

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

February 1, 2011  
3:04 p.m.

**MEMBERS PRESENT**

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

**MEMBERS ABSENT**

Representative Kurt Olson

**COMMITTEE CALENDAR**

PRESENTATION(S): ALASKA ENERGY AUTHORITY on the Emerging  
Technology Fund, and Renewable Energy Fund

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

BARBARA TRIPLETT, Program Manager  
Emerging Energy Technology Fund (EETF)  
Alaska Industrial Development & Export Authority (AIDEA) and  
Alaska Energy Authority (AEA)  
Department of Commerce, Community & Economic Development (DCCED)  
Anchorage, Alaska

**POSITION STATEMENT:** Provided a PowerPoint presentation titled,  
"Emerging Energy Technologies Progress Report" dated 2/1/11.

PETER CRIMP, Deputy Director  
Alternative Energy and Energy Efficiency  
Alaska Industrial Development & Export Authority (AIDEA) and  
Alaska Energy Authority (AEA)  
Department of Commerce, Community & Economic Development (DCCED)  
Anchorage, Alaska

**POSITION STATEMENT:** Answered questions and provided a PowerPoint presentation titled, "Alaska Renewable Energy Fund Program Status," dated 2/1/11.

**ACTION NARRATIVE**

[3:04:09 PM](#)

**CO-CHAIR LANCE PRUITT** called the House Special Committee on Energy meeting to order at 3:04 p.m. Representatives Pruitt, Lynn, Saddler, Petersen, Tuck, and Foster were present at the call to order.

**PRESENTATION(S) BY THE ALASKA ENERGY AUTHORITY ON:**

- **THE EMERGING TECHNOLOGY FUND**
- **THE RENEWABLE ENERGY FUND**

[3:05:09 PM](#)

**CO-CHAIR PRUITT** announced that the order of business would be presentations by the Alaska Energy Authority (AEA) on the Emerging Technology Fund and the Renewable Energy Fund. He then asked members to review the governor's "Energy Report to the Legislature," issued 1/31/11. Committee members congratulated Sara Fisher-Goad on her appointment as director of AEA.

[3:06:17 PM](#)

**BARBARA TRIPLETT**, Program Manager, Emerging Energy Technology Fund (EETF), Alaska Industrial Development & Export Authority (AIDEA) and Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development (DCCED), informed the committee the objective of AEA's EETF was to expand energy sources available to Alaskans through grants made to eligible applicants for demonstration projects that have a reasonable expectation to become commercially viable within a five-year period. The goals of EETF are: a clear and rigorous application and review process; constructive technical and economic oversight of the projects; development of entities to continue deployment of proven technologies. She explained meeting these goals will ensure there is a robust portfolio of projects for the fund. A three-pronged approach is used to evaluate projects, beginning with a strategic technology evaluation program (STEP) that includes evaluations on technology, marketability, and legal matters. Additionally, AEA will require explicit abstract and formal applications to ensure a rigorous and intense look at the proposals. On 1/7/11, AEA

released a request for application (RFA) with a deadline of 3/2/11, beginning the first round of evaluations on the initial applications. At that point, there will be a first round, first stage evaluation and from that surviving applications will be asked for a "full blown project proposal." After the formal proposals are ranked and recommendations are made to the AEA executive director and the Denali Commission federal co-chair, final selections advance to grant set-up, kick-off meetings, and project execution. Ms. Triplett continued to explain that once the projects are in, AEA will arrange for a reporting and review process by third party oversight entities such as the University of Alaska Fairbanks (UAF), Alaska Center for Energy and Power (ACEP), and the U.S. Department of Energy's National Renewable Energy Laboratory and National Energy Technology Laboratory. The oversight entities will help validate some of the performances of the projects and make economic evaluations of the technologies.

