

# **State of Alaska FY2010 Governor's Operating Budget**

## **Department of Commerce, Community, and Economic Development Statewide Project Development, Alternative Energy and Efficiency Component Budget Summary**

## Component: Statewide Project Development, Alternative Energy and Efficiency

### Contribution to Department's Mission

Assist in developing projects in Alaska that reduce and stabilize the cost of energy and decrease dependency on diesel and Cook Inlet natural gas for power, heating, and transportation.

#### Major Activities to Advance Strategies

- Issue competitive funding solicitations for preconstruction and construction activities.
- Issue and administer grants and contracts.
- Apply for grant funds.
- Conduct project feasibility assessment.
- Assist in and conduct statewide energy planning activities.
- Provide information and training through conferences and workshops.

#### FY2010 Resources Allocated to Achieve Results

**FY2010 Component Budget: \$1,280,400**

##### Personnel:

Full time	0
Part time	0
<b>Total</b>	<b>0</b>

### Key Component Challenges

The principal challenge is to address fuel issues throughout Alaska and the shortage of natural gas in Southcentral Alaska.

### Significant Changes in Results to be Delivered in FY2010

The Statewide Energy Plan will be released and AEA will be working with the Governor's Office and the Legislature to implement the final plan.

### Major Component Accomplishments in 2008

During FY2008 AEA's statewide project development activities focused on:

- Launching the statewide energy plan
- Developing alternative energy and energy efficiency projects
- Planning implementation of the Renewable Energy Fund

#### Statewide Energy Plan

AEA established eight technology teams of agency and industry experts to assess energy resources and evaluate technology options for providing stable priced, economic, and sustainable energy to Alaskans. AEA and sister agencies held town hall meetings in 24 communities to hear ideas and concerns and identify possible local sources of energy such as hydro, coal bed methane, and wind energy. In conjunction with the DNR-led Alaska Energy Inventory program and the University of Alaska, AEA teams began developing a common framework for comparing alternatives for supplying energy to Alaskan communities.

#### Alternative Energy and Energy Efficiency Project Development

AEA staff and contractors worked with utility, industry and agency partners to provide training, technical assistance, and funding to advance projects that decrease reliance on diesel for heat, power, and transportation. Work was accomplished through the following programs:

**Biofuels and Biomass Energy.** The City of Craig's sawmill waste-fired heating system started up in May. Supported by AEA, the project will save an estimated \$100,000 per year in school and facility heating costs. AEA staff and contractors visited 14 locations to work with communities to develop wood energy projects. AEA and others held the first Alaska Wood Energy Conference in Fairbanks last November, bringing together experts and community leaders from Alaska, Canada, Sweden and the Lower 48 to discuss successful projects. AEA and UAF completed successful tests on performance of fish oil-diesel blends in UAF's instrumented engine-generator. In October AEA released an RFP for developing and operating a portable module for rendering fish oil from fish processing waste currently ground and dumped. In June AEA offered funding through the Denali Commission/AEA Alternative Energy RFP for studying biodiesel production feasibility in Juneau and community wood energy feasibility in Talkeetna and Kenney Lake. AEA offered partial funding to develop wood heating systems for public buildings in Fort Yukon.

**Combined Heat and Power.** AEA continues to develop "waste heat" recovery systems as a part of its rural power system upgrade program and maintains a database of potential heat recovery projects in 170 communities. AEA organized a workshop in December to address opportunities to recover stack heat and convert jacket water and stack heat to power through organic rankine cycle technology.

**Energy Efficiency.** AEA contractors completed retrofits in the 31 communities, saving over \$360,000 per year in power and heating costs and displacing 65,000 gal/yr of diesel. AEA offered Tok, Ruby and Napaskiak funding through the Energy Efficiency and Technical Assistance (EE-TAP) program to assess cost saving measures in their power systems. As a result Ruby made power system upgrades that will save over \$20,000 per year in fuel costs for an investment payback of less than one year, and Napaskiak obtained funding for power system upgrades through USDA.

**Geothermal.** AEA held a workshop in August on the geothermal prospect at Mt. Spurr to generate interest among potential power project developers and to present available information on the resource. This effort contributed to DNR's successful lease sale in September 2008. In June AEA offered partial funding through the Denali Commission/AEA Alternative Energy RFP for constructing a geothermal power plant in Manley Hot Springs.

**Hydropower.** AEA drafted a memorandum of understanding with the US Army Corps of Engineers that will provide up to \$600,000 in state and federal funds on a 1:1 match basis to conduct studies of hydroelectric sites for future development. AEA provided technical support for review of prospective major hydroelectric projects at Valdez (Lake Allison – CVEA), Dillingham (Lake Elva/Grant Lake – Nushagak Electric), Cantwell (Jack River), and Angoon (Thayer Creek). AEA staff began compilation and screening of hydro data for over 150 sites in support of the State Energy Plan. Staff reviewed applications under the Denali Commission/AEA Alternative Energy RFP and offered funding to study feasibility of hydro projects near Chenega, Coffman Cove, Tok, Hatcher Pass, Nenana, Delta, Tenakee, Elfin Cove, the Kenai Borough, Hydaburg, and Homer.

