

## Energy Efficiency Improvements-City Buildings

As authorized by the City Council, Public Works has been coordinating the evaluation of energy use at sixteen City facilities to identify cost effective improvements that could be made to reduce energy usage.

The Council has approved the acceptance of a Alaska Energy Authority energy efficiency improvement grant in the amount of \$227,800; has created a revolving loan account with an additional \$315,000; and provided additional funding from the Harbor and Water/Sewer Resrve accounts - providing a total of \$847,000 to evaluate and implement energy efficiency improvements. The audit is expected to cost approximately 27,000, leaving \$820,000 to complete improvements.

These funds have been deposited into an energy efficiency revolving loan fund, created by the City Council; the purpose of which is to provide City departments with loans to complete energy savings projects. The savings resulting from these projects will allow each department to repay the loan; and provide continuous funding for future energy savings projects from the revolving loan fund.

Siemens Industry, Inc. was selected (through the RFP process) as the most qualified firm to complete this energy use evaluation and began work in September, 2010. Siemens has completed the facility evaluations, prepared a final audit report and has identified potential projects that would reduce energy costs. The cost of and the annual energy cost savings for each potential facility improvement measure (FIM) has been estimated. A total of approximately \$1.5M worth of potential improvements has been identified. These FIM's have been prioritized based on a cost/benefit analysis and simple payback evaluation (in years).

Public Works has identified approximately \$800,000 worth of improvements that have a payback less than 10 years (average payback is 8 years) and is working with Siemens to complete the recommended improvements. These improvements consist of lighting upgrade improvements in the harbor, at the airport terminal, at the police station, and at the sewer treatment plant. Other improvements include equipment motor replacements at the raw water pump station, in the sewer treatment plant; and heating system control modifications at Public Works. Fish Dock cranes will be provided with more efficient electrical transformers using City maintenance crews.

City of Homer spent \$759,535 on electricity and fuel (from August 2009 through July 2010) for the facilities undergoing energy efficiency improvements. Electricity = \$637,989; Fuel = \$121,546. After the planned energy efficiency improvements are completed, we estimate that the City's energy bill for the facilities to be reduced by approximately \$100,000; a reduction of approximately 14%. The improvements will be initiated in the Spring of 2011 and be completed by the end of the year.

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