[3:11:29 PM](#)

MS. TRIPLETTE said at the completion of the projects, AEA will disseminate information on the emerging technologies that have proven their value in order to "provide a way for that to get out to the marketplace." She furnished a tentative timeline: RFA, 1/7/11; request for abstract, 3/2/11; complete evaluation of abstracts, 3/23/11; request formal application, 3/23/11; formal application deadline, 4/27/11; applicant presentations to advisory committee, 5/10/11; recommendations, 5/17/11; final selection, 5/24/11.

[3:13:49 PM](#)

REPRESENTATIVE TUCK asked how the public was made aware of the RFA submission period.

MS. TRIPLETTE indicated AEA has a list-serve on its website for parties interested in emerging technologies, and issued press releases.

[3:14:40 PM](#)

REPRESENTATIVE FOSTER asked how many proposals have been received.

MS. TRIPLETTE advised no proposals have come in; however, there have been many inquiries. She anticipated receiving proposals beginning 3/1/11.

[3:15:22 PM](#)

CO-CHAIR PRUITT asked what types of programs AEA expects to approve.

MS. TRIPLETT said:

Right now, we have ... cast a wide net ... [including] everything from energy production, storage transmission control, energy efficiency, energy conservation, so right now we're ... looking for any type of emerging energy technology.

[3:16:16 PM](#)

REPRESENTATIVE FOSTER was interested in the inquiries AEA has received.

MS. TRIPLETT has been told the inquiries are a wide array of topics from fuel cell to geothermal projects.

[3:17:02 PM](#)

REPRESENTATIVE PETERSEN asked whether there are repeat applications.

MS. TRIPLETT said she did not know. In response to Representative Tuck, she repeated the third party oversight entities.

[3:18:16 PM](#)

REPRESENTATIVE TUCK then asked whether the oversight costs would be paid from the grant.

MS. TRIPLETT responded that third party oversight would be funded through the administration of the grant. In further response, she said inspections of installations would occur.

[3:19:30 PM](#)

CO-CHAIR PRUITT asked for a history of the program.

[3:19:36 PM](#)

PETER CRIMP, Deputy Director of Alternative Energy and Energy Efficiency, Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development (DCCED), clarified that this is the first round of EETF projects. He related the Denali Commission has funded a wide array of projects such as hydrokinetic devices, the pellet boiler at Sealaska Corporation in Juneau, psychrophiles, and the integration of wind energy into diesel systems, as well as fossil fuel projects.

[3:21:22 PM](#)

REPRESENTATIVE FOSTER asked how EETF is capitalized.

MS. TRIPLETT reported that \$2.4 [million] would come from the state and \$2.4 [million] from the Denali Commission.

MR. CRIMP, in response to Representative Petersen, said it was unknown whether additional funding would be needed. In further response, he agreed to furnish the committee with additional information later in the session.

[3:22:37 PM](#)

REPRESENTATIVE SADDLER asked for the membership of the advisory committee.

MS. TRIPLETT listed the members: Brent Petrie, Alaska Village Electric Cooperative (AVEC); Brent Sheet, National Energy Technology Laboratory; Joel Neimeyer, Denali Commission; Brian Hirsch, National Renewable Energy Laboratory; Eric Erickson, Alaska Electric Light and Power Company (AEL&P); Karl Reiche, AIDEA; Stephen Trimble, MWH Americas, Inc. She added that all of the members work within Alaska.

[3:24:35 PM](#)

REPRESENTATIVE TUCK returned to the subject of third party oversight and asked how the agencies will be assigned to projects.

MS. TRIPLETT opined each agency's expertise will make that determination, although the process is not established yet. In further response, she confirmed that contracts for oversight responsibilities will be funded through the administration of the grants, and the costs will not be paid from grantees' funds; in fact, these funds are already budgeted and available right away.

