HB

152

HOUSE COMMITTEE REPO

(11)

Date Referred to Committee: March 27, 2007 **FURTHER REFERRALS:**

Date of Committee Action: april 13-2007

The FINANCE Committee considered: **HB 152**

HOUSE BILL NO. 152 **ESTABLISHING A RENEWABLE ENERGY FUND**

"An Act establishing a renewable energy fund and describing its uses and purposes."

Recommends it be replaced with [ ] HCS *or* [X] CS for HB 152 (FIN)
*For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR*_____ [X] Same Title [ ] New Title

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
HSS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

NEW FISCAL NOTES *Assigned by Chief Clerk's Office				
List by Dept(s):	*FN#	Fiscal	Indet.	Zero
CED			✓	
CED			✓	

PREVIOUS FISCAL NOTES				
List by Dept(s):	FN#	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	Cara	✓			
Harry E Crawford Jr	CRAWFORD	X			
Mara Nelson	NELSON	✓			
Faith C Hawker	Hawker			☆	
Will Bill" Thorne	Thorne	✓			
	STOLTZE			X	
Mike Kelly	KELLY			X	
Chair: K Meyer	Meyer	✓			
Ch r:					

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: CS HB 152 (FIN)
() Publish Date:

Revision Date/Time (Note if correction):
Dept. Affected: Commerce
Title: Renewable Energy Fund
RDU: AIDEA (125)
Component: AIDEA Operations
Sponsor: Harris and Thomas
Requester:
Component No.: 1234

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services	•	•	•	•	•	•
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	•	•	•	•	•	•
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
1007 Interagency Receipts	•	•	•	•	•	•
TOTAL	•	•	•	•	•	•

Estimate of any current year (FY2007) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

This legislation creates a renewable energy fund to be administered by the Alaska Energy Authority (AEA) and establishes a seven member advisory committee. AIDEA provides staff support to AEA programs. The fiscal note is indeterminate at this time.

If an appropriation is made to capitalize the renewable energy fund created under HB 152 (FIN), AIDEA will provide staff support to promulgate regulations for the grant program as well as establish the seven member advisory committee. AIDEA anticipates that $100.0 will be needed in personal service costs, which will be funded through interagency receipts from AEA.

Prepared by: House Finance Committee — Phone 465-4945
Division — Date/Time 04/16/07 10:37 A.M.
Approved by: Representative Meyer — Date 4/16/2007
Representative Chenault

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: CS HB 152 (FIN)
() Publish Date:

Revision Date/Time (Note if correction):
Dept. Affected: Commerce
Title: Renewable Energy Fund
RDU: Alaska Energy Authority (453)
Component: AEA Rural Energy Operations
Sponsor: Harris and Thomas
Requester:
Component No.: 2600

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services						
Travel	•	•	•	•	•	•
Contractual	•	•	•	•	•	•
Supplies	•	•	•	•	•	•
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	•	•	•	•	•	•
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
New Renewable Energy Fund	•	•	•	•	•	•
TOTAL	•	•	•	•	•	•

Estimate of any current year (FY2007) cost: 0.0
Check this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

This legislation creates a renewable energy fund to be administered by the Alaska Energy Authority (AEA) and establishes a seven member advisory committee. This legislation requires AEA, in consultation with the advisory committee, to establish regulations to 1) develop a methodology for determining the order of projects that receive assistance; 2) determine grant and loan eligibility; 3) identify criteria to evaluate the benefit and feasibility of potential projects; 4) develop a methodology for distributing funds to finance various studies and construction projects; and 5) provide for power production incentives to reduce principal balances of loans.

Prepared by: House Finance Committee — Phone 465-6875
Division — Date/Time 04/16/07 11:07 A.M.
Approved by: Representative Kevin Meyer — Date 4/16/2007
Agency: Representative Mike Chenault

(Revised 9/23/2004 OMB)

ANALYSIS CONTINUATION

In consultation with the advisory committee, AEA shall make grants and loans to eligible applicants to finance feasibility studies, reconnaissance studies, energy resource monitoring, and construction of renewable energy projects, natural gas projects, or transmission or distribution infrastructure located in Alaska. AEA shall annually solicit funding recommendations from the advisory committee for all grants and loans.

This legislation establishes project eligibility criteria for a renewable energy project, a natural gas project, and a transmission or distribution infrastructure project.

The costs associated with the program start up will be as follows:

New project manager responsible for developing the regulations in consultation with the advisory committee: $100.0, one-time supply costs of $6.0, and estimated travel costs for the seven member committee to meet four times for the initial development phase of regulations and annually to solicit funding recommendations of $20.0.

The funding source is assumed to be the fund created under HB 152 (FIN), assuming the legislation becomes law and an appropriation is made to capitalize the fund. Until this time, the fiscal note is indeterminate.

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number: 1
Bill Version: CSHB 152(CRA)
(H) Publish Date: 3/27/07

Revision Date/Time (Note if correction):
Dept. Affected: Commerce
Title: Renewable Energy Fund
RDU: AIDEA (125)
Component: AIDEA Operations
Sponsor: Harris and Thomas
Requester: House Community and Regional Affairs
Component No.: 1234

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services	100.0	100.0	100.0	100.0	100.0	100.0
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	100.0	100.0	100.0	100.0	100.0	100.0
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match	100					
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
1007 Interagency Receipts	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Estimate of any current year (FY2007) cost: 0.0
Check this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time	1	1	1	1	1	1
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

This legislation creates a renewable energy fund to be administered by the Alaska Energy Authority (AEA) and establishes a seven member advisory committee. AIDEA provides staff support for AEA programs.

Indeterminate

Prepared by: Sara Fisher-Goad, Deputy Director - Operations
Phone: 907.269.4623
Division: Alaska Industrial Development and Export Authority
Date/Time: 3/5/07 1:50 PM
Approved by: Emil Notti, Commissioner
Date: 3/5/2007
Agency: Commerce, Community, and Economic Development

(Revised 9/18/2006 OMB)

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number: 2
Bill Version: CSHB 152(CRA)
(H) Publish Date: 3/27/07

Revision Date/Time (Note if correction):
Dept. Affected: Commerce
Title: Renewable Energy Fund
RDU: Alaska Energy Authority (453)
Component: AEA Rural Energy Operations
Sponsor: Harris and Thomas
Requester: House Community and Regional Affairs
Component No.: 2600

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services						
Travel	20.0	5.0	5.0	5.0	5.0	5.0
Contractual	100.0	100.0	100.0	100.0	100.0	100.0
Supplies	6.0					
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	**126.0**	**105.0**	**105.0**	**105.0**	**105.0**	**105.0**
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	126					
1005 GF/Program Receipts						
1037 GF/Mental Health						
New Renewable Energy Fund	126.0	105.0	105.0	105.0	105.0	105.0
TOTAL	**126.0**	**105.0**	**105.0**	**105.0**	**105.0**	**105.0**

Estimate of any current year (FY2007) cost: 0.0
Check this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal: [ ]

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

This legislation creates a renewable energy fund to be administered by the Alaska Energy Authority (AEA) and establishes a seven member advisory committee. This legislation requires AEA, in consultation with the advisory committee, to establish regulations to 1) develop a methodology for determining the order of projects that receive assistance; 2) determine grant and loan eligibility; 3) identify criteria to evaluate the benefit and feasibility of potential projects; 4) develop a methodology for distributing funds to finance various studies and construction projects; and 5) provide for power production incentives to reduce principal balances of loans.

Prepared by: Sara Fisher-Goad, Deputy Director - Operations
Phone: 907 269 4623
Division: Alaska Energy Authority
Date/Time: 3/5/07 1:50 PM
Approved by: Emil Notti, Commissioner
Date: 3/5/2007
Agency: Commerce, Community, and Economic Development

(Revised 9/18/2006 OMB)

Indeterminate

STATE OF ALASKA
2007 LEGISLATIVE SESSION

BILL NO. CSHB 152(CRA)

ANALYSIS CONTINUATION

In consultation with the advisory committee, AEA shall make grants and loans to eligible applicants to finance feasibility studies, reconnaissance studies, energy resource monitoring, and construction of renewable energy projects, natural gas projects, or transmission or distribution infrastructure located in Alaska. AEA shall annually solicit funding recommendations from the advisory committee for all grants and loans.

This legislation establishes project eligibility criteria for a renewable energy project, a natural gas project and a transmission or distribution infrastructure project.

This fiscal note represents costs associated with a new project manager who will be responsible for developing the regulations in consultation with the advisory committee: $100.0 in contractual costs for AIDEA and one-time $6.0 supply costs associated with the position. The fiscal note also provides estimated travel costs for the seven member committee to meet four times in FY 2008 for the initial development phase of regulations and annually to solicit funding recommendations.

The funding source is assumed to be the newly established Renewable Energy Fund, assuming this legislation becomes law and an appropriation to the newly established fund is provided.

adopted

Amendment #4

Offered in House Finance By: Thomas
To CSHB 152 (CRA)

Page 3, Line 9

Add: (4) investments to be managed by the Department of Revenue

adopted

Amendment #3

Offered In House Finance By: Thomas

To CSHB 152 (CRA)

Page 5, line 14 - 17

Delete after (g): [as applicable to licensing water-power development projects, unless the authority adopts a different definition based on a determination made by a nationally recognized independent nonprofit corporation that considers the environmental effects of hydropower practices;]

adopted

25-LS0413\N.1
Kane
4/12/07

AMENDMENT 2

OFFERED IN THE HOUSE BY REPRESENTATIVE CRAWFORD Thomas +

TO: CSHB 152(CRA), Draft Version "N"

Page 3, line 17:

Delete "and"

Page 3, line 20, following "section":

Insert "; and

(4) apply for and be able to receive contributions from other sources for distribution as grants to eligible applicants"

~~withdrawn~~ Adopted

CONCEPTUAL AMENDMENT 1

OFFERED IN THE HOUSE FINANCE COMMITTEE BY REP. MEYER
TO: CS HB 152 (CRA)

Page 3, line 19

After "balance"

Insert "of"

Alaska State Legislature

Session: (Jan-May)
State Capitol, Room 208
Juneau, AK 99801-1182
(907) 465-4859
Fax (907) 465-3799

Interim: (June-Dec)
716 West 4th Avenue, Suite 300
Anchorage, AK 99501-2133
(907) 269-0129
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John Harris
Speaker of the House

SECTIONAL ANALYSIS

HOUSE BILL 152

"An Act establishing a renewable energy fund and describing its uses and purposes."

SECTION 1: Provides legislative findings stating the many reasons why renewable energy is important and in the public interest, including the economic, environmental and security benefits. The findings point out that this legislation is consistent with the recommendation made by the Legislative Energy Policy Task Force in 2004 to "increase the proportion of renewables in long term fuel sources." The section also mentions natural gas, and states that it is considered a last alternative for possible funding from the Fund if a community does not have any viable renewable energy resources available.

SECTION 2: (New in CS) Adds a new subsection in AS 42.45, the Rural and Statewide Energy Programs Act, to establish the Renewable Energy Project Account within the Power Project Fund in consultation with the advisory committee will make funding recomendations.

SECTION 3: Adds a new section to AS 42.45 to creates the Renewable Energy Fund consisting of funds appropriated by the Legislature, gifts, bequests, contributions from other sources, federal funds, and interest earned on the money in the Fund (subsections (a) and (b).

Subsection (c) provides that the Fund is not a dedicated fund.

Subsection (d) provides that Alaska Energy Authority, in consultation with the advisory committee (established later in the bill), will develop appropriate methodologies to determine priority projects for receive assistance, for allocating money from the fund, and for renewable power production debt reimbursement grants.

These provisions describing how the fund is managed are new in the proposed CS.

Unchanged in the CS is subsection (e), directing the authority to make grants under the program for feasibility studies, reconnaissance studies, energy resource monitoring, and

construction of projects, including renewable energy, natural gas, or transmission and distribution projects.

Subsection (f) provides criteria under which proposed renewable energy projects could qualify under the program. Such a project would have to be new, and either a hydroelectric project, a project employing direct use of renewable energy resources, a fuel cell project using renewable energy or natural gas, a project generating energy from in-stream kinetic turbines, or one using renewable energy resources. In this section, the CS drops a requirement that a hydro project be a minimum of 50 kilowatts and serve a minimum of 20 end users.

Subsection (g) requires that for a natural gas project to be eligible under this section, it must serve fewer than 10,000 and the community has no viable renewable energy resources it can develop.

Subsection (h) requires that to qualify under this section, a transmission or distribution project must connect a renewable energy or natural gas project to transmission or distribution infrastructure.

Subsection (i) provides a percent of market value-type mechanism allowing not more than five percent of the value of the Fund to be used each year for grants. In the CS, this provision replaces a more complicated funding mechanism.

Subsection (j) creates a citizen advisory committee made up of seven diverse renewable energy stakeholders who are appointed by the governor to staggered terms. The intent is to include those stakeholders in the use of the Fund. The existence of the advisory committee gives the Authority a group of experts to help the Authority get the program established also providing input on funding decisions.

Subsection (k) provides boilerplate language consistent with other boards and commissions relating to compensation for members of the advisory board.

Subsection (l) provides definitions for some of the terms used in the statute.

SECTION 4: Adds a new section to uncodified law to accommodate the initial appointments by the governor to the advisory committee created by sec. 2 of this Act.

STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

P.O. BOX 111000
JUNEAU, ALASKA 99811-1000
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ANCHORAGE, ALASKA 99501-3650
PHONE: (907) 269-8431
FAX: (907) 269-8918

March 9, 2007

Speaker of the House, John Harris
House of Representatives
State Capitol Room 208
Juneau, Alaska 99801

Dear Speaker Harris:

I appreciate the opportunity for DNR to offer comments and suggestions regarding HB 152. DNR understands that the intent of HB 152 is to provide financial assistance for development of renewable energy sources that will supplement, or possibly replace current local energy systems. We look forward to working with you and the rest of the legislature to help diversify the energy picture in Alaska and provide a clean and sustainable energy base for future generations.

As an important part of that base, DNR fully supports developing all energy resources that are technically developable, economically and operationally feasible, and limit the impact on the local environment. As you know, it is vitally important that an energy consumer have current and reliable data on all possible energy sources for a given location so that informed decisions can be made. It is equally important that economics, long-term maintenance requirements, reliability, sustainability, and relative environmental impact be fully considered during the development of an energy-source portfolio. As is the case for any energy policy, it should likewise include incentives for taking advantage of efficiencies (such as waste-heat from generators) and conservation efforts that will help decrease overall consumption.

With respect to the "renewable energy fund" set out in Sec. 2 of HB 152, DNR understands that the Alaska Energy Authority already has a similar fund. However, should you retain some aspect of the "renewable energy fund" in the bill, we have the following recommendations.

First, the advisory committee set out in AS 42.45.045(b) should include at least one professional staff member from the Department of Natural Resources that has expertise in energy resources and permitting of energy exploration and development. We would also recommend that if natural gas is to be kept as a

possible energy source in this bill, that you consider adding a representative from the oil and gas industry and that "nonprofit environmental groups" be replaced with "an environmental scientist."

In addition, the advisory board should be expanded to include at least one Alaska Energy Authority member and one member from the Department of Community and Economic Development.

Second, if the goal of this legislation is to provide a source of renewable energy, we recommend that you delete references to natural gas throughout the bill, including AS 42.45.045(g). If the goal is rural energy, then we recommend that in AS 42.45.045(f) you add a population restriction, such as 10,000 or less. Regardless, we would point out that AS 42.45.045(g)(2)and (3) are problematic both economically and environmentally.