**Ocean and River Energy.** AEA partnered with Chugach Electric Association, Anchorage ML&P and Electric Power Research Institute to produce a report on the technical and economic potential for river in-stream energy conversion development in Alaska at Igiugig, Whitestone and Eagle

**Wind Energy.** AEA provided permitting assistance and state and USDOE funding for continued development of TDX Power Corp's 1 MW wind power plant in Sand Point and AVEC's 400 kW wind power plant in Chevak. AEA supported design of foundations suitable for thawing permafrost conditions, studies on siting turbines to avoid interactions with birds, and preparing a statewide environmental assessment for wind development so that individual utilities can avoid duplicative work. AEA's meteorological tower loan program has evaluated resources in over 40 sites over the last four years. AEA conducted a wind development workshop in Bethel in January for 70 participants from the Calista Region. In April AEA co-hosted the International Wind Diesel Workshop where participants from twelve countries learned about wind-diesel applications in Alaska. AEA staff reviewed applications under the Denali Commission/AEA Alternative Energy RFP and offered funding for project construction in Bethel, St. George, and Kokhanok and funding to study feasibility of wind projects near Kodiak, Tok, Deering, Nenana, Nunam Iqua, Delta, and Dillingham.

**General.** AEA revised and reprinted the Renewable Energy Atlas of Alaska. AEA staff provided expert speakers for numerous conferences and meetings throughout the state.

**Renewable Energy Fund**

In June, responding to newly-ratified HB 152, AEA began drafting documents for soliciting proposals under the Renewable Energy Fund.

**Statutory and Regulatory Authority**

AS 42.45      Rural and Statewide Energy Programs  
AS 44.83      Alaska Energy Authority  
3 AAC 107     Grant Programs

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### Statewide Project Development, Alternative Energy and Efficiency Component Financial Summary

*All dollars shown in thousands*

	FY2008 Actuals	FY2009 Management Plan	FY2010 Governor
<b>Non-Formula Program:</b>			
<b>Component Expenditures:</b>			
71000 Personal Services	0.0	0.0	0.0
72000 Travel	0.0	45.0	45.0
73000 Services	0.0	869.1	1,229.4
74000 Commodities	0.0	6.0	6.0
75000 Capital Outlay	0.0	0.0	0.0
77000 Grants, Benefits	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0
<b>Expenditure Totals</b>	<b>0.0</b>	<b>920.1</b>	<b>1,280.4</b>
<b>Funding Sources:</b>			
1002 Federal Receipts	0.0	41.9	41.9
1004 General Fund Receipts	0.0	411.1	771.4
1007 Inter-Agency Receipts	0.0	50.0	50.0
1061 Capital Improvement Project Receipts	0.0	300.0	300.0
1062 Power Project Loan Fund	0.0	56.5	56.5
1108 Statutory Designated Program Receipts	0.0	60.6	60.6
<b>Funding Totals</b>	<b>0.0</b>	<b>920.1</b>	<b>1,280.4</b>

### Estimated Revenue Collections

Description	Master Revenue Account	FY2008 Actuals	FY2009 Management Plan	FY2010 Governor
<b>Unrestricted Revenues</b>				
None.		0.0	0.0	0.0
<b>Unrestricted Total</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Restricted Revenues</b>				
Federal Receipts	51010	0.0	41.9	41.9
Interagency Receipts	51015	0.0	50.0	50.0
Statutory Designated Program Receipts	51063	0.0	60.6	60.6
Capital Improvement Project Receipts	51200	0.0	300.0	300.0
Power Project Loan Fund	51350	0.0	56.5	56.5
<b>Restricted Total</b>		<b>0.0</b>	<b>509.0</b>	<b>509.0</b>
<b>Total Estimated Revenues</b>		<b>0.0</b>	<b>509.0</b>	<b>509.0</b>

**Summary of Component Budget Changes  
From FY2009 Management Plan to FY2010 Governor**

*All dollars shown in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
<b>FY2009 Management Plan</b>	<b>411.1</b>	<b>41.9</b>	<b>467.1</b>	<b>920.1</b>
<b>Proposed budget increases:</b>				
-Support for Energy Planning	150.0	0.0	0.0	150.0
-Funding for the AEA Executive Director/Statewide Energy Coordinator (PCN 08-0208)	210.3	0.0	0.0	210.3
<b>FY2010 Governor</b>	<b>771.4</b>	<b>41.9</b>	<b>467.1</b>	<b>1,280.4</b>