[3:26:44 PM](#)

MR. CRIMP began his presentation on the status of the Alaska Renewable Energy Fund Program. He announced that "our fourth-round [Round 4] package" was delivered to legislators in the form of a compact disc (CD) containing the ranking of recommended projects, status reports, and evaluation guidelines. His purpose at today's meeting was to provide a status report for the first three rounds of the fund. He reminded the committee HB 152 passed the legislature in 2008 and established the renewable energy fund and selection criteria, the most important of which was that the highest weight is given to "high-cost energy areas." Mr. Crimp advised that AEA has proceeded with regulations and guidelines, the RFA process, and the review of the applications. The agency formed an advisory committee to help develop methods, but recommendations are done primarily by AEA staff, the University of Alaska Anchorage (UAA) Institute of Social and Economic Research (ISER), and the Department of Natural Resources (DNR). Currently, AEA has 125 projects valued at \$150 million, and has submitted a FY 11 funding recommendation for up to \$37 million. The project review process proceeds through the following four stages: 1. AEA determines what projects are eligible, including an economic assessment; 2. AEA expert staff perform technical review with economic analysis by ISER and other experts; 3. AEA ranks proposals and determines the percentage of funding; 4. advisory committee helps AEA achieve a balanced statewide distribution of projects.

[3:32:54 PM](#)

MR. CRIMP continued to explain that after the project is underway, AEA technical and grant staff begin to reimburse costs already expended by the grantees. He acknowledged that advances are sometimes allowed in the case of a "cash-poor" grantee. For construction projects, funds are not released until the completion of final design, permitting, and financing. At this time, about one-half of the grant funds have gone to wind projects, one-quarter to hydroelectric (hydro) projects, one-eighth to biomass projects, and the rest to small components such as heat recovery, geothermal, and solar. Mr. Crimp provided a bar graph that indicated 23 projects were completed at the end of 2010 that fell into the categories of feasibility, design, and construction; furthermore, by the end of 2011, 79 projects are expected to be completed. By 2012, he estimated that 100 projects will have been completed, depending on the

amount of appropriations received in FY 11. Not included in the graph were 24 projects that are not yet scheduled.

[3:36:33 PM](#)

MR. CRIMP, in response to Representative Saddler, clarified that the number of projects completed for a certain year includes those that completed only the feasibility stage and were abandoned at that stage.

[3:37:10 PM](#)

MR. CRIMP then provided a graph that indicated cumulative diesel fuel savings per year for completed projects, and those that are expected to be completed. For example, 2009 and 2010 figures were actual savings; however, 2011-2015 figures are projected savings. He called attention to an error on the graph and said, "Million dollars per year should be million gallons per year." Mr. Crimp noted that much of the diesel fuel displaced in 2010 was by the Pillar Mountain Wind Project in Kodiak. Projected diesel fuel displacement for 2011 is expected to be a little over 1.5 million gallons per year with the savings growing to about 3 million gallons in 2012. A significant increase in savings by biomass and hydro is expected during 2013, after completion of the Anchorage Regional Landfill Gas-to-Energy Project and the Humpback Creek Hydroelectric Project in Cordova. He reminded the committee that 24 projects not included in this presentation are described in the Round 4 CD, and offered to display slides of projects that are currently under construction.

REPRESENTATIVE PETERSEN asked for a description of available funds.

MR. CRIMP answered that the intent of the legislature is to fund \$50 million per year, and the governor's FY 12 budget allows \$25 million. His agency has identified \$37 million in projects that are reasonable to fund. In further response to Representative Petersen, he explained that about \$4 million obligated during previous funding rounds have been reallocated.

[3:43:01 PM](#)

CO-CHAIR PRUITT requested clarification on the conditions attached to [grants].

MR. CRIMP explained that AEA grants contain very detailed conditions; for example, on construction projects milestones such as final design, power purchasing agreements, and project financing, need to be achieved before any construction funds are released. Generally the grant money is "meter[ed] out, according to progress on the schedule."

[3:45:20 PM](#)

REPRESENTATIVE FOSTER asked for the reasons a project may be rejected.

