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Geothermal technology cuts costs and increases energy efficiency for New England development, redevelopment projects

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As the Gulf oil spill continues to decimate acres of pristine natural habitats, it is hard to imagine any good coming from the worst ecological disaster in our nation's history. However, the tragedy presents a timely opportunity to reenergize the national debate about alternatives to off-shore drilling, and the unprecedented opportunity we have as a nation to foster clean renewable energy systems.

Geothermal heating and cooling technology in particular, while still more obscure than solar and wind power, is one of the fastest growing alternative energy sectors in the United States. In 2009, the Geothermal Energy Association reported a 26% year-over-year growth in the nation's geothermal industry.

In New England, we are also seeing rapid growth in geothermal, through our National Geothermal Division, as developers, businesses and homeowners seek to reap substantial savings on energy costs while also promoting the cleanest, greenest alternative energy source available. In just two short years National Geothermal has experienced 400% growth in total geothermal installations, with eight projects currently underway and continued strong growth expected through next year.

Geothermal energy is the heat of the earth. While temperatures above ground fluctuate by season, the temperature underground remains constant during the year. Geothermal heating and cooling systems work by transferring energy to and from the earth (through subsurface loop systems) to provide a more efficient, affordable and environmentally friendly method of heating and cooling for buildings of all shapes and sizes.

Geothermal systems produce zero localized emissions, meaning they create no air pollution and have no negative impact on global warming. By capitalizing on the earth's free and renewable energy, captured naturally from the sun, facilities with geothermal systems operate at a 400% overall efficiency - meaning that for every unit of energy used, four more are produced and stored to support the building's future heating and cooling needs.

Two high-profile National Geothermal projects are currently underway for the Massachusetts Maritime Academy on Cape Cod and the Portland International Jetport in Maine. Both development teams chose geothermal over other heating and cooling energy sources for the following reasons:

*Geothermal heating and cooling systems pay for themselves in approximately five to seven years and have an expected lifespan of 100 years or more.

*Geothermal systems save building/homeowners up to 65% over conventional HVAC systems on average.

*The average geothermal installation creates the same environmental benefit as planting 750 trees, the equivalent of removing nine tons of burnt coal from the electricity generation network.

As the economic recovery takes hold, and developers and organizations begin to think about their next major capital projects, they should consider geothermal heating and cooling systems as an alternative energy source that benefits both the bottom-line and our nation's ecological well-being.

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