AS 42.45.045(g)(2) forces a rural community or utility (or smaller communities) to rule out renewable energy sources before it can consider a local natural gas source, regardless of the cost of developing the renewable energy source. Likewise, AS 42.45.045(g)(3) makes an assumption that harvesting renewable energy has no adverse environmental impacts. This assumption is incorrect. For example, both hydroelectric and wind farms can have adverse impacts, particularly on fish and wildlife. In effect, AS 42.45.045(g) sets a higher standard environmentally and economically for natural gas than for renewable energy sources.

In the opinion of DNR, including reference to and limiting the assistance options in relation to natural gas will create a situation that disadvantages some rural communities that may have such a local undeveloped resource, and could result in a negative economic impact by discouraging development of the most feasible alternative. It is DNR's recommendation that both AS 42.45.045(g)(2) and (3) (Page 4, lines 26-29) be deleted.

DNR also recommends language be added requiring that before a loan or grant is given, the recipient obtain authorization for the use of any state lands that might be needed for the project. This site control may include authorizations from several state agencies and may include the need for survey. There is no guarantee that permission will be granted to use state land just because a grant is issued. It has been our experience that some recipients of grants and loans begin projects on state lands and have already expended funds before obtaining authorization from the state for use of its lands.

In addition to the comments above, DNR offers the following specific suggestions:

Pg. 1, line 9: DNR suggests that you include a finding suggesting that conservation should play a significant part in any energy policy.

Pg. 2, line 5: This statement is misleading. It may be better to state that the primary cost of renewable energy systems is exploration, development, and long-term maintenance, rather than purchase of the resource. Given there are tangible costs to develop any kind of energy resource, we would recommend deleting this statement.

Page 2, Line 16: We would recommend that the descriptive phrase "zero fuel cost" be deleted as this is not necessarily accurate. For example, biofuels and geothermal sources can have costs associated with leasing activity, purchase, or royalties.

Pg. 2, line 18-19: (15) This broad statement should be deleted. It does not seem reasonable to suggest that a community should develop a renewable resource regardless of long-term cost or environmental impact, especially in a community that may have an undeveloped conventional resource available. The statement fails to take into account the particular location as well as the particular source of energy, either renewable or nonrenewable, that might be available. It also overlooks the economics and particular environmental factors of a particular location. For example, building a dam on a critical salmon migration river to produce hydroelectric energy may not be the better alternative to natural gas. We recommend deleting this sentence.

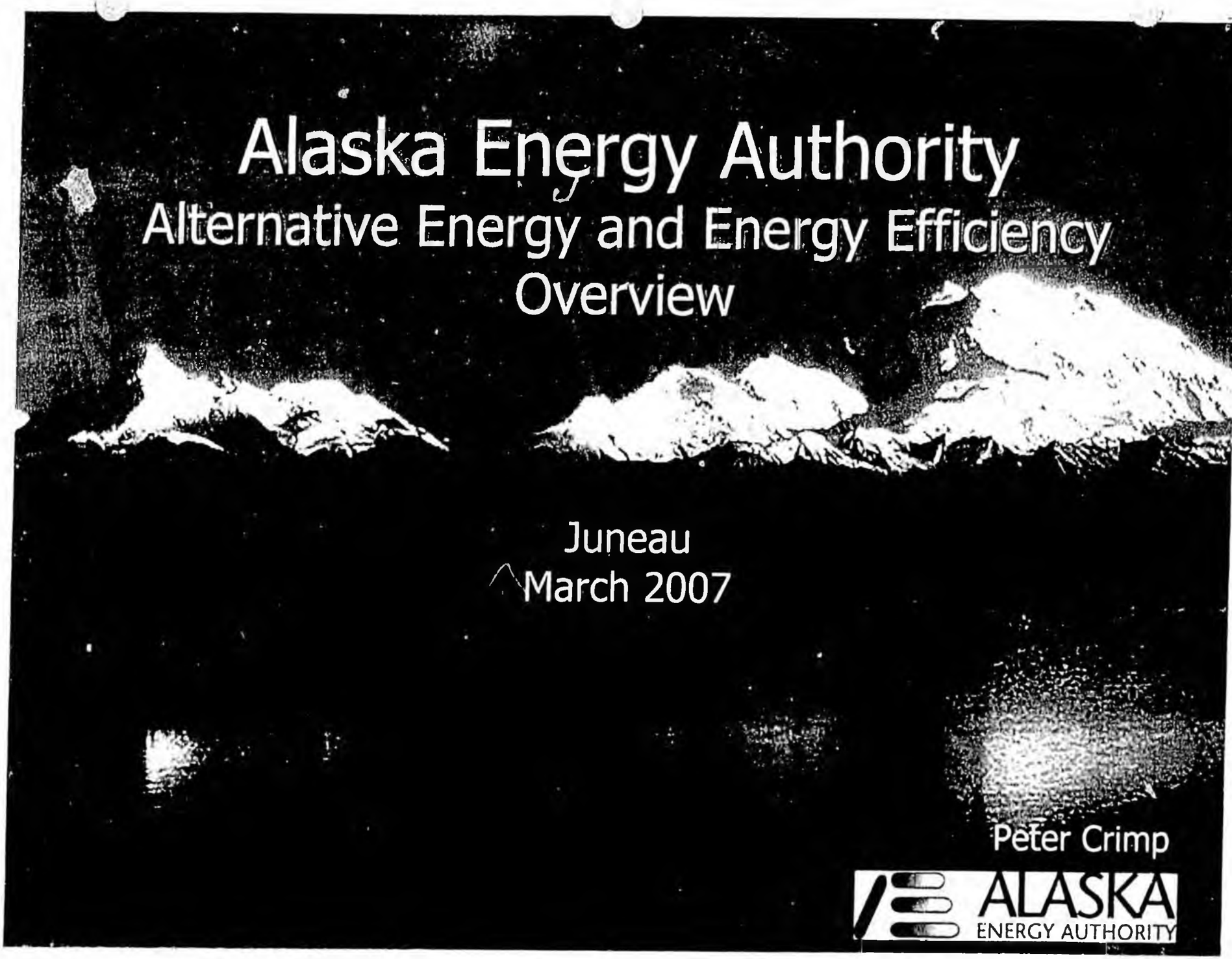
Page 5, Line 1 "electric grid" should be defined.

My staff would be happy to speak with you further about these concerns. Again, I appreciate the opportunity to submit comments and look forward to working with you during the session.

Sincerely,

Thomas E. Irwin
Commissioner

cc: Representative Bill Thomas
Robert Swenson, Acting Director, DNR, Division of Geological & Geophysical Surveys
Kevin Banks, Acting Director, DNR, Division of Oil & Gas
Wyn Menefee, DNR, Division of Mining, Land & Water
Melanie Lesh, Legislative Liaison, DNR
Marie Crosley, DNR, Division of Oil & Gas


Alaska Energy Authority
Alternative Energy and Energy Efficiency
Overview
Juneau
March 2007
Peter Crimp
ALASKA
ENERGY AUTHORITY

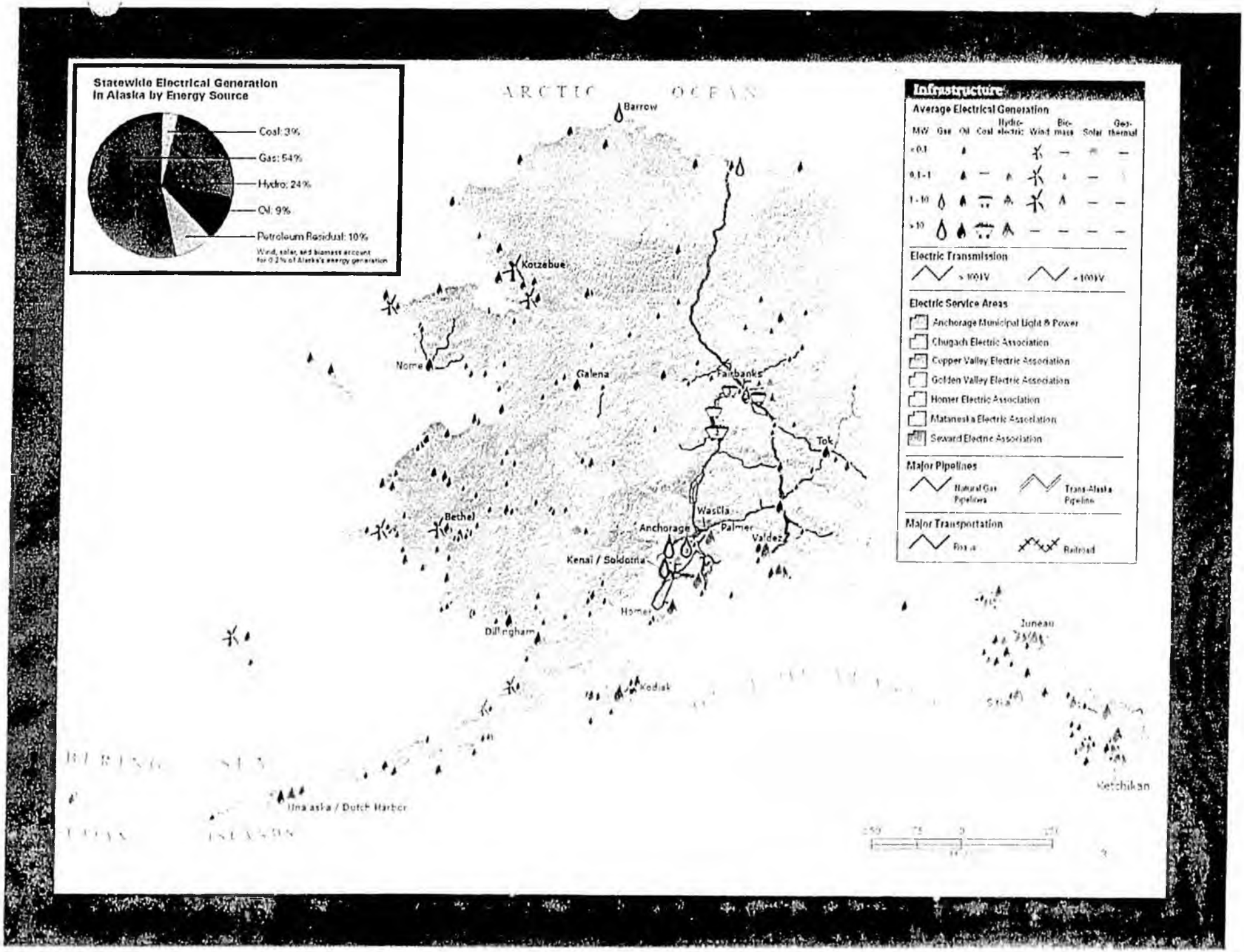
AEA Programs

- Statewide Energy Planning
- Infrastructure owner—Bradley Lake Hydro, Willow-Healy intertie
- Bulk Fuel Upgrades
- Rural Power System Upgrades
- Alternative Energy and Energy Efficiency
- Power Cost Equalization (PCE)
- Project Financing
- Training

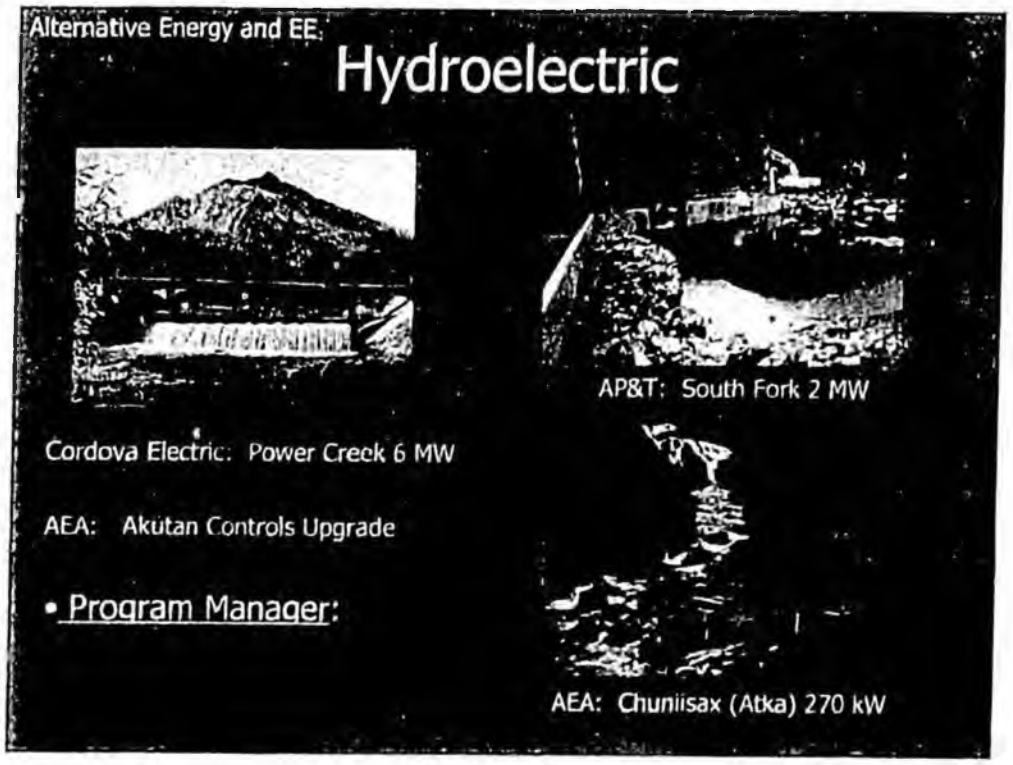
Statewide Energy Planning

- Rural Energy Plan
- Energy Policy Task Force
  - Railbelt
  - Non-Railbelt
- Rural Energy Action Council
- RE Atlas of Alaska
- Alaska Power Statistics




Statewide Electrical Generation
In Alaska by Energy Source
Coal: 3%
Gas: 54%
Hydro: 24%
Oil: 9%
Petroleum Residual: 10%
Wind, solar, and biomass account for 0.2% of Alaska's energy generation
ARCTIC OCEAN
Barrow
Kotzebue
Nome
Galena
Fairbanks
Tok
Bethel
Wasilla
Palmer
Anchorage
Valdez
Kenai / Soldotna
Homer
Dillingham
Kodiak
Juneau
Sitka
Ketchikan
Unalaska / Dutch Harbor
Infrastructure
Average Electrical Generation
MW
Gas
Oil
Coal
Hydro-electric
Wind
Bio-mass
Solar
Geo-thermal
< 0.1
0.1-1
1-10
> 10
Electric Transmission
> 100 kV
< 100 kV
Electric Service Areas
Anchorage Municipal Light & Power
Chugach Electric Association
Copper Valley Electric Association
Golden Valley Electric Association
Homer Electric Association
Matanuska Electric Association
Seward Electric Association
Major Pipelines
Natural Gas Pipelines
Trans-Alaska Pipeline
Major Transportation
Road
Railroad

Alaska Energy Authority



Potential Hydro Projects*

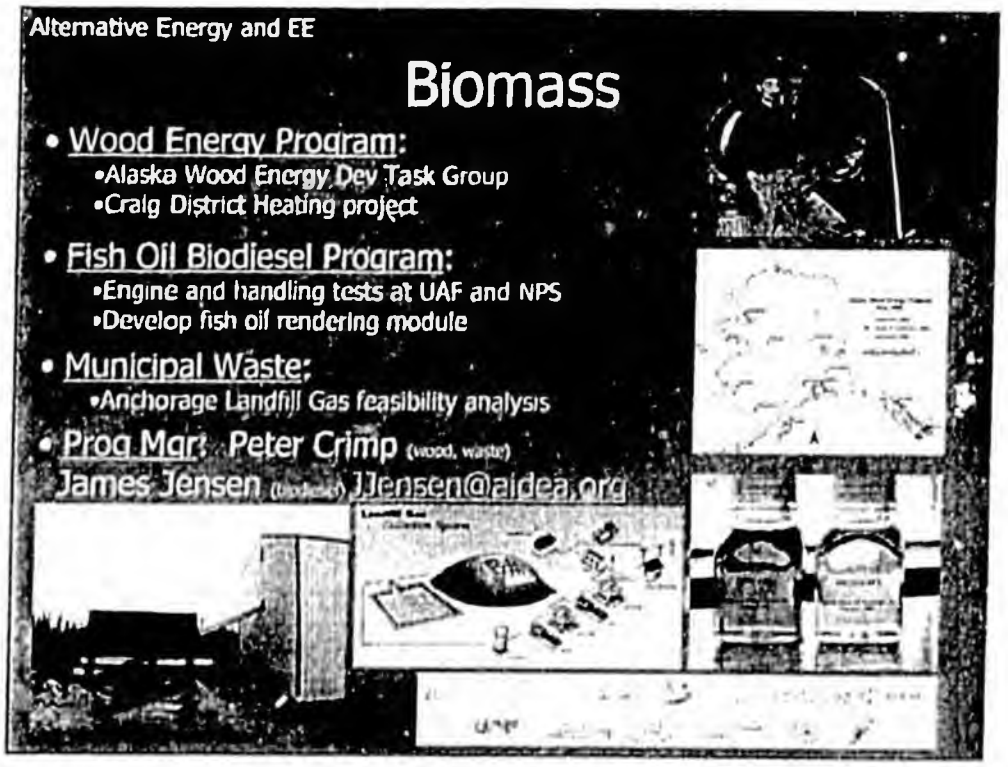
Community	Planning Area	Project	IC (MW)	Energy (MWh/yr)
Valdez	Four Dam Pool/SE	Allison Creek	7.0	29,000
Juneau	Four Dam Pool/SE	Lake 3160	7.0	56,800
Hyder	Four Dam Pool/SE	Soule Cr	50.0	187,000
Sitka	Four Dam Pool/SE	Takatz Lake	20.0	98,000
Eagle River	Railbelt	South Fork Eagle	1.2	6,000
Mat-Su	Railbelt	Archangel Cr.	1.2	5,000
Mat-Su	Railbelt	Fishhook Cr.	1.2	5,000
Tyonek	Railbelt	Chakachamna	430.0	1,301,000

** Provisional list—not comprehensive. Other potential projects to be identified through public solicitations and further research.*

Potential Hydro Projects* (cont.)