MR. CRIMP acknowledged there is a wide array of reasons for turning projects down and AEA strives to be clear as to why. One reason could be poor economics; for example, AEA life-cycle economic analysis has shown that photovoltaic - solar to electric power - does not make economic sense in many cases. Also, if project applications are poorly written or poorly defined, AEA engineering staff may find that the project is technologically not viable. Mr. Crimp assured the committee AEA works to assess projects "in as much detail and as fairly as we could."

[3:47:41 PM](#)

REPRESENTATIVE FOSTER asked whether the current funding level of \$50 million is "satisfactory for now."

MR. CRIMP opined there are many more good projects that could be funded, particularly in rural communities. He suggested that his agency, UA, and other sources could provide project development work and help rural areas "bring along projects." He then displayed slides of projects completed or under construction. The Falls Creek Hydro project in Gustavus saved 126,646 gallons of fuel in 2010 and is expected to have a 20-year payback, bringing down the cost of energy for the residents there. The total cost was \$10,153,000 and the grant amount was \$750,000. He described the Pillar Mountain Wind project in Kodiak as "a poster child of renewable energy fund projects," saving 1.6 cents per kilowatt hour (kWh). He reported that the Denali Solar Thermal project has not met expectations; however, if distribution problems are solved the amount of diesel fuel displaced will increase. The Unalakleet Wind project began operating in 2010 and due to integration issues is not working to capacity, although problems will be solved. He advised that data collected on all of the projects will be shared with the legislature.

[3:52:30 PM](#)

REPRESENTATIVE FOSTER compared the power produced between wind projects.

MR. CRIMP pointed out that the wind turbines in Unalakleet are smaller Northwind 100 kilowatt (kW) turbines. The turbines in Kodiak are GE 1.5 megawatt (MW) turbines which are "the large turbines that you'll see in Hawaii and the Lower 48, ... [they are] a lot less expensive per capacity installed." Regarding integration issues, he cautioned that "it takes usually about a year for any construction project to dial-in, to get the bugs worked out of it."

[3:54:18 PM](#)

REPRESENTATIVE FOSTER agreed that wind farms will pay off in the long-term.

[3:54:38 PM](#)

REPRESENTATIVE PETERSEN observed that many wind projects underway will require a method to solve the problem of integration and he asked for the best way to find solutions.

MR. CRIMP reported that switch gear systems for the integration of wind power have advanced greatly over the past five years. As a matter of fact, Northern Power Systems has a robust interface available at this time. He also suggested several ways to handle excess power, and opined the problems in Unalakleet are isolated to that site. Generally speaking, new technology can be obtained "off the shelf" to handle transmission problems, along with the implementation of newer ideas, such as sending excess power to residences for home heating. Mr. Crimp returned to other projects under construction and said the North Pole Heat Recovery project should displace 99,000 gallons of naphtha fuel per year. The Gulkana community wood-fired boiler is a clean-burning GARN boiler that saved 3,000 gallons of fuel during October-December, 2010. The Tok School wood-fired boiler is a 5.5 million British thermal unit (Btu) per hour boiler that burns wood harvested for wildfire mitigation and will displace 50,000 gallons of diesel fuel per year. The wood fuel source is made available by the use of a wood chipper funded by the legislature. Finally, the Cordova firewood processor makes firewood from logs and is expected to displace 90,000 gallons per year.

[4:00:52 PM](#)

CO-CHAIR PRUITT asked what determines the percentage of the grant.

MR. CRIMP stated there are no guidelines for a minimum match amount; in fact, the advisory committee does not feel percentages are appropriate because some communities are unable to provide matching funds. However, projects with matching funds available receive a higher ranking. In further response to Co-Chair Pruitt, he explained that the economic feasibility of a project is based on the full cost of the project as the purpose of the renewable grants fund "is to make good projects better, not to subsidize projects that are not inherently economic."

[4:02:12 PM](#)

CO-CHAIR PRUITT thanked the presenters.

[4:03:03 PM](#)

**ADJOURNMENT**

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 4:03 p.m.