mid-winter natural gas shortage situation.

4:32:59 PM

REPRESENTATIVE TUCK inquired as to how long it takes to get generators up during a power outage.

MR. FOUTZ answered that it takes up to two hours. In further response to Representative Tuck, he responded the intent would be to have both manual and automatic switch gear for different purposes. The facility primarily provides back-up generation. The utility needs manual capabilities for emergency situations to manually turn on the generators. In the event the entire Railbelt needs additional generation the utility would prefer automatic switches to allow CEA to rely on the additional generation.

MR. FOUTZ related significant local support including several City Council resolutions. The City of Seward bonded for $6 million for this project as well as $2 million of grant funding. The utility has spent $7.2 million on the project. The $4 million funding would complete Phase I as well as Phase II of this project. Phase II would provide an office warehouse on-site to store equipment to provide the benefits of having materials on-site. He related that the City of Seward funding over the next five years includes some small construction projects for the Seward Power Plant Integration that previously was phased out based on funding constraints. The City of Seward anticipates the project would be completed within five years with this funding approved. The project consists of two phases: Phase I, the generation building, and Phase II, the office warehouse. The cost of bonding has been passed on to ratepayers

and he was unsure of whether grant funds already paid were passed on or not. He clarified that the City of Seward is not funded by the Regulatory Commission of Alaska (RCA). In response to Representative Saddler, he offered his belief the source of the grant was state funds.

CO-CHAIR SEATON related his understanding that the City of Seward received a $2 million state grant for backup generators two years ago.

4:37:54 PM

MR. FOUTZ acknowledged that the City of Seward bonded $6 million and received an additional $2 million state grant. He related that the project was included in in Railbelt Integrated Resource Plan (RIRP) but is assumed to be completed since the project was under construction at the time the AEA prepared its RIRP. He identified that the $6 million in bonding meets the 50 percent matching fund requirement.

MR. JANORSCHKE reviewed the Soldotna to Quartz Creek Transmission Study Design and Permitting project. He related this project as similar to one discussed yesterday. He pointed out that two transmission lines exist, one higher and one lower voltage, from Soldotna to Nikiski. When the lines are of equal voltage it provides redundancy, he said. He said this project will upgrade an existing line, which is important in order avoid instances in which the higher line goes offline and transfers voltage to the lower voltage line that cannot handle the load. He advised that the only scenario to provide redundancy is when the higher voltage line can be reduced to the point the lower voltage line can handle the load to allow for maintenance. This project would provide a study, preliminary design, and initial permitting to convert a transmission line between Soldotna and Quartz Creek substations from 69 kV to 115 kV. He admitted this project presents challenges since it crosses the refuge. The right-of-way currently has been rated for the 69 kV line. The funds would be for analysis and review, routing and design. Additionally, this project would result in a 54 mile transmission line, noting the terrain worsens with the distance from the office. He stated that the average cost is $1 million per mile, which he believes represents a reasonable cost.

4:42:08 PM

REPRESENTATIVE P. WILSON asked whether converting from a 69 kV to 115 kV line requires a wider right-of-way.

MR. JANORSCHKE answered that right-of-way costs can vary in regions. He identified the project's location as adjacent to the Sterling Highway so as areas are cleared out it attracts moose, which pose safety issues for motorists.

REPRESENTATIVE P. WILSON clarified her question.

MR. JANORSCHKE stated that the right-of-way permit would need to be modified to increase the limit of voltage from 69 kV to 115 kV. Once that is addressed, the next step is to determine if the existing right-of-way can be widened to accommodate the higher voltage and provide additional safety for electrical conduction.

4:44:50 PM

REPRESENTATIVE TUCK inquired as to whether an existing 115 kV line exists or if both a 69 kV and 115 kV transmission line would exist.

MR. JANORSCHKE responded that currently a 69 kV and 115 kV line exist as parallel lines for most of the route. He related that the lower voltage line is essentially useless 98 percent of the time so to obtain any value the voltage needs to be increased. In further response to Representative Tuck, he explained the differences between this project, item number 8 on page 4, and item number 6 on page 3, the Quartz Creek to Soldotna Transmission maintenance repair. He said that the project listed as item number 6 would provide maintenance and repair to the 115 kV line. The existing 69 kV aging transmission line is in "horrible" shape, he said.