Community	Planning Area	Project	IC (MW)	Energy (MWh/yr)
Angoon	Rural	Thayer	10.0	60,000
Chignik Lagoon	Rural	Chignik Lagoon	0.2	600
Chitina	Rural	Chitina RPSU		
Eagle	Rural	Eagle UEK Demo		
Hydaburg	Rural	Reynolds Cr	5.0	20,000
Pelican	Rural	Pelican Hydro Flume		
Unalaska	Rural	Pyramid Creek	5	20,000
Tanacross	Rural	Yerrick Cr.	1.5	3,000
Tenakee	Rural	Tenakee	0.15	500

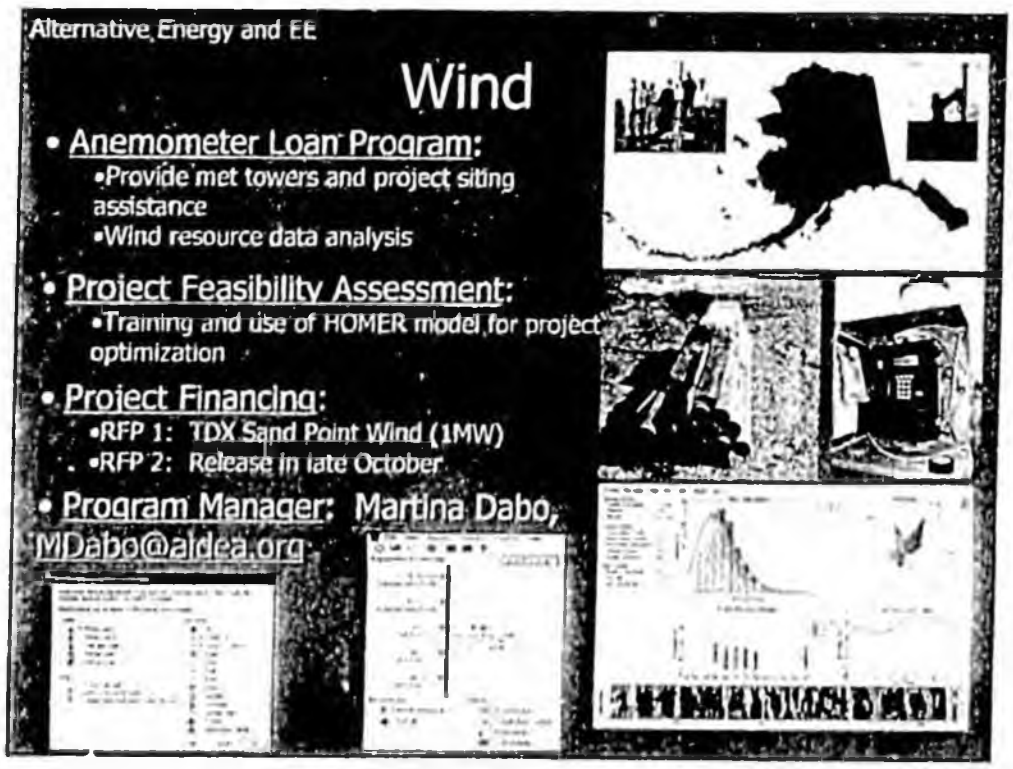
** Provisional list—not comprehensive. Other potential projects to be identified through public solicitations and further research.*



Potential Biomass Projects

Community	Planning Area	Project	IC (MW)	Energy (MWh/yr)
Anchorage	Railbelt	Anchorage Landfill GTE	2.4	21,000
Fairbanks	Railbelt	Chena Power Biomass	0.2	1,300 *
Delta Junction	Railbelt	Delta-Greeley SD Wood Boiler		
Delta Junction	Railbelt	Jarvis Creek Biomass-Coal Co-fire	4	
Craig	Rural	Craig Biomass DH		
Tok	Rural	Gateway SD Wood Boiler		
Haines	Rural	Haines SD Wood Boiler		
Tanana	Rural	Tanana SD Wood Boiler		
Statewide		Fish Oil Rendering Module		

** Provisional list—not comprehensive. Other potential projects to be identified through public solicitations and further research.*



Potential Wind Projects*

Community	Planning Area	Project	IC (MW)	Energy (MWh/yr)
Kodiak	Four Dam Pool/SE	Kodiak	2 to 8	
Healy	Railbelt	Eva Creek Wind	40	112,128
Anchorage	Railbelt	Fire Island	50	148,044
Aleutian Islands	Rural	Aleutian Regional		
Bethel	Rural	Bethel		
Chevak	Rural	Chevak	0.4	1,200
Northwest Region	Rural	Northwest Regional		
Nome	Rural	Nome- Energy Planning		
Sand Point II	Rural	Sand Point	0.5	
Unalakleet	Rural	Unalakleet	1 to 2	
Y-K Delta	Rural	Y-K Regional		
Statewide	Statewide	Wind-Training Program		

** Provisional list—not comprehensive. Other potential projects to be identified through public solicitations and further research.*

Alternative Energy and EE

Geothermal

- Alaska Geothermal Working Group: 47 participants with REAP assistance.
- Chena Hot Springs Project: $846k total grant and loan participation
- Project Development: Mt. Spurr, Manley Hot Springs, Bell Island, Akutan, Pilgrim Hot Springs, etc.
- Program Manager: David Lockard, DLockard@aidea.org

Potential Geothermal Projects*

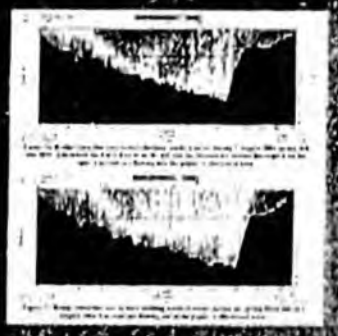
Community	Planning Area	Project
Tyonek	Railbelt	Mt Spurr
Akutan	Rural	Akutan Geothermal
Unalaska	Rural	Makushin Geothermal
Pilgrim Hot Springs	Rural	Pilgrim HS Geothermal

** Provisional list—not comprehensive. Other potential projects to be identified through public solicitations and further research.*

Alternative Energy and EE

Ocean Energy

- EPRI study on tidal energy potential of Knik Arm completed in May 2006
- new preliminary FERC tidal energy applications filed this year
- Tidal energy conference Ketchikan, January 2007
- Program Manager: David Lockard, DLockard@aidea.org



Alternative Energy and EE

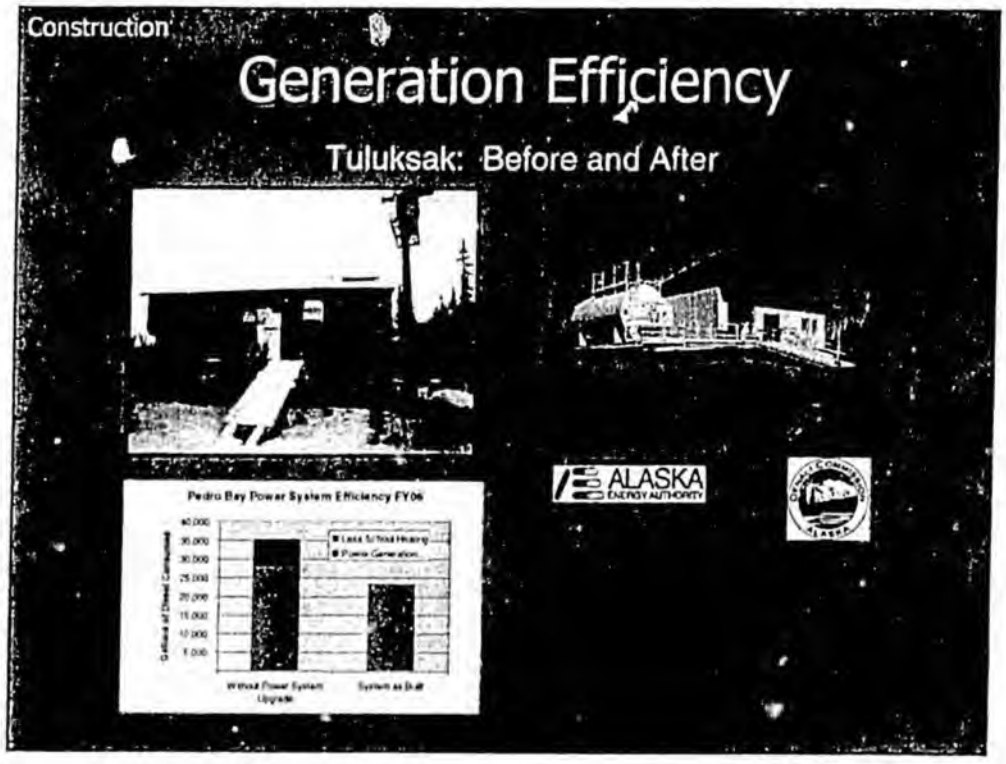
Interties

- Construction Financing through grants and loans
- Intertie Feasibility Assessment
  - Alaska-BC RFP proposals due 10/13
- Program Manager: Jim Strandberg, JStrandberg@aidea.org

Alternative Energy and EE

End Use Efficiency

- EE Tech Asst Program: Facility and power system energy audits,
- Village EUE Measures: Upgrades in 100+ facilities in 30 communities,
- State Building Effic Program: Help DOTPF establish energy services contract
- Program Manager: Rebecca Garrett, RGarrett@aidea.org



Potential Efficiency Projects*

Community	Planning Area	Category	Project
Anchorage	Railbelt	End Use Efficiency	Anchorage School District ECMs
Statewide	Rural	End Use Efficiency	Village End Use Efficiency
Aklak	Rural	Generation Efficiency	Aklak RPSU
Akutan	Rural	Generation Efficiency	Akutan RPSU Distribution
Chignik Bay	Rural	Generation Efficiency	Chignik Bay RPSU Distribution
Elfin Cove	Rural	Generation Efficiency	Elfin Cove RPSU Distribution
Igiugig	Rural	Generation Efficiency	Igiugig RPSU
Ruby	Rural	Generation Efficiency	Ruby RPSU
Tenakee Springs	Rural	Generation Efficiency	Tenakee Springs RPSU Distribution
Unalakleet	Rural	Generation Efficiency	Unalakleet RPSU
Kaltag	Rural	Heat Recovery	Kaltag HR upgrade
Statewide	Rural	Heat Recovery	AEA HR Database (29 projects)

** Provisional list--not comprehensive. Other potential projects to be identified through public solicitations and further research.*

Training and Education

Training Program

- Advanced Powerplant Operator
- Bulk Fuel Operator
- Bulk Fuel Bookkeeper
- Bulk Fuel Manager
- Electrical Utility Bookkeeper
- Electrical Utility Manager
- Hydro Operator
- On Site Bulk Fue
- Power Plant Ope
- PCE Utility Clerk

- Program Manager: Monica Moore, MMoore@aidea.org
- RE Conference: 4/24-26 Fairbanks
- Workshops
  - HOMER training
  - Wind, Ocean, Biomass, Geothermal..

Project Finance

- Energy Cost Reduction RFP
  - Selection based on life-cycle cost, ranked by B/C ratio
  - 1.4 million gal/year savings in diesel and natural gas
- Bulk Fuel Revolving Loan Fund
- Power Project Fund
- Program specific

Conclusion

- In rural areas continue to support reliable energy delivery through PCE and bulk fuel loans.
- But long-term sustainability will require actions that avoid exporting cash for imported fuels.
- Statewide: Need significant capital investment for cost-effective projects that stabilize long-term energy costs.

Alaska Energy Authority
813 W. Northern Lights Blvd.
Anchorage, AK 99503
(907) 269-3000
1-888-300-8534 (toll free in Alaska)

www.akenergyauthority.org

CalCEF

California Clean Energy Fund

About Us

Overview

The California Clean Energy Fund (CalCEF), formed in 2004, will make equity investments totaling at least $30 million in emerging clean energy technology companies. The Fund arises from the PG&E bankruptcy settlement negotiated by the California Public Utilities Commission (CPUC). CalCEF will invest in companies located in PG&E's service territory and in companies located elsewhere that are developing technology and/or products that could be of benefit in that region.

CalCEF is a non-profit entity but will make for-profit investments in commercially viable companies; profits will be reinvested in the Fund. Funds will be invested in private companies creating technologies or products that will lead directly or indirectly to decreased reliance on non-renewable fuels. This can include companies focusing on renewable energy, energy efficiency, energy storage, and other areas. It can also include companies providing products and services, such as software, that are designed to enhance a particular aspect of the clean energy sector.

UPDATE (12/9/05): Efficiency Challenge Grant Instructions

We've moved - click for CalCEF's new contact info

Response to Challenge Grant Questions

Challenge Grant Update: Call for Questions

Download the CalCEF Energy Efficiency Challenge Grant RFP (MS Word format)...

CalCEF is governed by a nine-member Board of Directors and recently hired two staff, a President and a Director of Technology and Policy Development. The Board has also retained a team of private equity firms to serve as investment managers for CalCEF.

Source of Funds

PG&E: CalCEF's initial funding of $30 million comes from PG&E shareholders. The funding schedule extends over a five-year period as follows: $2 million in 2004, $4 million in 2005, $6 million in 2006, $8 million in 2007, and $10 million in 2008. PG&E's role in CalCEF is limited to providing the initial $30 million in funding and appointing three of the initial nine Board members. PG&E has no control over CalCEF operations or investments, will not profit from positive returns on CalCEF investments, and does not have the ability to remove the directors it appointed or to designate the replacement of any directors it appointed who leave the Board for any reason.

