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**MAINE PUBLIC UTILITIES
COMMISSION**

**REPORT ON REVOLVING LOAN
FUNDING INCLUDING LOANS FOR
GEOTHERMAL HEATING SYSTEMS**

**Presented to the
Utilities and Energy Committee
February 1, 2010**

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I. Background

During its Second Regular Session, the 123rd Legislature enacted Resolves 2007, Chapter 156, “Resolve, Regarding Loans for Geothermal Heating Systems” (Chapter 156). Section 1 of Chapter 156 provides that the Public Utilities Commission (Commission) may provide loans for geothermal heating systems under the Energy Conservation Small Business Revolving Loan Program. Chapter 156 took effect on March 18, 2008.

Chapter 156 further provides that the Commission shall submit an annual report to the Utilities and Energy Committee (Committee) “regarding the number, amount and characteristics of loans made during the previous program year for geothermal heating systems and other energy conservation measures under the Energy Conservation Small Business Revolving Loan Program.”

This report is submitted in compliance with the reporting requirement in section 1 of Chapter 156. Section 2 of Chapter 156 directs the Maine State Housing Authority (MSHA) to provide the Committee with a summary of loans it has granted under its Home Energy Loan Program. The Commission understands that MSHA is preparing a separate report in response to that section.

II. Energy Conservation Small Business Revolving Loan Program

The Small Business Revolving Loan Program has existed since 1997, when it was established by the Energy Conservation Division (ECD) within the Department of Economic and Community Development. The Program was established in response to an analysis of the energy audit program which showed that many small businesses which had obtained energy audits did not implement the audit recommendations due to the difficulty in finding funding. That finding led to the establishment of a revolving loan program offering a low interest rate and guaranteed low closing costs.

Initially, the Program provided loans at 5% interest, capped at \$25,000. The cap was put in place because the funding available for the Program was limited and the ECD wanted to be able to provide loans to as many participants as possible. Over time, as the cost of energy efficiency measures rose, and interest rates declined, the interest rate offered under the Program was lowered to 3% and the cap was increased to \$35,000.

The Program offers loans for a variety of energy conservation measures including insulation, energy efficient boilers, refrigeration and other appliances, as well as wind, solar and geothermal systems. Recently, alternative power units for trucks (APU's) were added to the program from grant funds provided to Efficiency Maine from the Maine Department of Environmental Protection.

The Commission was given authority to administer the Program in 2004 (PL 2003, Chapter 644). Details regarding the Program and the associated fund are codified at 35-A M.R.S.A. § 10005. Since 2008, the Finance Authority of Maine (FAME) and the Commission have partnered on reviewing and administering loan requests under the Program. As a result of the receipt of Recovery Act funding in 2009, the Commission's Energy Programs Division ("Efficiency Maine") was able to lower the rate to 1% and increase the pool of funding available by \$1.3 million, effective July 1, 2009.

III. Geothermal Technology

Geothermal heating systems were the focus of Chapter 156. Geothermal heating systems offer an established and reliable technology, coupling a heat pump with a source of low-grade heat such as ground water in a well or the warmth of the earth itself. Rather than generating heat through combustion of fossil fuels or otherwise, geothermal technology moves heat that already exists from one location to another. In the winter, the geothermal system collects heat from under the ground and delivers it to the structure to be heated. In the summer, the cycle reverses and the system sends the heat from the host structure to the earth or air. Geothermal systems tend to have low operating costs, but high initial costs. Similar heat pump technology exists for air source heat pumps and even heat pumps using sea water.

IV. Loans Made Under the Program

Chapter 156 requires the Commission to report on loans made under the Energy Conservation Small Business Revolving Loan Program during the previous program year for (1) geothermal heating systems and (2) other energy conservation measures under the Program.

Geothermal Heating System Commercial Loans. The Commission has included education and outreach on geothermal heat pump technology and other renewable resource opportunities as a component of its small business energy auditing program. Although there have been a number of inquiries, no one has submitted an application to the Commission for a loan for a geothermal system under the Program to date. (The Commission did provide a \$20,000 demonstration grant to the Chewonki Foundation in December 2008, to install a geothermal system to provide heat for one of the zones in its Environmental Educational building.)

Commercial Loans For Other Conservation Measures. Due to economic conditions during the 2009 fiscal year, commercial loan activity was very low across the entire economy. The revolving loan program was not an exception. Only five loans were applied for and awarded during this period. A summary of the applications approved for fiscal year 2009 is included below.

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<i>CLIENT</i>	<i>LOAN AMOUNT</i>	<i>LOAN APRV. DATE</i>	
Brown, Martin (MHBT) - Benton	\$7,726.00	1/13/2009	Truck APU
Carson Trucking - Kingman	\$8,495.55	3/4/2009	Truck APU
Colonial Theater - Belfast	\$11,620.00	10/5/2008	Insulation
Kehoe Trucking - Belgrade	\$8,676.00	8/11/2008	Truck APU
Leighton, Harold - Milbridge	\$7,937.10	8/19/2008	Truck APU
Midwest Run, Inc - Skowhegan	\$34,486.00	9/12/2008	Truck APU
Mountain Village - Kingfield	\$20,148.45	1/21/2009	Windows, Doors, Insulation – at Bed & Breakfast Inn
Sunset Flowerland II-Fairfield	\$27,157.33	12/10/2008	Heating System – Purchase pellet stoves to replace low efficiency oil burner.
Valley Auto - Fort Kent	\$20,000.00	9/22/2008	Solar/Thermal HW system
TOTALS	\$146,246.43		

V. Conclusion

The commercial sector did not take advantage of loan opportunities in any significant way during this reporting period. Clearly the national economic picture provides an explanation. With funding from the Recovery Act added in 2009, Efficiency Maine was able to reduce the loan interest rate to 1 percent and increase the loan fund. As a result, we are seeing some preliminary indication of increased interest, but participation remains relatively low.

Of the nine loans provided during FY 2009, none was for a geothermal heating system. One explanation might be the cost of such systems. Although often cited for their long term energy efficiency, the up front cost of geothermal is a factor for many possible commercial customers. Even the favorable loan terms offered through this program do not seem to be attracting much activity in this sector.

The Commission would be happy to meet with the Committee to present this Report and respond to any questions you may have about loans made under the Energy Conservation Small Business Revolving Loan Program.