REPRESENTATIVE TUCK asked if the design and permitting were complete whether it would be cheaper to perform both these functions at the same time.

MR. JANORSCHKE disagreed. He identified the projects are distinctly two separate projects. The Soldotna to Quartz Creek Transmission Study Design and Permitting project would have some field work but not any heavy equipment but rather working through the legal permitting process and performing the civil engineering to design the replacement for the 69 kV line. He explained the 115 kV transmission line is limited to the east side of that section towards Quartz Creek at Cooper Landing. That project would entail heavy equipment and helicopters to replace poles and cross arms on the 115 kV transmission line. In

further response to Representative Tuck, he advised they are adjacent lines with two separate easements with a grove of trees ranging from 10 to 30 feet.

4:48:36 PM

REPRESENTATIVE TUCK clarified his question, asking if the design and permitting was completed, whether it would be cost effective to perform the construction simultaneously since the helicopters could be used on both adjacent lines.

MR. JANORSCHKE responded that the proposed project entails the 54 mile length of the line. The previous $10 million focused on the eastern section of the transmission lines, but this project covers the entire line.

4:49:29 PM

REPRESENTATIVE SADDLER related his understanding that project number 8 would study design work to upgrade the 69 kV line. He asked for the relationship between the two projects.

MR. JANORSCHKE answered that the 115 kV line provides the primary tie between Bradley Lake and HEA and CEA facilities on the Kenai Peninsula and Anchorage. Project number 8 would work to build redundancy between that tie line from Kenai to Anchorage. In further response to Representative Saddler, he indicated that the estimate is $750,000 to $1 million per mile for design since an estimate has not been finalized.

4:50:59 PM

CO-CHAIR PRUITT anticipated that funding may be requested in a future project.

MR. JANORSCHKE agreed.

4:51:18 PM

REPRESENTATIVE TUCK inquired as to whether parallel redundancy exists from Anchorage to Golden Valley or to the Matanuska-Susitna Valley.

MR. JANORSCHKE clarified that redundancy does not exist from Quartz Creek to Anchorage.

4:51:48 PM

MR. GRIFFITH system explained that Golden Valley Association is looped and redundant from plant 2 in Anchorage to Willow. North of Willow the line is a single 138 kV line to Healy built to 345 kV standards and dual lines from Healy to Fairbanks. He recalled that the funding source was Railbelt Energy Fund from the old Susitna project that built the second line from Healy to Fairbanks. He further recalled that Anchorage's share is the $67 million in the governor's budget for the Susitna project.

REPRESENTATIVE TUCK inquired as to whether this is ARCTEC's project, but it is not going through the CAPSYS program process, but rather through the governor's budget process.

MR. GRIFFITH related that the $5 million for the Teeland to Healy Substation Improvements and Repair would provide repair of the three static systems located at Teeland, Gold Creek, and Healy. These static systems ensure the ability to reach the electrical transfer capacity of approximately 75 MW. The components were installed 25-30 years ago and some are no longer manufactured. The electronics need to be fixed or replaced. This project started 7-8 years ago with a $10 million state grant. The GVA does not have sufficient funding to complete the project. He said the $5 million will complete the project that previously was funded with $10 million in state grants.

4:55:27 PM

CO-CHAIR PRUITT asked whether the $5 million request would be sufficient or if additional funding would be needed to complete the project.

MR. GRIFFITH answered that this would complete the project. The prior funding was disbursed to the Municipality of Anchorage and AEL&P is currently managing the project.

4:56:05 PM

REPRESENTATIVE SADDLER asked him to identify any previous funding.

MR. GRIFFITH explained that about $8 million of the $10 million funding was expended on the project and the remaining $2 million covered fees so insufficient funding exists to complete the project. In further response to Representative Saddler, he related his understanding that in about 2004 or 2005 the $10 million funding was secured. The state funding is the only

funding sources. He agreed $5 million will complete the project.