Berkeley Lab and the Clean Energy States Alliance

CASE STUDIES OF STATE SUPPORT FOR RENEWABLE ENERGY

Northern Exposure: An Overview of Canadian Clean Energy Funds

Garrett Fitzgerald, Ryan Wiser, and Mark Bolinger
Lawrence Berkeley National Laboratory

Allison Schumacher, Clean Energy Group

CONTENTS

June 2004

Download other clean energy fund case studies from:

http://eetd.lbl.gov/ea/ems/cases/

or

www.cleanenergystates.org

CASE SUMMARY

The Canadian federal government is an active proponent of renewable energy and supports a variety of funding mechanisms for clean energy projects and programs. In addition to federal climate change funding aimed at reducing greenhouse gas emissions and other federal, provincial and municipal incentives to finance renewable energy projects, several clean energy funds[1] also exist in Canada.

This case study profiles the activities of the following clean energy funds: the **Green Municipals Funds (GMEF and GMIF)**, the **Climate Change Action Fund (CCAF)**, the **Toronto Atmospheric Fund (TAF)**, and **Sustainable Development Technology Canada (SDTC)**. It also explores other federal and provincial incentives that have a significant impact on Canada's renewable energy market. While there are numerous energy efficiency programs and funding mechanisms in Canada, the scope of this case is limited to funding for clean energy production technologies in Canada.[2]

Though they share many similarities to their U.S. counterparts, some of the key distinguishing characteristics of the Canadian funds include:

- Unlike in the United States, the major Canadian clean energy funds tend to operate nationally, with division of responsibility between them lying in the type of projects that they support

[1] It should be noted that many of the funds profiled in this case provide funding for more than clean energy projects and are often referred to as "sustainability" funds or "green" funds. In continuing the focus of this case study series, this paper will use the term "clean energy funds" to describe the renewable energy, hydrogen and fuel cell activities of the various Canadian funds.

[2] Canada also has a $12 million Climate Change Development Fund for greenhouse gas reducing technologies in developing countries, and $6 million allocated through its Clean Development Mechanism and Joint Implementation Office for investments in projects in developed and developing countries that reduce greenhouse gas emissions and generate carbon credits.

(e.g., technology development vs. feasibility studies, vs. investments), rather than along geographic boundaries. Table 1 shows the type of support each fund offers. The national reach of most of the Canadian funds allows them to capitalize on local opportunities and partners in many different areas, yielding a broad cross-section of projects.

- Also unlike in the United States, where clean energy funds have typically been financed by electric ratepayers, the Canadian clean energy funds are endowed with large sums of taxpayer money and other federal revenue sources from the federal or provincial governments, but are often kept at arms length to prevent reallocating the funds to other governmental priorities.[1]
- In general, the Canadian funds are driven by broad climate and technology development goals, while U.S. funds typically have a somewhat more narrow focus and consequent range of projects eligible for support.
- Canadian funds rely heavily on projects created through innovative partnerships (e.g., between federal and municipal government, and/or private sector and academic partnerships).

Table 1. Canadian Clean Energy Fund Offerings

Fund	Support for Feasibility Studies	Support for Technology R&D	Support for Technology Implementation	Support for Hydrogen or Fuel Cell Technology	Support for Consumer Education
GMEF	X			X	
GMIF			X	X	
CCAF		X			X
SDTC		X*		X	
TAF	X		X		

* pre-venture capital funding beyond R&D phase

CASE STUDY DETAILS

Introduction

While the non-hydro renewable energy market in Canada remains small, the Canadian federal government has played a significant role in developing the country's renewable energy market, providing support for research and development, commercialization, and implementation of new technologies. Concern over climate change is a major driver of this support: Canada has committed to reducing its greenhouse gas emissions by 6 percent below 1990 levels between 2008 and 2012 under the Kyoto Protocol. To achieve these reductions, the federal government has made funding available through various programs and projects, many of which directly support the increased use of qualifying clean energy technologies. Provincial and local governments have further bolstered this assistance through contributions of their own. A significant portion of this support has been provided through nationally and locally operating clean energy funds, each playing a distinct role in the promotion of renewable energy.

Much like their U.S. counterparts, Canadian clean energy funds play an important role in driving the development of renewable energy in Canada. However, they exhibit a set of

[1] In March 2003, the federal government announced it would use the proceeds from the sale of federal shares in Petro-Canada (expected approximately $1 billion) on clean energy technologies. $200 million was allocated to the new Sustainable Development Technology Canada Fund. The remaining $800 million has yet to be allocated and could possibly go toward the creation of a nationwide Canadian Clean Energy Trust, pending the outcome of Canada's elections on June 28, 2004. [Note: All monetary units in this document are provided in Canadian dollars. For comparison, the exchange rate between U.S. and Canadian currency is generally between 1.2 and 1.4 Canadian dollars per U.S. dollar.]

interesting differences from U.S. models, including a division of responsibility not based geographically on provincial boundaries, but rather on areas of commercialization support focus such as research and development, feasibility studies, and direct implementation of new technologies. In addition, while clean energy funds in the United States are typically financed through small surcharges on electricity rates, their Canadian counterparts are typically financed through federal or provincial tax dollars, and are often operated at "arms length" to prevent reallocating the funds to other governmental priorities later. This case examines the purpose, structure, and activities of the major Canadian clean energy funds, and seeks to extract lessons applicable to clean energy funds elsewhere.[4] It then proceeds to discuss other forms of federal and local support from which lessons may also be drawn.

The Federation of Canadian Municipalities Green Municipal Funds

In 2000, the Government of Canada established the Federation of Canadian Municipalities (FCM) Green Municipal Funds to stimulate investment in innovative environmental infrastructure projects among Canadian municipal governments and their public or private-sector partners. The Government of Canada's initial $125 million endowment to FCM for the two complementary [illegible] the Green Municipal Enabling Fund [illegible] which provides grants) and the Gr[illegible]icipal Investment Fund (GMIF whic[illegible]vides interest-bearing loans, loan guarantees and grants toward larger projects) was doubled to $250 million in 2001 to encourage projects and studies in more communities. As of April 2004, the FCM Green Municipal Funds have approved support for 320 projects with more than $154 million invested by FCM, leveraging more than $1.15 billion in project investments. Of the 320 projects, approximately 56.5% of grant funding and 36.4% of loans (from GMEF and GMIF combined) have been allocated for energy projects.

Green Municipal Enabling Fund

The $50 million Green Municipal Enabling Fund offers support to Canadian municipalities and their public- or private-sector partners for feasibility studies and field tests of new renewable energy projects. Studies of the technical, environmental, and/or economic feasibility of proposed municipal projects are eligible for grants covering up to 50 percent of project costs to a maximum of $350,000 per project. Applications to GMEF are accepted year-round. The fund is slated to expire in March 2007.

Eligible renewable energy projects include:

- on-site energy generation and co-generation technologies;
- landfill gas capture to generate electricity and/or heat, or to produce liquid fuels;
- installation of renewable energy technologies/building elements (e.g., solar walls, solar thermal heating);
- micro-hydro, wind, solar thermal, solar photovoltaic or biomass projects used to meet community energy needs; and,
- community energy planning (for greenhouse gas reductions, sustainable community development, and brownfields redevelopment).

Other project types are also eligible for funding through GMEF, including those with the potential to improve environmental performance in the following areas: energy, water, solid waste management, sustainable transportation services and technologies, and sustainable community planning.

Renewable energy projects receiving support have covered a wide range of technologies (e.g., wind, solar, geothermal, biomass, landfill gas) and applications (e.g., solar water

[4] For further information on clean energy programs and policies in Canada, see "Low-Impact Renewable Energy Policy in Canada: Strengths, Gaps and a Path Forward," by Andrew Pape-Salmon et. al, of the Pembina Institute, February 2003.

heating, large-scale grid-connected wind farm).

GMEF will support up to 65 feasibility studies in 2004, and has approved support for a total of 273 projects to date, including 55 studies/field tests/feasibility assessments for renewable energy/supply and 30 studies/field tests/feasibility assessments for sustainable community planning. Examples of previously supported projects include:

- *Wastewater Treatment Plant Biogas Cogeneration Evaluation* – The GMEF provided a grant of $60,000 to the City of Red Deer, Alberta, to assess the feasibility of installing a cogeneration facility at the city's wastewater treatment plant. The proposed facility would be fueled by biogas produced in digester tanks, eliminating the need to flare off excess digester gas at the plant, and replacing the natural gas currently used to meet process and space heating requirements.
- *Wind Power Feasibility Study* – Unitec're Resources Limited and the Village of Masset partnered to receive a grant of $100,000 covering half of the cost of a study to assess the wind resource available and viability of harnessing wind energy on Graham Island, British Columbia. The study will include a review of turbine technology, community consultation, site identification, and an environmental impact assessment. Graham Island is currently served by a polluting and expensive diesel-fueled electricity generating system.
- *Municipal Solar Swimming Pool Heating Retrofits* – The Greater Vancouver Regional District's Air Quality Department, in partnership with member municipalities, received a grant of $47,500 to study the potential cost and energy savings and greenhouse gas emission reductions that would result from installing solar-thermal heating systems at 19 municipal swimming pools currently heated by natural gas.
- *Small Wind Farm Feasibility* – The GMEF provided a grant of $67,570 to the town of Canso, Nova Scotia, covering half the cost of analyzing the technical and economic potential of constructing a wind farm in or near the town. The study, to be carried out by project partner Renewable Energy Services Limited, will include a business plan and a comprehensive community consultation process, as well as consideration of opportunities to market green power locally and through grid sales in the province.
- *Large Wind Farm Feasibility* – The city of Greater Sudbury, Ontario, received a grant of $100,000 toward the production of a business plan for the development of a major wind farm with a capacity of at least 50 MW. The study will include consideration of wind turbine technology, long-term economic development potential, and research and development opportunities.
- *Landfill Gas Evaluation* – The Regional Municipality of Halton, Ontario, received a $64,500 grant to test the viability of collecting and utilizing the methane gas from its small to medium-sized landfill sites. The study will examine the feasibility of using the collected gas as fuel for nearby industries, or as a fuel source for electricity production.
- *Ground Source Energy in Municipal Buildings* – GMEF provided a grant of $85,000 to Îles de la Madeleine, Quebec for a feasibility study of the potential to use ground source heat pumps to replace the use of fuel oils.

Green Municipal Investment Fund

A sister fund to GMEF, the $200 million Green Municipal Investment Fund is a permanent revolving loan fund that offers

interest-bearing loans, loan guarantees, and grants toward the implementation of a similar range of municipal environmental projects as those funded by GMEF, including projects involving renewable energy technologies. GMIF lends to municipalities at the Government of Canada bond yield minus 1.5% per annum, with terms of four to ten years. The reference bond term matches the loan term (e.g., if the loan is for seven years, GMIF will lend at 1.5% less than the 7-year Government of Canada bond yield). GMIF also lends to private sector partners of municipalities. In these cases, GMIF assumes a high risk debt position, providing subordinated debt, non-recourse loans or structured financing to leverage additional funds from private sector lenders and investors. The interest rate is typically above or equal to the Government of Canada bond yield for private sector loans.

Through GMIF, eligible projects may apply for loans covering up to 15 percent of project costs (25 percent in exceptional cases).

Projects must have an investment return of 10 years or less, except in cases where GMIF provides grant funding for select environmental pilot projects that are highly innovative but that have an investment payback in excess of 10 years. Such pilot projects must have the potential for significant impact and replication on a regional or national basis. In the case of pilot projects, GMIF can provide up to 50 percent of the capital cost of a pilot project as a combination of grant and/or long-term loan (in excess of a 10-year term) or loan guarantees. Applications for financing through GMIF are accepted year-round.

GMIF can also act as a financial advisor or financial arranger for municipalities for large projects with complex financial requirements, or for projects involving private sector partners. Services include flexible repayment options and no brokerage fees, and may be made available free of charge to municipal borrowers.

Supported renewable energy projects cover a similarly wide range of technologies (e.g., wind, solar, geothermal, biomass, landfill gas) and applications (e.g., solar water heating, large-scale grid-connected wind farm) to those supported by GMEF. GMIF also supports integrated community projects, such as community-wide sustainable energy and environmental management projects.

To date, GMIF has approved support for a total of 47 projects, including 12 renewable energy/supply projects or pilots, and 10 energy projects/pilots for buildings or facilities. Examples of supported projects include:

- *Town of Okotoks Solar Seasonal Storage District Heating Project* – GMIF recently approved a grant for approximately $2.48 million and a loan of $450,000 for a 74-home subdivision pilot project to demonstrate the concept of solar seasonal storage technology, which will serve as the first demonstration of the technology in North America. Solar collectors will collect heat during the spring, summer and fall and store the thermal energy in underground boreholes for extraction during the winter. A district-heating network will distribute the thermal energy. With approximately 90% of energy consumption provided by solar energy, the project should result in a reduction of 2.4 tons of greenhouse gas emissions per home per year, or 72% below a business as-usual scenario. The project also includes water conservation measures and an R-2000 standard for home construction, significantly reducing thermal load.
- *Hydroelectric Generation Improvements* – GMIF provided a loan of $2.6 million covering one quarter of the cost of upgrades to PowerGen Corporation's hydroelectric facilities in the town of Parry Sound, Ontario. The project will increase the hydroelectric generating

capacity of PowerGen's facilities from 1.2 MW to 2.5MW through the installation of new technologies and structural upgrades. This project will also produce significant performance improvements over the existing facilities, resulting in a product expected to qualify for EcoLogo[5] certification as "green power." The new generation facility is expected to produce an estimated 11.4 million kWh per year, 15 percent of the total power used by the ratepayers of Parry Sound.

- *Deep Lake Cooling Water* - Enwave and the City of Toronto have received a loan of $10 million toward a $176 million project allowing Enwave to make use of cold water from deep within Lake Ontario to offset the need for conventional electric chillers at Enwave's cooling plant. Enwave will then distribute the water to its customers – commercial buildings in Toronto's downtown core – for air conditioning. While providing an equivalent level of cooling to conventional chillers, the Enwave system is projected to reduce the use of electricity and steam by 75 percent.
- *Waste Wood Biomass Utilization* – The City of Revelstoke, British Columbia, received both a loan and a grant, each worth $1,348,000, covering in aggregate half of the cost of the construction of a new heating plant and district heating system. The plant will feature a state-of-the-art boiler designed to combust approximately 7,000 tons of wood biomass residue annually. The project will displace approximately 1.5 MW of fossil fuel use, primarily propane, using wood waste with no identified alternative use, and is estimated to produce a net 40 to 60 percent process efficiency improvement (counting energy capture, transmission and delivery).

Climate Change Action Fund

Established by the Canadian federal government in 1998 to help Canada meet its commitments under the Kyoto Protocol, the Climate Change Action Fund (CCAF) has supported a variety of projects that research climate change issues, raise public awareness and understanding, and promote actions to reduce greenhouse gas emissions. Operating from a $150 million endowment, CCAF has supported a number of projects related to renewable energy (e.g., a green power public awareness campaign and a demonstration of building-integrated photovoltaics), though the vast majority of its support has gone to other climate change-related impact studies and education efforts. CCAF is now in its final year of operation, with no plans at present for any future solicitations.[6]

One distinct component of CCAF continues to offer support to renewable energy projects, however. The Technology Early Action Measures (TEAM) initiative offers investment support to accelerate the demonstration and deployment of new technologies with potential to reduce greenhouse gas emissions. TEAM was launched with $60 million from CCAF in 1998 and has received an additional $35 million since to extend its operation through 2008.

Total federal funding for TEAM projects may not exceed 50% of project costs. If TEAM funding is stacked with other federal funding, TEAM support may not exceed 85% of federal funding per project.

Since its inception, TEAM has committed almost $73 million toward 82 projects with a total cost of $780 million (through 2001).

