6 Ways Geothermal Energy will Benefit your Commercial Building

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HEATING NORDIC COOLING

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Geothermal heating and cooling is unlike most other HVAC systems on the market today, because it uses renewable energy. Geothermal heat pumps collect the abundant, renewable heat in the earth, then efficiently and effectively transfer it into your commercial building. The low-grade heat that is collected is concentrated and released via an in-floor heating system, resulting in an even and comfortable temperature throughout your building, regardless of the outside temperature. Unlike conventional heat sources, such as oil, there won't be spikes in temperature, or blasts of cold air, ruling out the need to actively control the system.

With conventional systems, like oil or electric baseboard heat, building owners, managers or tenants are dependent on the fluctuating prices of the commodity, the shorter lifespan of the HVAC systems involved, and external suppliers for maintenance. This isn't the case with a geothermal heat pump. When you work with Maritime Geothermal Ltd., you'll be able to rely on your geothermal system to deliver long lasting, high quality and low cost heating and cooling for decades.

When selecting a heating and cooling system for your development, it is imperative that you know that you are getting the best quality product—one that is capable of performing in the demanding conditions of commercial building applications. Maritime Geothermal Ltd. is the only Canadian heat pump manufacturer, and our experience with the harsh Canadian winters gives us unique insight into the variations in climate across North America. This ensures that our Nordic® heat pumps are the most robust and durable products available on the market today.

Extraordinary Return on Investment

When you choose a Nordic® commercial heat pump over other heating alternatives, you'll experience extraordinary return on investment, because geothermal heating is the most efficient heat source on earth. This is because geothermal heat pumps are moving heat from the ground into your building, unlike other heating systems, which generate heat from a fuel input like oil or electricity. For example, when heating with electric, every one watt of electric input results in one watt of heat. With geothermal heating, every one watt of energy used to run the pump results in 4 watts of heat for your building. This means geothermal heating is 400% more efficient than electric heating.

Once you've selected a geothermal heat pump, you'll be able to feel confident that it will continue to provide the even heating and cooling they're known for over their average lifespan of two decades, and the ground loop will last for the life of the building.

Reliable and Low Maintenance Systems

Maritime Geothermal Ltd.'s Nordic® heat pumps are some of the most reliable on the market, and are built in our Canadian manufacturing facility by our experienced technicians. Maritime Geothermal Ltd. is the only Canadian manufacturer with a fully computerized testing facility that is certified by the Canadian Standards Association. We are also recognized as ISO 9001 compliant, ensuring that each product is built to the highest possible specifications.

Before every single heat pump is shipped, it is thoroughly tested by simulating the conditions present in a typical installation and the results are recorded. This ensures that it is running smoothly and eliminates the possibility that a new heat pump will arrive to the job site with a malfunction. Furthermore, as there are few moving parts in a heat pump, there is very little chance of a spontaneous maintenance issue. Unlike other HVAC equipment like air source heat pumps, geothermal heat pumps are housed indoors and aren't subject to weather related issues like storms, flooding, or even rust. This means they have a longer lifespan than conventional equipment.

Get LEED Certification

Leadership in Energy and Environmental Design (LEED) is recognized as an international sign of excellence in eco-friendly and sustainable construction. Buildings are scored in eight categories using a cumulative point system. Each category has a number of points associated with the various choices that can be made in that area of the design and construction, for instance like the selection of renewable energy. If a building satisfies the minimum criteria, it can be granted one of the four levels of certification: LEED Certified, Silver, Gold and Platinum. Choosing a renewable energy source like geothermal can provide a up to 10 of the total 136 available points, giving you an edge on your LEED certification

Numerous buildings that feature Nordic® heat pumps have achieved LEED certification. Many have earned Platinum status, the highest possible level of recognition. In fact, Maritime Geothermal Ltd. is the first choice of many developers looking to attain this designation.

Attract Environmentally Conscious Tenants

Commercial and residential buildings have a significant environmental impact: they generate up to 35% of landfill waste and 35% of greenhouse gasses, with up to 80% of water consumption occurring within and around them. Incorporating eco friendly

elements into a development can have a huge impact on the planet and perhaps as importantly, a great impact on selling or renting the space.

There is no doubt that environmental responsibility is an increasingly important focus of both consumers and businesses alike. As a result, designing and constructing commercial properties with green features to attract tenants and customers who are concerned about the environment is a priority for many developers. That's where geothermal comes in.

Maritime Geothermal Ltd.'s products have been installed in a number of buildings where sustainability and environmental consciousness are hugely important to not only the tenants but their customers as well. For example, the Halifax Seaport Farmers' Market which focuses on selling local, sustainable food and products, incorporates numerous environmentally friendly elements including Nordic® heat pumps, wind turbines, solar tubes, and a rainwater collection tank. It is also one of North America's most energy efficient buildings, and has achieved LEED Platinum status.

Choosing geothermal has also become popular with multi-unit residential builders. For example, Nordic® products will be installed in the Q Lofts, also in Halifax. These condominiums have been designed to be some of the most environmentally conscious and energy efficient in North America, and the builder, Polycorp Developments, is aiming for LEED Platinum Certification. There are many innovative features built into the property to minimize the environmental impact including geothermal units for waste water heat recovery and electric vehicle charging stations. This development is being marketed towards environmentally conscious condo buyers who enjoy luxurious, green living.

Reduce Operating Overhead

Many measures that increase a building's efficiency require a slightly larger capital outlay at the beginning, but will quickly pay dividends and last longer than conventional methods. Geothermal energy is the same. The most obvious way a heat pump will benefit a commercial development is through the tremendous decrease in utility costs

when compared to conventional heating methods, such as electricity or oil. Installing Nordic® heat pumps will reduce your heating costs by up to 60%-75%, depending on the region and local electricity rates.

Another benefit of Nordic® heat pumps for commercial developments beyond simple heating and cooling is that they can be used for a variety of other functions. For example, our commercial heat pumps can also preheat domestic hot water. Although a heat pump isn't a direct replacement for a water heating system, they can preheat domestic hot water extremely efficiently, saving you money on your domestic hot water costs.

Our Nordic® heat pumps have also been used in heat recovery applications and can also cool ice rinks by removing heat from the ice surface. Instead of rejecting that heat to the outdoor air like many inefficient ice cooling systems, our heat pumps can use that heat to warm swimming pools or heat other parts of the building simultaneously, so no heat is wasted and your building operates as efficiently as possible..

Provide Comfortable, Consistent Heating

Geothermal is a low-level heat source. This means that unlike oil, which is a high-level heat source, heating and cooling will be consistent throughout the development for all tenants on all floors. Steady and dependable heat prevents noticeable hot or cold spots or spikes in temperature, decreasing the chance of discomfort amongst people living or working within the building. Geothermal heat pumps are also ideal for zoned systems where individual tenants control their unit's temperature.

Selecting geothermal heat is one of the best investments that architects, builders and developers can make. Lowering operating costs, using sustainable resources, and satisfying tenants' environmental concerns will have a positive impact on your bottom line, and are all outstanding reasons to install Nordic® heat pumps.

If you're ready to learn more about Maritime Geothermal Ltd.'s line of Nordic® products for commercial use, **call 1-506-756-8135 now** to speak to a member of our team, or find your **nearest dealer**.