


MEMORANDUM

To: Mayor McAdams and Members of the Assembly
Jim Dinley, Municipal Administrator

Through: Michael Harmon Public Works Director 

From: Stephen L. Weatherman, P.E., Municipal Engineer 

Date: September 8, 2010

Subject: FY11 Alaska Energy Authority Renewable Energy Fund Round IV

Background:

The Alaska Energy Authority Renewable Energy Fund allows communities to apply for grants to develop renewable energy sources. The purpose of the renewable energy sources is to reduce the dependency on oil heating for City and Borough buildings. One source of renewable energy is heat pumps using ocean water to generate building heating. The Centennial Hall is one City facility which uses oil for heating, has funding for renovation and is adjacent to the ocean. A second option for Centennial Hall is the use of air heat pumps to extract heat from the ambient air.

Sitka Sound is south facing and collects considerable heat energy during the summer months that persists into the winter months. The current heat pump technology can extract usable heat from the ocean with the water temperature as low as 40 degrees Fahrenheit. Sitka Sound rarely drops below 40 degrees in the winter so provides a usable heat source for heating Centennial Hall and the Library.

A second source of renewable energy is the effluent discharge from the Sewer Treatment Plant. Current heat pump technology will allow the extraction of usable heat from the discharge to heat the building and keep the sewer treatment process warm. The use of this renewable energy would reduce the amount of oil heat required to keep the building warm.

Analysis

It is estimated that a grant of \$30,000 would allow the retention of a consultant for evaluation of the feasibility of using the Sitka Sound as a heat source for Centennial Hall and the Library. The evaluation of the Centennial Hall will also evaluate the suitability of air heat pumps. The grant amount would also be sufficient to evaluate the feasibility of using the effluent outfall from the Sewer Treatment Plant.

The City and Borough has previously obtained an energy audit for City buildings which will be used as a base for the evaluations and would be used as a match for the requested grant.

Assembly approval of the attached resolution is required to complete the application for the grant by the deadline on September 15, 2010. The application does not commit the City and Borough to utilize the grant.

Recommendation:

Approve Resolution 2010-25 authorizing the City and Borough to obtain grant for the project listed above, in the amount of \$30,000.

Sponsor: Administrator

CITY AND BOROUGH OF SITKA

RESOLUTION NO. 2010-25

**A RESOLUTION OF THE CITY AND BOROUGH OF SITKA, ALASKA
AUTHORIZING A GRANT APPLICATION TO THE ALASKA
RENEWABLE ENERGY FUND FOR THE EVALUATION OF
RENEWABLE ENERGY SOURCES FOR MUNICIPAL BUILDINGS**

Whereas, we are entering an era of increasingly scarce and increasingly expensive oil over the next twenty years and beyond; and,

Whereas, Sitka is heavily dependent on oil for heating and transportation; and,

Whereas, due to high oil prices the City and Borough of Sitka plans to evaluate the suitability of renewable energy sources for Municipal Buildings including air heat pumps, sea water heat pumps and raw water heat pumps.

Whereas, Sitka is committed to reductions in use of hydrocarbons; and

Whereas, developing the renewable energy sources to displace oil which will reduce the cost of operation of City and Borough of Sitka Municipal Buildings; and

Now therefore be it resolved by the Assembly of the City and Borough of Sitka that Sitka is committed to reducing its dependence on oil and developing its renewable energy resource; and

Be it further resolved that the Administrator is authorized to apply to the Alaska Renewable Energy Fund for \$50,000 to conduct the engineering and economic studies necessary to determine the feasibility of developing the suitability of heat pump systems for Municipal Buildings.

Passed and approved by the Assembly of the City and Borough of Sitka, Alaska on this 14th day of September, 2010.

Scott McAdams, Mayor

ATTEST:

Colleen Ingman, MMC
Municipal Clerk