[5] For further information on Canada's EcoLogo program, see www.ecologo.com/en/howit.cost

[6] Additional funding for the program was not announced by the Martin government during the Budget Speech in March 2004, which outlined major fiscal initiatives and policies for the new administration.

Roughly 30 of these projects have involved renewable energy technologies, with TEAM support accounting for approximately $30 million of their $260 million total price tag. Renewable energy projects supported by TEAM have ranged from the development of 10kW and 60kW wind turbines to the demonstration of building integrated PV, and have also included an array of research related to fuel cells. TEAM has also provided support to a variety of renewable energy projects located outside of Canada, including the use of PV in China, solar drying in Panama, landfill methane recovery in Egypt, and small hydro development in Nepal. Non-renewable energy projects supported by TEAM have also spanned a variety of market areas, including coal bed methane use, natural gas-powered vehicles, and composting.

Sustainable Development Technology Canada

Sustainable Development Technology Canada (SDTC) is a $350 million fund for the development, demonstration and pre-commercialization of sustainable development technologies that address climate change and clean air issues in Canada. SDTC was initiated in 2002 as a non-profit corporation with an initial $100 million endowment from the Canadian government for allocation between 2002 and 2006. The government renewed its commitment to the fund with additional contributions of $250 million in 2003.[7]

Eligible projects may include energy exploration, production, transmission and distribution, and utilization, as well as waste management, transportation, emissions controls and enabling technologies (e.g. communication software, sensors and controls). Renewable energy and hydrogen technologies are eligible within each stage where applicable.

SDTC increases clean technology deal flow in the Canadian marketplace by providing pre-venture capital funding to entrepreneurs beyond the research and development phase. SDTC does not take an equity position in projects.

SDTC may fund up to 50 percent of eligible costs for a particular project, although they aim to fund approximately 33 percent of project costs across the entire range of projects, with additional funding leveraged through project consortia. If SDTC contributes funding along with other Canadian federal and provincial entities, total federal and provincial support may not exceed 75 percent of project costs.

As of June 2004, 38 projects totaling $72 million in investment from SDTC had been approved, leveraging $206 million from project consortia members. SDTC will launch its sixth funding round in July 2004.

SDTC has provided funding to a number of renewable/clean energy projects including:

- *Biogas Utilization* – Bio-Terre Systems received support for a series of process improvements designed to more effectively capture and treat methane gas from hog manure and convert it into usable energy to meet site-specific energy demands.
- *Solar-Powered Lighting* – Carmanah Technologies is developing low energy consumption, solar powered LED lighting technology for edge lit signage for commercial mainstream applications.
- *Solar Thermal Building Technology* – The Conserval Group received support to continue its work to enable greater utilization of building surfaces for capturing solar energy and converting it to warm air.

[7] It was announced in March 2003 that SDTC would receive an additional $200 million in 2004/2005 – increasing the total size of the fund to $550 million – to expand its mandate to include water and soil quality issues.

- *Fuel Cells* - Hydrogenics and a consortium of technology and end-user partners will develop, demonstrate and pre-commercialize fuel cell-powered forklifts.

Toronto Atmospheric Fund

The Toronto Atmospheric Fund (TAF), established by the Toronto City Council in 1991 with a $23 million endowment, offers support for projects with the potential to mitigate global climate change and improve Toronto's air quality. City of Toronto agencies and departments, non-profit organizations, registered charities, and public institutions and schools are eligible to apply for grants and loans in the areas of renewable energy, energy conservation and efficiency, and reduced fossil fuel content of energy sources. Individuals, for-profit organizations, and applicants from outside Toronto are not eligible.

In 2003, TAF provided approximately $526,000 to support 19 projects selected competitively through two separate initiatives. The Business Development Program offers short term grants that are generally less than $10,000 each for the development of business plans. The Incubation Program offers support in loans of up to $100,000 per year for up to three years for projects that mitigate potential climate change and its impacts in Toronto. Recent renewable/clean energy projects supported have included approval in 2003 for $300,000 in contingent debt financing to the [illegible] Renewable Energy Cooperative (TREC) for the Lakewind Power Generation Project (debt will be converted to equity in the project if and when equity becomes available; $50,000 grant to TREC for the development of North America's first utility scale urban wind turbine (2000-2001) and a $495,000 loan for this project (issued in 1998 and repaid as of 2003); $15,000 for the development of a guide for wind power development in Ontario (2003), and $15,000 for a fuel cell demonstration project at Toronto's Exhibition Place (2003).

Other Forms of Federal Support

In addition to providing resources through the clean energy funds described above, the Canadian federal government has supported renewable energy technologies in other ways as well. For example, the government is seeking to purchase 20 percent of the electricity used in federal buildings from green power sources. Several other federal programs have also had an impact on Canada's renewable energy market, including:[8]

- Wind Power Production Incentive (WPPI) – The federal WPPI offers support to electric utilities and independent power producers for the construction of new wind projects in Canada. The WPPI, established with $260 million in 2001, aims to provide support for the installation of 1000 MW of new wind capacity by 2008. Incentive payments decline from 1.2 cents/kWh to 0.8 cents/kWh by 2007, and are available for the first ten years of a project's operating life on a first-constructed, first-served basis. Payments are designed to cover approximately half of the cost premium associated with new wind projects over conventional electricity sources.
- Market Incentive Program (MIP) for Distributors of Emerging Renewable Electricity Sources – The MIP, which is managed by Natural Resources Canada (NRCan), is designed to encourage electricity distributors to explore new ways of stimulating sales of electricity generated from low-impact renewable sources by offering incentives covering up to 40% of distributors' costs associated with increasing bulk green power sales to

[8] Other major federal funding programs that provide support for clean energy (environmental technologies, green buildings, and R&D) include the Natural Sciences and Engineering Research Council, Natural Resources Canada Program of Energy Research and Development (PERD), Office of Infrastructure (demonstration projects), and National Research Council (IRAP). The Canadian Foundation for Innovation is an independent foundation established by the federal government that provides support for research and technology development.

residential and small business customers. This program offers $25 million of funding through March 31, 2006.[9]

- Renewable Energy Technologies Program (RETP) – NRCan's RETP offers support for the development and commercialization of advanced renewable energy technologies. In addition to providing funds for R&D efforts, the RETP has also supported organizations such as the Canadian Wind Energy Association and Canadian Solar Industries Association.

- Community Energy Technology Centre (CETC) – Also managed by Natural Resources Canada, CETC is a revolving fund that supports project feasibility studies. Project developers must pay back the cost of the feasibility study if the project moves forward.

- Renewable Energy Deployment Initiative (REDI) – Begun in 1998, the REDI is a six-year $24 million program offering incentives toward the installation of renewable energy systems used for space and water heating and cooling. Eligible technologies include solar air- and water-heating systems and small biomass combustion systems. Businesses are eligible for a rebate of up to 25 percent (40 percent in remote communities) of the purchase and installation cost of qualifying systems, up to $80,000 per project. In 2000, nine businesses received a total of $119,910 through the REDI.

- Pilot Emission Reductions, Removals and Learnings Initiatives (PERRLI) – Through the PERRLI, the Canadian federal government offers to purchase emissions reduction credits generated from renewable energy projects.

- Technology Partnerships Canada (TPC) – TPC is a program of Industry Canada, a federal agency whose mission is to foster a growing competitive, knowledge-based Canadian economy. TPC manages two programs that fund clean energy technologies: 1)The TPC R&D program is geared to pre-competitive projects across a wide spectrum of technological development, including environmental technologies, life sciences, information and communications technologies and advanced manufacturing. Support for small to medium-sized companies with projects valued under $3 million is provided through the TPC Industrial Research Assistance Program; and 2) The H_2 Early Adopters Program (H2EA), a partnership program between Canadian government and industry stakeholders to build a Canadian hydrogen economy. H2EA partnerships are designed to foster the development and early introduction into the market place of hydrogen and hydrogen-compatible technologies, such as fuel cells and those used to produce, store and distribute hydrogen. H2EA is currently reviewing proposals for projects such as Vancouver's Hydrogen Highway, and the Hydrogen Village Partnership proposal for a community model based on the dynamic and synergistic deployment of hydrogen and fuel cell technologies driven by an end-user community within a defined geographic area.[10] As of March 2003, TCP had invested $357 million in climate-change related projects.

Other Provincial and Municipal Initiatives

Provincial and municipal governments have also played an important role in advancing renewable energy in Canada. Like the federal government, multiple Canadian provincial governments have released their own climate

[9] While the MIF runs through March 2006, the last round of proposals under this program closed in January 2004.

[10] The Hydrogen Village Partnership is a public-private initiative to accelerate and sustain the application and commercialization of hydrogen and fuel cell technologies in Canada, facilitated by Fuel Cells Canada, an organization with nearly 80 members including end-users, technology providers and technology integrators. The first Hydrogen Village is planned for the Greater Toronto Area in 2004.

change action plans, and some have directly supported demonstration projects or provided other incentives for renewable energy technologies.

- Alberta Climate Change Central (CCC) -- Climate Change Central is a not-for-profit corporation supported by public and private funding that provides analysis, engagement and policy advice; promotes innovation through the exchange of knowledge, ideas and best practices and focuses attention on Alberta's successes in addressing climate change. In 2002, it contributed approximately $4 million to co-funding projects, leveraging its funding by nearly five to one.

- British Columbia Renewable Energy Technology Program (BCRETP) – Through the BCRETP, the B.C. government provided $850,000 over three years starting in the fall of 2000 to support a variety of renewable energy projects. Support was provided primarily to research and development and early demonstration projects.

- Manitoba Climate Change Action Fund -- This fund was set up in 2001 to allocate $1 million over 4 years toward technological innovation (research and commercialization), alternative or "green" energy, projects focusing on public education and outreach, and the scientific understanding of climate change impacts and potential adaptation practices. 37 projects totaling $732,300 were funded in the first three years of the program.

- Quebec Private Investment and Job Creation Promotion Fund ("FAIRE") – Quebec's Private Investment and Job Creation Promotion Fund was established not to advance clean energy technologies, but rather to promote job creation and economic growth in the province. The fund provides grants, loans and loan guarantees to new projects of various types, requiring each project to involve an investment of at least $2 million and create at least 50 jobs over its first two years. Quebec's November 2001 provincial budget made wind power projects eligible for FAIRE support.[11]

- Yukon Green Power Initiative (YGPI) – The YGPI is a $3 million pilot project designed to advance research and development, technology implementation, and education and training related to new renewable electricity generating technologies. The GPI includes a production incentive of between two and five cents per kWh for new green power projects.

While these last two initiatives are both technically funds, they differ substantially in size, duration and structure from the major Canadian clean energy funds described in more detail above, and their U.S. counterparts.

Lessons Learned

Several lessons emerge from this summary of the Canadian clean energy funds:

- Many of the clean energy funds in Canada obtain their funds from federal and (to a lesser extent) provincial government tax revenue, while U.S. clean energy funds typically operate at the state level and are funded through surcharges on electricity rates.

- Support from Canadian funds is structured to foster innovative partnerships. The national reach of the various Canadian funds allows them to capitalize on local opportunities and partners in many different locations, yielding a broad cross-section of projects.

[11] It was announced in March 2003 that FAIRE would be suspended and replaced by a new Strategic Support for Investment Program (PASI), the terms of which have not been established as of publication of this case study. It is not known at this time if the support for wind power will carry through to the new program.

- Climate change and greenhouse gas emissions reductions are primary drivers behind government support, as is increased investment in Canadian technology companies.
- Emerging models for community energy systems that integrate city planning with green buildings, renewable energy technologies and other sustainable practices, may provide useful new models for municipal clean energy programs in the U.S. and elsewhere.
- The strength of municipal funding of programs in Canada through the Federation of Canadian Municipalities could potentially be replicated through a U.S. federal endowment to a sister organization in the United States, such as the Conference of Mayors.
- Funds such as SDTC have been inundated with proposals, signaling a potentially large, untapped need for funding sustainable development innovation in Canada.
- The types of projects and funding mechanisms used by the Canadian funds are not very different from those used by their American state counterparts (e.g., grants for feasibility studies and small projects, loans for large projects), though the sources of Canadian funds tend to come from federal budgets rather than from ratepayer funded system benefits charges.
- At present, Canadian clean energy funds have no direct mandate or mechanism to collaborate, resulting in a fragmented policymaking approach that has not yielded a systematic strategy map for clean energy development in Canada. Proposals to create a more robust collaboration among funds are being developed as part of a new Canadian climate action plan to be proposed in fall 2004.

Organization and Contact Information

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Information Sources

Bramley, Matthew, et al. "Green Power Programs in Canada – 2002: Overview of Government Green Power Policies, Utility Green Power Development Programs, Green Power and Certificate Marketing Initiatives, and Their Benefits." Pembina Institute. November 2003.

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Sharpe, Vicky. "Clean Technology: Challenges and Opportunities." Presentation to the Clean Energy States Alliance. San Francisco, CA. November 2003.

Sustainable Development Technology Canada. "Mandate." http://www.sdtc.ca/en/mandate/index.htm. Viewed February 2004.

Personal Communications with Louise Comeau (Centre for Sustainable Community Development), Phil Jessup (Toronto Atmospheric Fund), and Andree Mongeon (Sustainable Development Technology Canada)

About this Case Study Series

A number of U.S. states have recently established clean energy funds to support renewable and clean forms of electricity production. This represents a new trend towards aggressive state support for clean energy, but few efforts have been made to report and share the early experiences of these funds.

This paper is part of a series of clean energy fund case studies prepared by Lawrence Berkeley National Laboratory and the Clean Energy States Alliance. The primary purpose of this case study series is to report on the innovative programs and administrative practices of state (and some international) clean energy funds, to highlight additional sources of information, and to identify contacts. Our hope is that these brief case studies will be useful for clean energy funds and other stakeholders that are interested in learning about the pioneering renewable energy efforts of newly established clean energy funds.

Twenty-five total case studies have now been completed. Additional case studies will be distributed in the future. For copies of all of the case studies, see:
http://eetd.lbl.gov/ea/ems/cases/ or http://www.cleanenergystates.org/

About the Clean Energy States Alliance

The Clean Energy States Alliance (CESA) is a non-profit initiative funded by members and foundations to support the state clean energy funds. CESA collects and disseminates information and analysis, conducts original research, and helps to coordinate activities of the state funds. The main purpose of CESA is to help states increase the quality and quantity of clean energy investments and to expand the clean energy market. The Clean Energy Group manages CESA, while Berkeley Lab provides CESA with analytic support.