4:57:00 PM

CO-CHAIR PRUITT inquired as to whether $10 million was the original estimate for the complete project.

MR. GRIFFITH answered that the shortfall was due to unexpected expenses. Once the work began they discovered some of the components were outdated. He confirmed that the $5 million will complete the project.

4:58:04 PM

MR. GRIFFITH, in response to Representative Tuck, explained that the substation at Teeland is owned by CEA but contains MEA components, the Douglas substation is owned by AEA with MEA components, and the Gold Hill substation is owned by AEA. In further response to Representative Tuck, he agreed all three components and the static bar compensators in the substations are part of the project.

REPRESENTATIVE TUCK inquired as to why this project is not being presented by AEA since it owns two of the facilities.

4:59:04 PM

MR. GRIFFITH clarified that the original $10 million proposal was an AEA project which was transferred to the MOA and Alaska Electric Light & Power (AEL&P). The AEL&P advised that additional funds would be required. He agreed it is technically AEA's equipment since it ties into their intertie.

MR. JANORSCHKE noted there are many projects to consider. He stated utilities must work together to continue to provide reliable service given the aging systems. He was uncertain how utilities could continue to provide services without making these improvements. He related that most issues are with transmission systems. He predicted that utilities will struggle to get geothermal, hydroelectric and wind power on the grid so integrating renewable sources will continue to be challenging.

REPRESENTATIVE SADDLER asked for projections of what lies ahead in the next five years after funding these projects.

MR. GRIFFITH offered his belief that moving forward with the Susitna project will require a huge investment in transmission. The biggest issue the utilities face today is the fuel problem. Anything that improves the transmission system reduces costs for everyone in the Railbelt. The issues raised today represent the key issues which ARCTEC will review. He agreed with Representative P. Wilson that Alaska cannot afford to run the systems needed to operate the economy today. He concluded that ARCTEC will review the issues during the interim and hopes to come back with suggestions next session.

CO-CHAIR PRUITT thanked the presenters.

5:04:21 PM

CO-CHAIR SEATON expressed his concern about the language on page 99 of CSSB 46(FIN). He referred to page 99, line 18, and questioned whether a set 50 percent for all projects is appropriate. There projects are diverse and it may not make sense to have a "hard and fast" percentage. He suggested a criteria-based approach be used instead. He suggested the committee pass these concerns on to the House Finance committee for use during its deliberations.

CO-CHAIR PRUITT agreed that concerns should be passed along.

5:08:56 PM

REPRESENTATIVE PETERSEN noted the effect of lower rates of utility rates to commerce in rural areas. He related that lowering the costs to a grocery store in rural Alaska could be passed on to customers so milk does not cost $8 to $10 per gallon. He noted some of the projects will lower the cost to consumers, but also to small businesses in the region. Additionally, income could be "freed up" for other projects. He said he believes that the legislature can improve people's lifestyles and lower the cost of living by keeping electric costs as low as possible. He thought many of these projects could help us reach that goal.

5:10:34 PM

CO-CHAIR PRUITT asked whether participants have addressed projects in a previous committee setting.

MR. JANORSCHKE answered no.

5:11:42 PM

REPRESENTATIVE SADDLER related that the projects were presented as implementing the state's energy policy. He read the policy. He thought that other questions could be asked to determine how these projects fit into the policy and address energy efficiency, support economic development, have elements of energy research, and include government coordination. He concluded the importance of being able to quantify how these projects fulfill the energy policy.

REPRESENTATIVE DICK noted school districts are paying very high utility bills due to fuel costs.

5:12:47 PM

REPRESENTATIVE TUCK recalled grants available including the Southeast grant funds and if approved, will require regulation. He offered his belief that many of the projects will need to apply for grants. He inquired as to the process AEA uses to distribute grant funds.

MS. FISHER-GOAD responded that only projects in this list that require regulation process would be the Southeast Energy fund since it would be $10 million to the fund for the AEA to do a specific purpose to issue grants to statutory eligible grantees. The other projects fall under typical capital budget projects where individual projects would be managed by AEA. The scope of the project is identified in the backup. The capital budget provides the AEA the information on how to fund the project. The AEA would work with the grantees and project owners to honor match requirements.

