

The Geothermal Heat Pump Market 2009

Energy Beneath the Backyard



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Technologies Examined:

- Closed-loop Horizontal
- Closed-loop Vertical
- Closed-loop Pond or Lake
- Open-loop
- Direct Exchange

Methodology

The information in *Energy Beneath the Backyard* is based on primary and secondary research. Primary research entailed in-depth interviews with companies and associations involved in the industry to obtain information on market size, technology, and industry growth. Secondary research drew from energy and industry publications, newspapers, periodicals, company literature and websites, annual reports, conference proceedings, and data from the U.S. Department of Commerce and the Census Bureau, along with information from trade associations such as the Geothermal Energy Association, U.S. Department of Energy, business journals, and research services such as Hoover's and OneSource.



Who Should Buy This Report

Marketing managers - to identify market opportunities and develop targeted promotion plans for geothermal heat pump markets.

Research and development professionals – to stay on top of competitor initiatives and explore demand for geothermal heat pump technologies.

Advertising agencies – working with clients in energy, banking, infrastructure, and local and state governments, to develop messages and images that compel consumers and businesses to use geothermal heat pump technology.

Venture capitalists and business development executives – to understand the dynamics of the market and identify possible investment opportunities.

Information and research center librarians – to provide market researchers, brand and product managers and other colleagues with accurate and timely information that they need to do their jobs more effectively.

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Companies Profiled:

Companies profiled include product and technology suppliers to the industry. Detailed profiles of each of the following companies are included in the report:

Carrier Corporation/Bryant
ClimateMaster
DEVI Electroheat Ltd.
Eagle Mountain
ECONAR Geosystems LLC
Energycore

Florida Heat Pump
Heat Controller
Northern Heat Pump, Inc.
Ochsner Heat Pumps Ltd.
WaterFurnace International, Inc.



How You'll Benefit From This Report

If your company is already doing business in the geothermal heat pump market, or is considering making the leap, you will find this report invaluable, as it provides a comprehensive package of information and insight not offered in any other single source. You will gain a thorough understanding of the current market for geothermal heat pump technologies, as well as projected markets and trends through 2013.

Key Report Deliverables

- In-depth description of geothermal heat pump technologies currently in use including: Closed-loop Horizontal, Closed-loop Vertical, Closed-loop Pond or Lake, Open-loop and Direct Exchange.
- Key trends and issues.
- Current (2008) market size and forecast of market size through 2013.
- Review of drivers and influencers of demand and assessment of their impact on future demand.
- Marketplace acceptance of alternative energy.
- Legal and regulatory requirements.
- In-depth profiles of leading participants within the industry including background, product portfolio, financial performance, M & A activity, technology development, strategic direction and key personnel changes.

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Study Background

Geothermal energy is a vast, renewable, low-carbon energy source that can be used to generate electricity in limited geographic areas. In virtually unlimited areas, geothermal energy can be used for climate control in building environments through the use of geothermal heat pump technologies. Almost everywhere on the planet, within the upper 10 feet of the earth's surface, a nearly constant temperature of 50 to 60°F (10 to 16°C) is maintained. A geothermal heat pump (GHP) consists of a network of piping or tubing buried in shallow ground near the building, which can tap this free, year-round reservoir of constant temperature.

Geothermal heat pumps can access the moderate temperatures just beneath the earth's surface and use it to heat and cool homes or commercial buildings. Since the source of energy for this use is found all over the world, this technology can be utilized virtually anywhere on the planet and is not dependent on accessing the extremely hot water and steam deeper inside the earth in the geothermal hot zones.



Current usage of geothermal heat pumps is limited. Out of the two million heat pumps installed in the United States each year, just over 2 percent are geothermal. However, increased development of geothermal technology will improve its acceptance and use by governments, other organizations, developers and homeowners.

Geothermal heat pumps offer a number of advantages over traditional heating and cooling methods, namely:

- Reliable
- Renewable (self-replenishing natural resource)
- Combustion-free
- Virtually zero emissions
- No contribution to global warming
- Local availability (no fuel or transportation expense)

However, the systems are higher-priced than traditional air-source heat pumps and installation can be substantially higher in cost due to the length of pipe that is usually required to be installed underground. In spite of the higher cost and land requirements, geothermal energy

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(Study Background continued)

is becoming an attractive solution as the global demand for clean, reliable and renewable energy increases. This is true not only in the United States, but at numerous locations on six continents.

The total market for U.S. GHPs in 2009 is estimated to be about \$3.7 billion dollars, including equipment and installation cost (and not reduced by government or other incentives). The dealer who sells the equipment typically installs it. PMG expects a growth rate of 32% to continue for a few years. By 2013, PMG projects the U.S. geothermal heat pump market to be in excess of \$10 billion.

Energy Beneath the Backyard presents a firm understanding of the technical, economic, and market potential for geothermal heat pumps. Such an understanding is required to assist decision makers in the identification



of the most efficient use of resources. Both historical and projected metrics were gathered to determine technology improvements and commercialization opportunities. The report conducted analyses of market, policy, and technology status by evaluating the impacts of research and testing options. Additionally, results of the analyses will provide information to researchers, policy makers, and investors on areas to target for greater cost reduction and market transformation.

Energy Beneath the Backyard contains comprehensive data on the U.S. and global geothermal heat pump market, including historical (2004–2008) and forecast (2009–2013) market size data in terms of number and dollar value of unit shipments. The report identifies key trends affecting the marketplace and significant drivers of growth, and includes profiles of major marketers and producers

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Availability

Energy Beneath the Backyard will be available in June 2009. The report is over 100 pages and includes over 40 tables and charts.

Pricing options are as follows:

- \$ 1,950 - PDF (single user license)
- \$ 2,250 - PDF (single user license) and a hard copy
- \$ 3,315 - PDF (corporate license) and a hard copy



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