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Disclaimer

Alaska - Wind Resource Map

Indian Reservation or
Alaska Native Village Statistical Area

Wind Power Classification

Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m²	Wind Speed[a] at 50 m m/s	Wind Speed[a] at 50 m mph
2	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
3	Fair	300 - 400	6.4 - 7.0	14.3 - 15.7
4	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
5	Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
6	Outstanding	600 - 800	8.0 - 8.8	17.9 - 19.7
7	Superb	800 - 1600	8.8 - 11.1	19.7 - 24.8

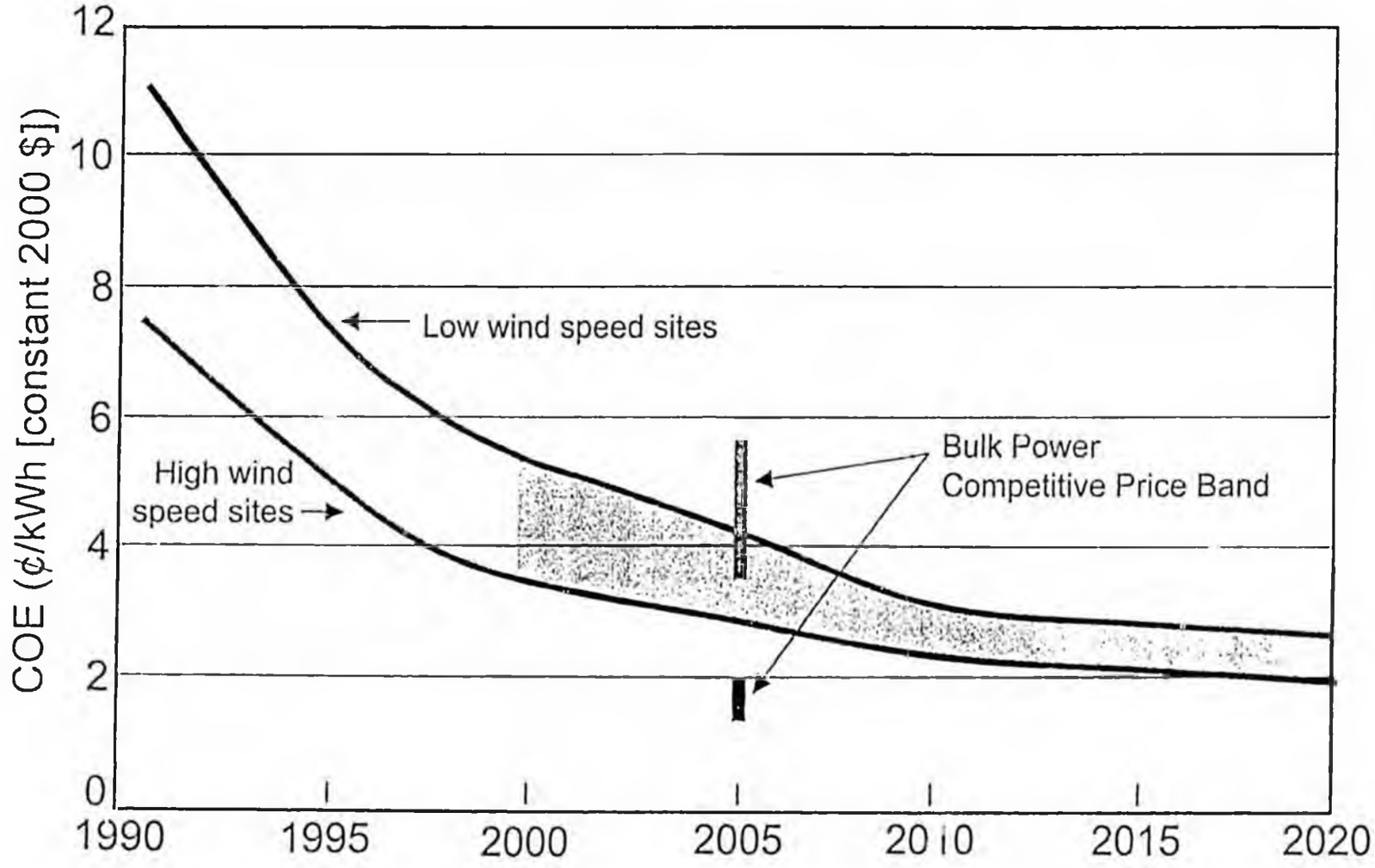
[a] Wind speeds are based on a Weibull k value of 2.0

Source: Pacific Northwest National Laboratory - DOE, 1987.

U.S. Department of Energy
National Renewable
Energy Laboratory

DM Helmiller 01-MAY-2001 1.1.9

Wind Cost of Energy



March 5, 2006

Representative John Harris, Speaker
House of Representatives
State Capital, Room 404
Juneau, AK 99801-1182

Representative Harris,

The Alaska State Chamber of Commerce strongly supports sustainable energy solutions for Alaska. Alaska's vast geography and isolated communities create energy problems, energy shortages, and high-energy costs unparalleled by any other state. Thank you for sponsoring HB 152 and for your work with Rep. Bill Thomas. We appreciate your diligent work in searching out cheaper and alternative energy solutions for Alaska.

Existing and new businesses in Alaska must often jump through high-energy hurdles in order to prosper and maintain any level of sustainability. Finding solutions to Alaska's energy problems should be paramount for Alaska's political leaders. Especially in rural Alaska where transportation of energy creates additional costs, Alaska's businesses will continue to struggle as crude prices continue to escalate. HB 152 attempts to address Alaska's unique energy problems by creating an alternative energy fund, by studying and recommending energy solutions that will ultimately help all Alaskans and Alaska's businesses.

The Alaska State Chamber of Commerce strongly supports HB 152. We believe the bill will ultimately help the state configure alternative energy solutions that will help lower the cost of energy in Alaska's remotest regions allowing all Alaskan's to prosper.

Yours in economic prosperity,

Wayne A. Stevens
President/CEO
Alaska State Chamber of Commerce

cc: Rep. Bill Thomas

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To: House Committee on Community and Regional Affairs

AkPIRG urges your support for HB 152 - ESTABLISHING A RENEWABLE ENERGY FUND.

Energy costs are on the rise across Alaska. Consumers are facing increasing costs for electricity, particularly in rural areas. Alaska's vast renewable energy resources can provide a cost-effective alternative to these rising prices. Communities like Kotzebue, Wales, St. Paul, Selawik, Port Heiden and Toksook Bay have projects on the ground that are doing just that. HB 152 will expand the amount of money available to build more projects in Alaska.

More state support of renewable energy development in Alaska is a good thing. Senator Murkowski stressed that in her speech to the Alaska Legislature. She emphasized the need for legislators to support renewable energy development. HB 152 can serve as the first step toward more energy produced in Alaska.

Most states have one or more of the following three policies: a renewable portfolio standard – mandating a certain percentage of renewable power by a date certain, net-metering – which enables customers to use their own generation to offset their consumption, and renewable energy funds – like that in HB 152. A compilation of state energy policies shows that 21 states and the District of Columbia (DC) now have renewable portfolio standards. Thirty-nine state and DC have net-metering policies. Fifteen states and DC have renewable energy funds like that of HB 152.

Energy efficiency is also a money saver and worth the investment. Whether it needs to be dealt with in this bill or whether it should be in a separate bill can be determined in committee. No matter how we are producing electric power or heating our homes, we should be doing it in the most energy-efficient manner. Consumers need to be rewarded and encouraged to start saving energy now.

With the ever-increasing cost of fossil fuel generated power, consumers deserved a diversified energy supply that will help keep costs down. HB 152 is a step in that direction.

Thank you for your support of this legislation.
Sincerely,

Steve Cleary

Steve Cleary
AkPIRG Director

ALASKA MUNICIPAL LEAGUE
Resolution No. 2007-14

A RESOLUTION ESTABLISHING A RENEWABLE ENERGY FUND

WHEREAS, Alaska possesses vast amounts of renewable energy resources in the form of wind, geothermal, biomass, solar, tidal, wave and hydro power; and

WHEREAS, the Alaska Legislature established the Alaska Energy Policy Task Force in 2003 to review and analyze the state's current and long-term energy needs. The Task Force found that one of Alaska's long-term energy needs is to "identify and evaluate long-term fuel resources: and recommends that the state "increase the proportion of renewables in long-term fuel sources"; and

WHEREAS, there is virtually no fuel costs associated with renewable energy resources; and

WHEREAS, renewable energy technology development promotes both industry and job creation; and

WHEREAS, ISER's December 2005 Research Summary states, "Diesel is the main energy source in remote communities....and in 2004, diesel outside the rail belt cost about 5 times as much per unit of energy as natural gas." Community facilities such as electrical plants, water & sewer services and health clinics use diesel fuel; and

WHEREAS, there are numerous agencies dealing with energy assistance, both federal, state and international specialists. We urge the State to appoint a cabinet level position to coordinate and centralize resources to effectively solve the long-term energy crisis; and

NOW, THEREFORE BE IT RESOLVED, by the Alaska Municipal League, that we request our Alaska State Legislature and Alaska Congressional Delegation to address the energy needs by:

1. Creating a Renewable Energy Fund to finance new utility scale renewable energy projects in Alaska. The Fund shall be funded by general appropriations. The Fund shall be distinct from funds administered by the Alaska Energy Authority.

2. The Fund will conduct a program of energy research, development, demonstration and application.

3. Create a cabinet level position to coordinate efforts and centralize state and federal resources to solve the long-term energy crisis.

4. Creating a revolving loan and grant program to assist individuals, organizations, and businesses in purchasing and installing alternative and renewable energy products.

PASSED AND APPROVED BY THE ALASKA MUNICIPAL LEAGUE on the 17th day of November 2006.

Signed:_____
Tim Bourcy, President
Alaska Municipal League

Attest:

_____

01 02 07

CHUGACH

Resolution in Support of a Renewable Energy Fund

WHEREAS, the Chugach Electric Association Board of Directors recognizes that renewable energy will play an important role in Alaska's future energy supply;

BE IT RESOLVED that the Chugach Electric Association Board of Directors supports the establishment of a renewable energy fund where the funding comes from the Alaska State Legislature in the form of appropriations, general funds, or through an endowment.

I, Jim Nordlund, do hereby certify that I am that I am Secretary of Chugach Electric Association, Inc., an electric non-profit cooperative membership corporation organized and existing under the laws of the State of Alaska that the foregoing is a complete and correct copy of a resolution adopted at a meeting of the Board of Directors of this corporation, duly and properly called and held on the 21st day of February, 2007, that a quorum was present at the meeting; that the resolution is set forth in the minutes of the meeting and has not been rescinded or modified.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the seal of this corporation the 21st day of February, 2007

Jim Nordlund

Secretary

GVEA
Golden Valley Electric Association
PO Box 71249, Fairbanks, AK 99707-1249 • (907) 452-1151 • www.gvea.com
Your Touchstone Energy® Cooperative

RESOLUTION NO. 102-07
GOLDEN VALLEY ELECTRIC ASSOCIATION, INC.
SUPPORTING THE CONCEPT OF A RENEWABLE ENERGY FUND

WHEREAS, the GVEA Board recognizes that renewable energy will play an important role in Alaska's future energy supply;

BE IT FURTHER RESOLVED that the Golden Valley Electric Association Board of Directors supports the concept of a renewable energy fund where the funding comes from an appropriation, general funds or through an endowment.

CERTIFICATION

I, William D. Digan, do hereby certify that I am the Secretary of Golden Valley Electric Association, Inc., an electric not-for-profit cooperative membership corporation organized and existing under the laws of the State of Alaska; that the foregoing is a complete and correct copy of a resolution adopted at a regular meeting of the Board of Directors of this corporation, duly and properly called and held on the 29th day of January 2007; that a quorum was present at the meeting; that the resolution is set forth in the minutes of the meeting and has not been rescinded or modified.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the seal of the corporation this 29th day of January, 2007.

GOLDEN VALLEY ELECTRIC ASSN INC CORPORATE SEAL ALASKA

William D. Digan

William D. Digan, Secretary

ML&P Resolution 01-07
A Resolution Supporting the Establishment of a Renewable Energy Fund for Alaska

WHEREAS: An adequate, reliable, reasonably priced and safe supply of electrical energy is necessary for Alaska's basic infrastructure, economic and technological development; and

WHEREAS: Alaska possesses vast amounts of potential renewable energy resources including wind, geothermal, biomass, solar, tidal, wave, and hydro power; and

WHEREAS: The Alaska Legislature established the Alaska Energy Policy Task Force in 2003 to review and analyze the state's current and long term energy needs; and

WHEREAS: The Task Force found that one of Alaska's long term energy needs is to "identify and evaluate long term fuel resources", and recommended that the state should "increase the proportion of renewable in long term fuel sources"; and

WHEREAS: There is virtually no fuel cost associated with renewable energy resources; and

WHEREAS: Other states and nations are working successfully to develop their renewable energy resources; and

WHEREAS: The continued competitiveness and stability of the state's economy requires that the legislature consider national and international trends toward renewable energy development; and

WHEREAS: Renewable energy technology development promotes both industry investment and job creation; and

WHEREAS: Clean, renewable energy has many environmental and health benefits; and

WHEREAS: Locally produced renewable energy has many security benefits; and

WHEREAS: Modern, affordable, and efficient renewable energy technologies now exist; and

WHEREAS: It is in the public's interest for Alaska to develop its renewable energy resources

NOW THEREFORE BE IT RESOLVED: That the Anchorage Municipal Light & Power Advisory Commission finds that a Renewable Energy Fund for Alaska should be established as a separate fund to finance new utility scale renewable energy projects in Alaska with grants and/or loans; and

BE IT FURTHER RESOLVED: That the Fund should be funded by general appropriations so that Alaska can leverage a portion of today's oil and gas wealth into a renewable energy industry that can and will provide perpetual benefits to Alaskans.

Approved and passed in the ML&P Commission meeting held January 24, 2007.

Russell Nogg, Chairman
ML&P Advisory Commission

ATTEST:
Linda R. Davidovics
ML&P Commission Secretary

SWAMC Southwest Alaska Municipal Conference
3300 Arctic Boulevard, Suite 203 Anchorage, AK 99503 p: 907.562.7380 f: 907.562.0438 www.swamc.org

Alaska Peninsula
Aleutian
Bristol Bay
Kodiak Island
Pribilof Islands

Resolution 07 - 07

A resolution of the Southwest Alaska Municipal Conference in support of the Establishment of a Renewable Energy Fund for Alaska.

WHEREAS, an adequate, reliable, reasonably priced and safe supply of electrical energy is necessary for Alaska's basic infrastructure, and economic and technological development; and

WHEREAS, Alaska possesses vast amounts of renewable energy resources in the form of wind, geothermal, biomass, solar, tidal, wave and hydro power; and

WHEREAS, the Alaska Legislature established the Alaska Energy Policy Task Force in 2003 to review and analyze the state's current and long term energy needs; and

WHEREAS, the Task Force found that one of Alaska's long term energy needs is to "identify and evaluate long term fuel resources," and recommended that the state should "increase the proportion of renewable in long term fuel sources;" and

WHEREAS, the cost of fuels such as natural gas and diesel that Alaskans rely on in large part to generate electric power and heat is steadily rising; and

WHEREAS, residents in rural Alaska pay far more for electricity than residents who live on the Rail belt energy grid; and

WHEREAS, there is virtually no fuel cost associated with renewable energy resources; and

WHEREAS, other states and nations are working successfully to develop their renewable energy resources; and

- m o r e -

WHEREAS, the continued competitiveness and stability of the state's economy requires that the legislature consider national and international trends towards renewable energy development; and

WHEREAS, renewable energy technology development promotes both industry investment and job creation; and

WHEREAS, clean, renewable energy has many environmental and health benefits; and

WHEREAS, locally produced renewable energy has many security benefits; and

WHEREAS, modern, affordable, and efficient renewable energy technologies now exist; and

WHEREAS, It is in the public's interest for Alaska to develop its zero fuel cost renewable energy resources.

NOW THEREFORE BE IT RESOLVED that the Board of Directors of the Southwest Alaska Municipal Conference support a Renewable Energy Fund for Alaska to be established as a separate fund to finance new utility-scale renewable energy projects in Alaska with grants and loans; and

BE IT FURTHER RESOLVED that the Fund should be funded by general appropriations so that Alaska can leverage a portion of today's oil and gas wealth into a renewable energy industry that can and will provide perpetual benefits to Alaskans.

PASSED AND ADOPTED by a duly constituted quorum of the Southwest Alaska Municipal Conference membership this 26th day of January, 2007.

Signed:

Glen Gardner
President

Attest:

Wanetta Ayers
Executive Director

ALASKA FEDERATION OF NATIVES INC.