5:15:10 PM

REPRESENTATIVE TUCK related his understanding that there is not a process. He related a scenario, such as the community of Akiak, who would not have a prescribed process to receive funds once approved. He inquired as to whether the community would receive funds from AEA or if the community would need to meet the criteria to receive the full amount.

MS. FISHER-GOAD answered that Akiak project is unique since it is a Rural Power System Upgrade (RPSU) project. The RPSU projects underwent a ranking criterion process the AEA and the Denali Commission several years ago. She affirmed that Akiak is at the top of that list. She said that if Akiak receives its

funding from an individual line item in a capital budget, the AEA can use the $10 million designated for the RPSU project for other projects. She anticipated the two projects that could be funded are Fort Yukon or Atmautluak.

REPRESENTATIVE TUCK said he understood. He stated he had randomly selected Akiak. He then turned to Anchorage to Quartz Creek Transmission Maintenance and Repair project, noting the $25 million. He related his understanding the $25 million would not be directly given to the Municipality of Anchorage (MOA). He inquired as to whether there are internal controls to identify when and how the funding is delivered. He clarified that his interest is focused on the AEA's procedures.

MS. FISHER-GOAD answered that the AEA executes several grant agreements which would typically consist of 40 pages of requirements, including those that identify allowable costs. She recalled the language outlines requirements that are similar to those of the Renewable Energy Fund requirements. The AEA may suggest a milestone process for the grantee. She related that the AEA's project managers have a familiarity with the grantees and have "boilerplate" grant requirements. She provided an example of prohibited grant fund uses such that a grantee cannot use funds for lobbying the legislature. She illustrated the $25 million Anchorage to Quartz Creek Transmission Maintenance and Repair grant is a grant to the Chugach Electric Association (CEA) for the project. The grant agreement would identify the scope of work and would identify any prohibited expenditures. The primary purpose of the funds would be to perform the identified project and AEA would verify expenditures via invoices to ensure the grantee follows the legislature's intent. She reiterated that the AEA would go administer the grant for appropriateness of expenditures.

5:19:06 PM

REPRESENTATIVE TUCK offered he had been considering the Southeast Integrated Railbelt Plan. He inquired as to whether it would be better to lump the funding for grants rather than to list each one separately. He related his understanding that the 40-page grant application process provides a standardized process but some projects could be fine-tuned to ensure the state's interests are represented.

MS. FISHER-GOAD affirmed that AEA takes its fiduciary responsibilities very seriously with respect to grantees and the grant agreement creates a contractual relationship between the

AEA and the grantee. She indicated the AEA would place any necessary stipulations on a specific project. In further response to Representative Tuck, she related the AEA would reallocate money through the legislature in the event that a grant was terminated, similar to how the AEA administers Renewable Energy Grants.

5:21:41 PM

REPRESENTATIVE TUCK inquired as to whether the AEA supports the Teeland to Healy Substation Improvements and Repair project.

MS. FISHER-GOAD related her understanding the specific repairs are for the AEA Intertie. She offered to confirm this with Mr. Griffith. She reviewed the history of the project relating that in 2003 $20.3 million was appropriated to AEA to upgrade the intertie and create a Teeland bypass. The project experienced issues but continues to be active with the AEA and the Intertie Operating Committee. In 2008, the legislature reappropriated $10 million for the intertie repairs but the necessary project costs increased to $15 million. She offered her support for the state to maintain state-owned assets. She opined these repairs need to be done, noting that it would be difficult for the utilities to manage the 50 percent matching funds, particularly due to the intertie agreement. She also recognized the state's opportunity given the newly created ARCTEC to review and accomplish repair projects the legislature funds as well as to consider the overall integrity of the Railbelt transmission system. She advised that the AEA has historically allowed the utilities take the lead on repairs which is one reason this capital request was not made through the AEA budget. She offered to work with the utilities to determine whether the AEA should take a more active role or to work on a partnership with the utilities.

