



WATER ENERGY DISTRIBUTORS, INC.

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### GEOTHERMAL SYSTEMS IN MAINE

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Geothermal means **ground heat**, and sometimes people are surprised to learn that “geothermal” heat is available in the State of Maine. In fact, the geothermal heat in Maine is provided predominantly by heat from the sun, which heats the ground. This solar heat, stored in the ground, is then recycled using a heat pump, coupled to the ground, after which the heat is distributed to the building.

A big advantage of such “stored solar heat” is that it is always available, day and night, not just when the sun is shining. Other geothermal advantages include reduced environmental impact, no fumes, no flames, reduced maintenance, and, very importantly, substantially reduced heating bills. **At Maine’s average 2008 fuel costs and electric rates, geothermal heat is typically only about 30% of the cost of oil or propane heat.** This means a potential 70% heating cost savings!

One disadvantage of geothermal systems is that installation costs can be higher than for fossil heating systems. However, **the 2009 “Stimulus Bill” provides a 30% residential tax rebate, which brings the effective installation cost down to the same level as conventional fossil systems.** This installation cost equality means that new residential construction can benefit from the substantially reduced geothermal operating cost, without any net initial installation cost penalty.

For people who want air conditioning, in addition to heating, the same geothermal system can provide both heating and cooling. Geothermal cooling operating costs are about half the cost of conventional central air conditioning, providing yet another cost savings to the homeowner.

In Maine, the most convenient form of ground coupling uses a well, which may also be the well providing domestic water to the residence. This dual use of the same well further reduces the installation cost of the geothermal system. These cost savings make geothermal retrofits extremely worthwhile investments for both homeowners and businesses with existing fossil fuel heating. In short, with existing domestic water wells, both new construction and geothermal retrofits may have already paid for half of their heating systems, with the well right there in their own back yards.

For more information on renewable, sustainable, energy from geothermal systems in Maine, consult a geothermal primer at: [www.northeastgeo.com/logan.html](http://www.northeastgeo.com/logan.html). Additional background is available at: [www.northeastgeo.com](http://www.northeastgeo.com) and descriptions of different geothermal heat pumps can be found at: [www.climatemaster.com](http://www.climatemaster.com).

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