2006 ANNUAL CONVENTION

RESOLUTION 06-34

TITLE: CALLING FOR THE ESTABLISHMENT OF A RENEWABLE ENERGY FUND

WHEREAS: Alaska possesses vast amounts of renewable energy resources in the form of wind, geothermal biomass, solar, tidal, wave and hydro power; and

WHEREAS: The Alaska Legislature established the Alaska Energy Policy Task force in 2003 to review and analyze the state's current and long term energy needs; and

WHEREAS: The Task Force found that one of Alaska's long term energy needs is to "identify and evaluate long term fuel resources" and recommends that the state "increase the proportion of renewable energy in long term fuel sources"; and

WHEREAS: There is virtually no fuel costs associated with renewable energy resources; and

WHEREAS: Renewable energy technology development promotes both industry and job creation; and

WHEREAS: The Institute of Social and Economic Research's December 2005 research summary states "Diesel is the main energy source in remote communities--and in 2004 diesel outside the rail belt cost about 5 times as much per unit of energy as natural gas;"and

WHEREAS: Community facilities such as electrical plants, water & sewer services and health clinics use diesel fuel; and

WHEREAS: Rural Alaskan residents are dependent on diesel fuel to generate heat for homes and the high cost of energy seriously impacts economic conditions in rural Alaska. The average price of diesel fuel in the Bering Straits Region is $4 39 a gallon; and

WHEREAS: There are numerous agencies dealing with energy assistance, both federal state and international specialists. We urge the State to appoint a cabinet level position to coordinate and centralize resources to provide leadership and begin to develop a solution to the long term energy crisis; and

NOW THEREFORE BE IT RESOLVED by the Delegates to the 2006 Annual Convention of the Alaska Federation of Natives that President Bush is urged to include in his budget for FY 2008, more funding for alternative fuel projects; and

BE IT FURTHER RESOLVED, that the Alaska Congressional Delegation and the State Administration is urged to address the energy needs of rural Alaska families by:

1. Creating a Renewable Energy Fund to finance new utility scale renewable energy projects in Alaska funded by general appropriations. The fund shall be distinct from funds administered by Alaska Energy Authority and will conduct programs of energy research, development, demonstration and application; and
2. Creating a cabinet level position to coordinate efforts and centralize state and federal resources to solve the long term energy crisis; and
3. Creating a revolving loan fund to allow individuals and businesses to purchase and install alternative energy products.

SUBMITTED BY: KAWERAK, INC.; NAPAKIAK CORPORATION

COMMITTEE ACTION: DO PASS

CONVENTION ACTION: AMENDED AND PASSED

Tuesday, 06 March 2007
Testimony (and related insertions) on HB 152
By Todd Hoener, GVEA Energy Efficiency Specialist

TO: HOUSE COMMUNITY & REGIONAL AFFAIRS Standing Committee

- CO-CHAIR: Representative Fairclough
- CO-CHAIR: Representative LeDoux
- Representative Dahlstrom
- Representative Neuman
- Representative Olson
- Representative Cissna
- Representative Salmon

Good morning Madam Chair and members of the committee,

My name is Todd Hoener. I am the Energy Efficiency Specialist for Golden Valley Electric Association here in Fairbanks. I am also the Sustainable Natural Alternative Power (SNAP) program administrator for GVEA.

(Unrecorded NOTE not provided in testimony but for full disclosure: I am, also, chair of the State of Alaska's (Alaska Housing Finance Corporation's) Policy Advisory Council for the Low-Income Weatherization Assistance Program – as required under the U.S. Department of Energy's regulations, 10 CFR Part 440.17)

Thank you for this opportunity to testify on HB 152, a bill to establish a renewable energy fund. The GVEA board of directors has passed a resolution supporting HB 152. On Monday night, however, I talked with GVEA's CEO & president informing him that I would be giving this testimony with suggested inclusions into this bill.

I am 100 percent in support of this bill, but it only represents 50 percent of the renewable energy equation. The other 50 percent of this the renewable energy equation is energy efficiency and energy conservation, and this bill does not address these inseparable and integrated energy resources necessary for renewable energy to be fully cost effective.

To make this connection between energy efficiency and renewable energy as simple and succinct as possible for the committee members, I ask that members take a few minutes of their day and simply open up any of the U.S. Department of Energy web pages that distribute the public information on renewable energy. If one were simply to surf to the National Renewable Energy Laboratory web site, or to the Office of Energy Efficiency and Renewable Energy web pages, one would learn that renewable energy is joined-at-the-hip with energy efficiency practices.

HB 152 is only half of the equation; it only deals – once again – with supplying more energy, not demanding that the energy is used efficiently and cost-effectively.

Energy efficiency, or demand side management (both have the same meaning), has been treated as an important energy source – a fuel source – by utilities for decades. It is treated as a clean energy source and the cheapest fuel source available. For example, last week two significant news items appeared that clearly demonstrate the over-due recognition, the growing trend and the significant importance that energy efficiency has in addressing the energy needs, the security benefits and environmental and health benefits of the world.

One news item was that Australian officials and European lighting manufacturers have announced plans to phase-out the incandescent bulb. The incandescent bulb is just one example of our continued use of old and inefficient technologies, but it is an energy hog. Just 5 percent of the electricity it uses goes to light the bulb; the other 95 percent is electric heat (the most expensive BTU in Alaska). The energy that these countries purchase is just too valuable to waste, as is the energy purchased by Alaskans.

The other news was that Texas electric utility giant, TXU Corporation, was reducing its planned construction of 11 coal-fueled power plants down to 3 and that it intended to meet its customers growing demand for electricity by investing $400 million into demand-side management initiatives – that is, energy efficiency – and by investing in alternative energy technologies, including renewable energy.

These are just two very recent examples of the global trends to increase energy independence, reduce environmental and health risks associated with greenhouse gases, and produce energy security benefits while reducing volatile energy costs that exist in continually using fossil fuels. As HB 152 suggests, such national trends should be required to be considered by the legislature.

I am not asking that HB 152 be rewritten, although I wish it had been more carefully deliberated while being drafted. What I am suggesting is that language be inserted into this bill that addresses the need to integrate energy efficiency technologies and energy conservation practices into funding renewable energy projects.

First I recommend that the proposed advisory committee consist of at least one member from a non-profit agency or for-profit business that is engaged in the energy efficiency sector and there are many to choose from in Alaska. This energy efficiency-oriented committee member would oversee the assurance that renewable energy projects include energy efficiency (for example, inclusion of ENERGY STAR appliances, energy efficiency practices and client education, etc) in their planning, development and as a condition for funds.

Second, I recommend that the bill's designated administer, the Alaska Energy Authority, in consultation with this revised advisory committee, establish methodology and

regulations for determining projects that include the need to address energy efficiency issues, demand-side management issues, in the consideration of any and all such projects.

If these concerns are not addressed, then this bill is just another supply-side energy bill, albeit a better energy supply bill that contributes to the competitiveness and stability of the states economy, creates new jobs and has many environmental, health and security benefits.

These are small but important changes to the language of HB 152. However, if this concern is not met, and energy efficiency requirements and issues are not addressed and included with renewable energy projects, then the state is, again, wasting the precious energy and money resources of Alaskan citizens.

I am sure this time we can work to get our energy priorities on the right path and create a bill that addresses 100 % of the energy concerns. We deserve it for our future.

Thank you very much. I would be glad to answer any questions from committee members.

Todd Hoener
GVEA Energy Efficiency Specialist
Sustainable Natural Alternative Power program administrator
907 451 5607

References:

- National Renewable Energy Laboratory: http://www.nrel.gov/learning/
- Office of Energy Efficiency and Renewable Energy: http://www.eere.energy.gov/
- GVEA's Energy$ense programs: http://www.gvea.com/memserv/energysense/
- GVEA's SNAP program: http://www.gvea.com/alternative-energy/snap/

Suggested language to be inserted into HB 152:

Page 2

Line 5: (7) there is virtually no fuel cost associated with renewable energy resources **or energy efficiency or conservation**;

Line 10: (10) renewable energy **and energy efficiency** technology development promotes industry and creates jobs;

Line 12: (11) clean renewable energy **and energy efficiency** have many environmental and health benefits;

Line 14: (13) modern, affordable, and efficient renewable energy **and energy efficient** technologies now exist;

Line 25: *subsection (b) should include either substituting one of the seven advisory committee members for an energy efficiency specialist or increasing the advisory committee to nine (9) members, which ever is best.*

Page 3

Line 13: ...applying for support from the fund, with significant weight being given **to energy efficiency criteria included in the project** and to the amount of matching...

Line 18: ...resource monitoring, **energy efficiency determination within the end-users that would benefit from such a project,** and construction of renewable energy projects...

Line 2: ...reconnaissance studies, **energy efficiency criteria determination,** and energy resource...

Page 4

Line 23: **(4) be a project that is certified by the authority as its end-user meeting the standards and criteria for energy efficiency or demand-side management practices.**

Page 5

Line 15: **(2) "energy efficiency, energy conservation, demand side management practices or criteria" means ... (TBD)**

6th March 2007

TO: The Committee for Community and Regional Affairs

RE: House Bill 152

The following is an attempt at transcribing what I said verbally on March 6th at the hearing on this bill from the Fairbanks Legislative Information Office.

My name is Richard Seifert and I am the Energy and Housing Specialist for Cooperative Extension Service. Much of what I do everyday involves applications of renewable energy and energy conservation. I teach a course on integrating solar energy into the building of new homes and a course on cold or marine climate homebuilding techniques customized to regions of Alaska, to enable people to build with the best technology they have for energy conservation.

I was really pleased to follow in my testimony the excellent points made by Mr. Todd Hoener of Golden Valley Electric Association and personal comments by him and Mr. Brad Reed of Kotzebue Electric. I wanted to particularly emphasize my endorsement of Todd's points regarding a match for the investment in renewables, which generally I support in this bill, with a benefits match for conservation as well. By doing this I'm suggesting a sort of double benefit/double incentive system to reward people for doing the wisest things.

As I mentioned in my testimony, I undertook this myself to be an example through my work and retrofitted my 1975 prepipeline house with insulation and $10,000 worth of new windows in the summer of 2005. By doing this I have learned a great deal about my house and with the present weather we're having I'm very grateful that I insulated against the rising costs of fossil fuels.

It is very important that we provide some kind of incentive, which will work for everyone. For that reason I do not appreciate the limit of 50 kilowatts for investing in these power projects. The problem of just supplying power doesn't give people an incentive to do the right things and lower their power use. People don't need energy, they need the services that energy provides. If it can be done much more comfortably with a better housing stock that's more durable and serves the people in the state better. We should provide incentives to get there first and then provide the double benefit of lower cost, renewable energy. The price of the fuel is zero: we pay for the equipment, the house, and the insulation. That's what this bill should achieve.

I also mentioned that the important thing to consider about both of these options, both energy conservation and renewable energy, is that all the costs are upfront, capital costs. And if you're going to provide funding, it should at least be made equitable to both reduce the need for energy and to reduce the cost for energy infrastructure. Doing both of these is the only sane way to approach this problem. Recall that we are the most energy consuming, most energy expensive people on earth. Alaskans live at a very high standard of living and consequently use a huge amount of fossil energy now. There is no reason we can't live at a very high standard of living but do it renewably with the resource base that we have, if we wisely invest the capital in renewable energy equipment and an energy efficient housing stock.

We have had many false starts in regard to renewable energy funding and it is very important that this funding mechanism and this incentive program for investing renewables works well. I submit that the energy trust concept (example: Energy Trust of Oregon) where much of the investment decision is made by a non-profit, depoliticized agency is a very good strategy. I also suggest that it might be good to somehow tie investment in renewables for communities to weatherization and retrofit of those communities through programs that are now administered by the Alaska Housing Finance Corporation.

Alaska Housing Finance Corporation deals with housing stock and should be encouraged to help finance retrofitting of communities and improving the existing housing stock to meet the future that I think we're going to be facing in energy costs. This will provide the incentive needed to get renewably off the power cost equalization money and the fossil fuel bind that Rural Alaska now finds itself in.

I think this would also work well for the urban areas of Alaska. Anything we can do to minimize our energy use for fossil fuels will pay huge benefits in being an example to the rest of the world and not contributing to global warming. All indications are we're doing ourselves future harm by "over-contri buting" our share of fossil fuel emissions to the problem of global warming. We should at least be in a position to say, "We're doing our best to limit our own ultimate affects on global warming. The world should follow suit."

Sincerely,

Richard D. Seifert, Professor
Energy and Housing

UAF, Cooperative Extension Service
6th March 2007

Sonya Hymer

From: Rep. Gabrielle LeDoux
Sent: Tuesday, March 06, 2007 12:39 PM
To: sonya_hymer@legis.state.ak.us
Subject: FW: HB 152 comments from Greg Egan

more.....

Suzanne Hancock, Chief of Staff
Representative Gabrielle LeDoux
State Capitol
District 36
Juneau, AK 99801-1121
phone: (907) 465-2487 (office)
(907) 465-4230 (direct)
fax: (907) 465-4956

From: Greg Egan [mailto:greg@remotepowerinc.com]
Sent: Tuesday, March 06, 2007 12:14 PM
To: Rep. Gabrielle LeDoux; Rep. Anna Fairclough
Subject: HB 152 comments from Greg Egan

Hello again,

I spoke briefly in support of HB152 this morning from the LIO in Fairbanks. (I'm the one who designs and installs wind and solar power systems) After I spoke there was testimony regarding the inclusion of energy conservation and efficiency measures in the bill. I disagree – here's why.

Efficiency and conservation are very important concepts but I can't heat my office or run this computer on efficiency. For example, I drive a Toyota hybrid that gets ~ 45mpg. This is an improvement over the car I used to drive but it still needs fuel or it's not going anywhere – no matter how efficient it is.

I can however run my car on renewable energy. In the future I will be able to charge the batteries in my car at night from utility power. This could be power generated from wind blowing through Healy, tidal power from the coast, geothermal from Chena Hot Springs, hydro from Bradley Lake or another renewable energy source. This is actually being done today in California and parts of Canada.

Renewable energy is being used to generate hydrogen which is then used to fuel internal combustion engines for powering vehicles and generators. Hydrogen can also be used for heating, cooking, welding etc. Again, this is being done today. (Fuel cells on the other hand are not economical or reliable as of yet.)

So although energy conservation and efficiency are a step in the right direction, renewable energy can be the solution to high energy prices in Alaska and for that reason I believe HB152 should be passed into law in its present form. It should also, and this is very important, be adequately funded to do any good.

Conservation projects should continue to be funded through AIDEA via the Power Project Loan Fund.

Thank you very much,

ALASKA ENERGY AUTHORITY

Executive Director
Ron Miller 269-3000

Deputy Director - Rural Energy
Mike Harper 269-3025

Alternative Energy
Peter Crimp 269-4631
Reuben Loewen 269-3027
Rebecca Garrett 269-4624
Mia Devine 269-4602

Community Outreach
Bruce Tangeman 269-[illegible]

Manager - Bulk Fuel & RPSU
Chris [illegible] 269-[illegible]

Bulk Fuel (BF)
David Lockard 269-4541
Bryan Carey 269-4688
Mark Schimscheimer 269-4689
Ron Brown 269-4698

Rural Power System Upgrades (RPSU)
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Power Cost Equalization (PCE)
Terri Harper 269-4630
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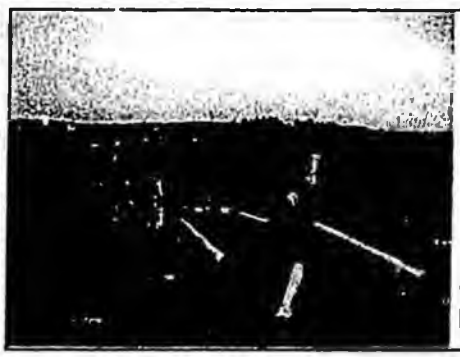
Alaska Energy Authority (AEA) update - Alternative Energy 2006

- Biomass Energy
- Diesel Efficiency
- End-use Efficiency
- Geothermal Energy
- Hydroelectric Power
- Tidal & Wave Power
- Transmission/Distribution
- Wind Energy
- Combined Heat / Power
- Solar

Alternative Energy Options



Dillingham - AEA sets up a "met tower" for monitoring the wind resource with help from the locals.

