



## Storing heat for the winter

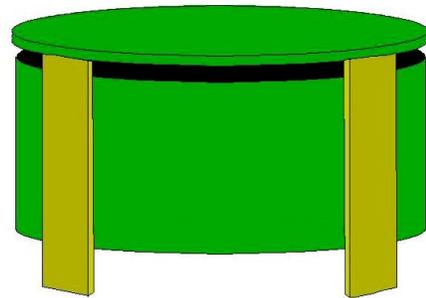
***Here is a new way to heat your home – by extracting heat from the summer air and storing that heat until the winter!***

An atmospheric Energy (AE) system has a heat exchanger that absorbs heat from the summer air and injects that heat into the ground. In the winter the heat is recovered via set of boreholes surrounding the injection borehole and a heat pump is used to raise the temperature enough to heat your home, either via comfortable and efficient underfloor heating or via a forced air system. The system can optionally provide air conditioning and domestic hot water as well.

AE systems tap an energy source that has an almost unlimited capacity and that can be used anywhere in countries that have substantial seasonal temperature swings, like in Canada and the United States. ***The energy source is free and such systems produce no carbon dioxide or air pollution!***

AE systems use relatively shallow boreholes so they are less expensive to install than ground source heat pumps,

they use less electricity to operate because of their higher seasonal efficiency, and they are not limited by constraints like the amount of natural heat in the ground.



**A small box outside of the house extracts the heat from the air and transfers it into the heat exchange fluid.**

Such systems can be installed at any time of the year because they incorporate a feature that can inject inexpensive off peak electrical heat for storage in the first year if the installation is too late to collect summer peak. They can optionally be used to provide inexpensive domestic hot water and to provide air conditioning with very little power demand. They can be used in areas that have a mild climate, like the southern US, or for frigid areas in the far north.

**For further info see <http://sustainability-journal.ca>**