5:26:00 PM

REPRESENTATIVE TUCK understood that AEA was very familiar with capital projects. He inquired as to whether the AEA maintains a list of priorities that were previously funded and how the projects are ranked.

MS. FISHER-GOAD asked for clarification on which projects, whether he referred to the state-owned AEA assets or statewide projects.

REPRESENTATIVE TUCK answered that his interest is in all state projects with AEA involvement.

MS. FISHER-GOAD offered to more fully discuss the matter outside the meeting since she was uncertain she fully understood his question. She related that generally, except for Renewable Energy Fund, the AEA does not typically advocate for utility projects in the capital budget, except for the Susitna project which would be AEA-owned. She reiterated that she did not believe that AEA advocated for a project in the Governor's budget that the AEA was not directly involved in. She recalled earlier testimony before the committee that the RPSU and Bulk Fuel projects represent long standing programs by the AEA and the Denali Commission to address deficiencies.

5:29:12 PM

REPRESENTATIVE TUCK offered to meet with the AEA. He pointed out one reason for the special session has been due to the gridlock over energy projects. He indicated the relevance of knowing which projects the governor supports or does not support since that may help identify which energy projects have a chance of successfully completing the funding process. In response to Co-Chair Pruitt, he answered that he did not advocate all of the energy projects be funded. He related that it would depend on the total amount the legislature would like to authorize. He clarified that he does not serve on the House Finance Committee and would not make the final decisions. He inquired as to whether the joint committee could present recommendations to the House Finance Committee, similar to the finance budget subcommittees. He said he prefers to have capital projects move to the committee level and then back to the finance committee process as a backwards process although he appreciated learning about the energy projects and commissioner's testimony with respect to the process. He expressed interest in being part of the vetting process to get these important energy projects approved.

5:31:33 PM

CO-CHAIR PRUITT agreed that information gleaned should be shared. He inquired as to whether the committee would like to make recommendations to the finance committee, suggesting that relevant questions such as the 50 percent provision should be made. He highlighted that one reason for the meeting was to determine whether members would like to see these projects move forward or be tied together. He noted input from both

committees could be valuable to the finance committee during its deliberations.

5:33:24 PM

REPRESENTATIVE P. WILSON suggested the legislature consider making regulatory changes with the RCA. She expressed interest in the state managing its expenditures much in the same way a household would. She further expressed interest in the legislature providing the utilities the statutory ability to plan and collect maintenance funds from ratepayers. She hoped the legislature would consider the best approach to accomplish this next year. She recalled the ten questions the committee asked capital requestors today. She recalled the Denali Commission and Mental Health Trust developed criteria for funding proposals to ensure sustainability of its projects. She suggested that the legislature consider similar methods to determine sustainability of projects it funds.

5:36:49 PM

CO-CHAIR SEATON expressed concern with the coal-to-liquids projects with respect to resource perspective. He recalled testimony that the project is not yet commercially viable. He questioned whether the state should proceed. He said he was a conflicted since the process of gas or coal-to-liquids is very important to the state. He recalled detailed testimony before the Resources Committee on the gas to methanol process. He reiterated his concern that the coal-to-liquids has not been sufficiently vetted whereas the methanol project could potentially be viable and has elements that make the project attractive in cold climates. He said he hoped the House Finance Committee would obtain more information.

5:41:19 PM

REPRESENTATIVE TUCK concluded that the high cost of energy is question of survival for rural residents given the rural residents' salaries.

REPRESENTATIVE DICK noted the committee reviewed numerous projects. He raised concern that some good projects considered by the other body were not forwarded for consideration. He offered his belief that all the projects should be considered since some projects may potentially be as viable as the projects reviewed by the joint committees.

CO-CHAIR PRUITT agreed. He concluded by asking members to inform him of any support or concern with respect to individual projects. He indicated his desire to provide the House Finance Committee with collective comments on the energy projects.

5:47:55 PM

ADJOURNMENT

There being no further business before the committees, the joint meeting between the House Special Committee on Energy and the House Resources Standing Committee was adjourned at 5:47 p.m.