Don't be an Energy Hog!

AEA supports the national energy awareness campaign

Turn down the heat. Lower the temperature just 10 degrees in a building or home during unoccupied times to save 10% or more on heating fuel - - try a programmable thermostat.

Turn off the power. Purchase a quality power strip to plug in the T.V., stereo, microwave or coffee maker – flip the switch off when not in use.

Project highlight: GEOTHERMAL

Chena Hot Springs - This geothermal project is an **AEA Energy Cost Reduction Project.** The plan is to install a 400kW geothermal power plant at Chena Hot Springs in Interior Alaska. As a technology demonstration, this will be the first power plant operated by a geothermal resource in Alaska. The geothermal power plant will replace a 200kW diesel Caterpillar genset. The first unit will start qualifications testing February with actual installation in June and November for units one and two.

Projected savings: Based on October 2005 fuel costs of $2.50/gallon, the Chena project is expected to **displace 96,725 gallons of diesel fuel** and **save $241,812 of diesel costs** annually.

AEA Update: ALTERNATIVE ENERGY

ALASKA ENERGY AUTHORITY

Alaska Energy Authority (AEA) update — February 2006

Special points of interest:

- Does your office or home have an Energy Wheel or Energy Hog?
- Energy Awareness campaign reminder: Not in Use = Turn off/unplug
- NEW! AEA has a new web address:

akenergyauthority.org

Inside this issue:

Displacing diesel with alternatives

AEA's Alternative Energy and Energy Efficiency programs promote:

- Use of renewable energy resources and local sources of coal and natural gas as alternatives to diesel-based power, heat, and fuel production.
- Measures to improve the efficiency of energy production and end use.

Currently, **AEA** manages or funds **47 projects** with state and federal funding totaling **$21.9 million** in the areas of hydroelectric, wind, biomass, transmission and distribution, geothermal, diesel generation efficiency, and energy conservation. By displacing diesel fuel, projects also seek to lower the cost of power and heat to Alaskan communities while maintaining system safety and reliability.

AEA publishes the biennial Alternative Energy and Energy Efficiency Assistance Plan describing available funding, funding **AEA** plans to request, types of assistance that **AEA** provides or plans to provide, and criteria for allocating funds.

Project highlight: HYDROELECTRIC

Prince of Wales Island - Alaska Power and Telephone Co. recently completed the 2 MW South Fork Hydroelectric Project with grant and loan funding under **AEA's Energy Cost Reduction RFP.** The **$3.97 million** project is expected to **displace 536,000 gallons** of diesel fuel annually, used to provide power to **Craig, Klawock, Viking Lumber sawmill, Thorne Bay, Kasaan, Hollis and Hydaburg.**

South Fork Hydro - water diversion construction in late 2005.

Project highlight: RETROFITS

Ruby - The Merreline A. Kangas school, home of the Ruby Ravens, was retrofitted with more efficient compact fluorescent (T8) lighting by **AEA** in the summer of 2003.

The Principal, Tim Stathis, estimated that the school saved over $6,000 on electricity in the current year.

Asked what the savings were used for, he replied that the school was able to send two honor roll students on an otherwise unaffordable field trip. The school was also able to bring in a career counselor for the students. Besides the savings and direct student benefits,

(Continued on page 3)

Hydroelectric power is one of

Alaska's most attractive alternative energy options. **AEA** owns **Bradley Lake** and **Larsen Bay** hydro projects, and is developing or upgrading hydro projects in **Atka, Akutan, King Cove,** and **Pelican. AEA** is investigating hydro potential in **Elfin Cove, Chitina** and assisting in **Gustavus.**

"Phantom" energy costs real money

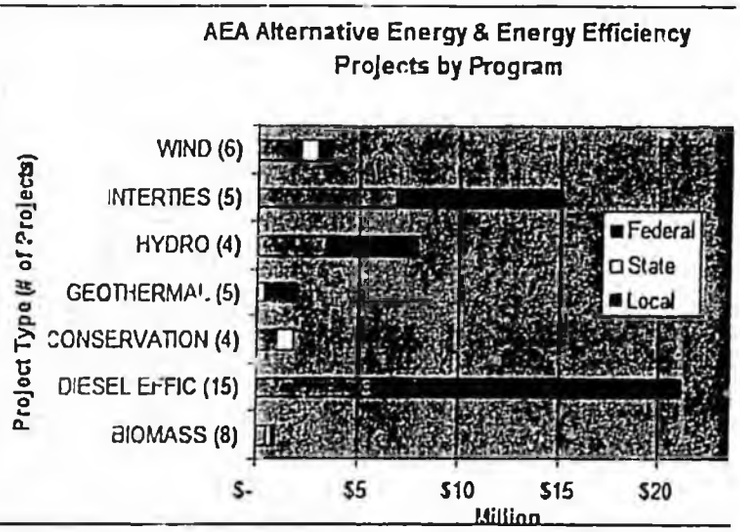
Many idle electronics, TVs, VCRs, DVD and CD players, cordless phones and microwaves, use energy even when switched off -- to keep display clocks lit and memory chips and remote controls working.

Nationally, these energy "vampires" use 5% of our domestic energy and cost consumers more than $3 billion annually.

"Sleep" features that power down equipment and electronic devices that are turned on but not in use can save households up to $70 annually.

Energy cost reduction loans and grants

AEA's Energy Cost Reduction (ECR) program offers opportunity for entities to apply for low interest loan and grant financing. A new ECR solicitation is expected in early 2006.



End use efficiency activities

The Alaska Rural Energy Plan identifies end use efficiency and widespread opportunities for reducing costs of power and heat.

AEA focuses its end use efficiency activities on larger facilities such as schools, community clinics, buildings and water treatment plants.

AEA has conducted state and federally-funded energy audits in **490 schools** and other facilities in **143 rural communities** over the last five years under the Re-build America Program. Audits identify measures that can save an estimated $2.3 million per year over the next decade at a one-time cost of $4.1 million.

AEA is currently supporting lighting and other cost-effective upgrades in **55 schools** and other facilities in **17 communities.** Funding for **10 additional communities** to be completed in FY07 is requested.

AEA also supports the Alaska DOT/PF's Facilities Energy Efficiency Program, projected to save the state $3.4 million in utility costs over ten years in **eight facilities.** In 2006, **16 more facilities** may be added.

In 2005, **AEA** solicited proposals offering utilities and communities engineering assistance for power generation and end use efficiency upgrades.

All **14 communities** that applied were awarded funding!

Project highlight: BIOMASS

City of Craig – Funded by **AEA**, the **USDOE Regional Biomass Energy** partnership, and the **US Forest Service**, the **City of Craig** is in the design stage for a planned wood-fired district heating system supplying two schools and the City pool facility. The clean-burning automated chip-fired system is expected to **annually displace 39,000 gallons of propane** and **16,000 gallons of fuel oil** using local sawmill residues.

AEA and its partners are soliciting **requests to assess feasibility** of other wood-fired facilities in Alaska. See www.akenergyauthority.org for more details and an application.

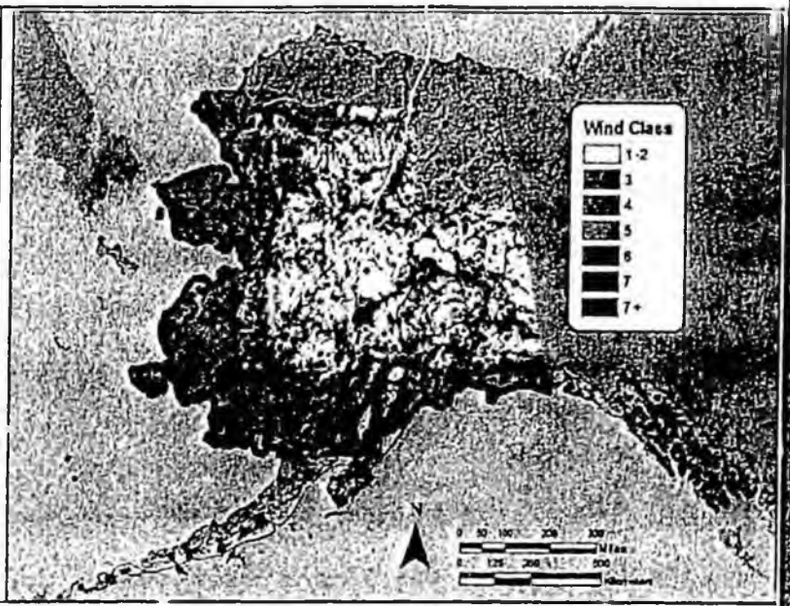
Opportunity might be in the WIND

Wind Energy Construction RFP

NEW! **AEA's** wind energy development initiative will provide approximately **$3,000,000** for construction of wind generation systems in rural Alaska through a competitive solicitation. Federal funds will be matched with state capital funds and local contributions. The first Request for Proposals (RFP) is expected to be issued this February.

Anemometer Loan Program

NOW! Over **35 communities** are participating in **AEA's** wind resource monitoring program to assess the viability of wind energy in their power systems.



Go online to see AEA's high resolution wind map, Anemometer Loan Program details, wind resource reports and more! For wind in Alaska go to: www.akenergyauthority.org

Project highlight: HEAT RECOVERY

Pedro Bay - Lake and Peninsula Borough School District is enjoying the heat recovery rewards from the recently completed bulk fuel storage and power plant upgrades in **Pedro Bay**. Commissioned last summer, the **AEA** project included an expansion of the school powerhouse to meet the entire community's needs and an agreement between the District and the Pedro Bay Village Council to provide heat from the new powerhouse to the school. The District previously had a heat recovery system, but it was only from the school's powerhouse, so there was not enough heat to minimize fuel consumption at the school. Based on fuel data from the District, **heating fuel consumption at the school has decreased by approximately 80%** since the new systems were installed. At the 2005 price of $2.72/gallon, the District **will save over $10,000 in fuel costs annually.**

(Continued from page 1)

Project highlight: RETROFITS light the Ruby gym

"the gym lighting is phenomenal!" according to principal Stathis. "We have been able to use it with the minimal lighting levels for lunch and other activities. Full lighting during activities such as games, assemblies and school photographs is easy to achieve, as there is no 'warm up' time in turning lights on. This also allows us to turn lights off completely when the gym is not in use."

Don Honea, the maintenance man for the school, said he felt the lighting upgrade had been a major improvement. The cages for the gym fixtures seemed to be quite substantial and had already been 'well tested' by the students. He thought the new lamps were better and he had not needed to replace any yet. Teachers and staff both commented on the improvements in lighting levels. Ronda McCarty, the administrative assistant, said the lights were better and brighter and Holly, the Kindergarten teacher, said she often uses a quarter of the lights she did before.

April 12, 2007

Representative Kevin Meyer, Co-Chair
Representative Mike Chenault, Co-Chair
House Finance Committee
State Capital
Juneau, AK 99801-1182

Members of the House Finance Committee,

The Alaska State Chamber of Commerce strongly supports sustainable energy solutions for Alaska. Alaska's vast geography and isolated communities create energy problems, energy shortages, and high-energy costs unparalleled by any other state. Thank you for sponsoring HB 152 and for your work with Rep. Bill Thomas. We appreciate your diligent work in searching for cheaper and alternative energy solutions for Alaska.

Existing and new businesses in Alaska must often jump through high-energy hurdles in order to prosper and maintain any level of sustainability. Finding solutions to Alaska's energy problems should be paramount for Alaska's political leaders. Especially in rural Alaska where transportation of energy creates additional costs, Alaska's businesses will continue to struggle as crude prices continue to escalate. HB 152 attempts to address Alaska's unique energy problems by creating an alternative energy fund, by studying and recommending energy solutions that will ultimately help all Alaskans and Alaska's businesses.

The Alaska State Chamber of Commerce strongly supports HB 152. We believe the bill will ultimately help the state configure alternative energy solutions that will help lower the cost of energy in Alaska's remotest regions allowing all Alaskan's to prosper.

Yours in economic prosperity,

Wayne A. Stevens
President/CEO
Alaska State Chamber of Commerce

ALASKA STATE CHAMBER OF COMMERCE

Headquarters
[illegible]

Regional Office
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www.alaskachamber.com

ALASKA MUNICIPAL LEAGUE
Alaska Conference of Mayors

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Thursday, April 12, 2007

Co-Chairman Mike Chenault
Co-Chairman Kevin Meyer
Members of the House Finance Committee
State Capitol
Juneau, Alaska 99801-1182

Dear Co-Chairman Chenault, Co-Chairman Meyer, and members of the committee,

We are writing in support of HB 152 – ESTABLISHING A RENEWABLE ENERGY FUND.

The Alaska Municipal League supports renewable energy because it has the potential to lower energy costs in Alaska. This is due to the fact that there are virtually no fuel costs associated with renewable energy. Renewable energy also promotes industry and job creation because it allows for lower operating costs for industry. In addition, communities and citizens (particularly in rural areas) are being crippled by high fossil fuel costs.

As our State addresses Climate Change, it seems only wise for us to also spend time and money finding ways to "do our part" to curb the emissions produced by diesel fuel, which is the primary means of energy in smaller communities in this state.

AML passed a resolution in support of establishment of a renewable energy fund at our annual meeting on November 17, 2006. That resolution is attached to this letter.

We urge your support of HB 152.

Sincerely,

Kathie Wasserman

Kathie Wasserman, Executive Director
Alaska Municipal League
217 Second Street, Suite 200
Juneau, Alaska 99801
(907) 586-1325

ALASKA MUNICIPAL LEAGUE
Resolution No. 2007-14

A RESOLUTION ESTABLISHING A RENEWABLE ENERGY FUND

WHEREAS, Alaska possesses vast amounts of renewable energy resources in the form of wind, geothermal, biomass, solar, tidal, wave and hydro power; and

WHEREAS, the Alaska Legislature established the Alaska Energy Policy Task Force in 2003 to review and analyze the state's current and long-term energy needs. The Task Force found that one of Alaska's long-term energy needs is to "identify and evaluate long-term fuel resources: and recommends that the state "increase the proportion of renewables in long-term fuel sources"; and

WHEREAS, there is virtually no fuel costs associated with renewable energy resources; and

WHEREAS, renewable energy technology development promotes both industry and job creation; and

WHEREAS, ISER's December 2005 Research Summary states, "Diesel is the main energy source in remote communities ...and in 2004, diesel outside the rail belt cost about 5 times as much per unit of energy as natural gas." Community facilities such as electrical plants, water & sewer services and health clinics use diesel fuel; and

WHEREAS, there are numerous agencies dealing with energy assistance, both federal, state and international specialists. We urge the State to appoint a cabinet level position to coordinate and centralize resources to effectively solve the long-term energy crisis; and

NOW, THEREFORE BE IT RESOLVED, by the Alaska Municipal League, that we request our Alaska State Legislature and Alaska Congressional Delegation to address the energy needs by:

1. Creating a Renewable Energy Fund to finance new utility scale renewable energy projects in Alaska. The Fund shall be funded by general appropriations. The Fund shall be distinct from funds administered by the Alaska Energy Authority.

2. The Fund will conduct a program of energy research, development, demonstration and application.

3. Create a cabinet level position to coordinate efforts and centralize state and federal resources to solve the long-term energy crisis.

4. Creating a revolving loan and grant program to assist individuals, organizations, and businesses in purchasing and installing alternative and renewable energy products.

PASSED AND APPROVED BY THE ALASKA MUNICIPAL LEAGUE on the 17th day of November 2006.

Signed: _____
Tim Bourcy, President
Alaska Municipal League

Attest:

_____