



Alares Selected to Design & Build Geothermal System for Air National Guard

The Connecticut Air National Guard selected Alares to design and build a 50-ton geothermal heating and cooling system for one of their operations buildings. The Guard wanted to minimize operating costs especially as the cost of conventional fuels continue to rise. The Guard recognized that the additional first costs for the geothermal system would be offset by the savings in energy costs. This exciting geothermal project for our client, the Air National Guard, fits in with our stated objective of helping our clients clean the environment, reduce energy consumption and decrease carbon emissions. Geothermal systems can reduce energy consumption and corresponding emission by as much as 40% compared to other standard systems. *Geothermal energy is a form of solar energy.* The earth is continually warmed by the sun and therefore serves as a huge, stable energy repository. Geothermal heating and cooling uses the earth's stable temperature as its primary energy source.

While it has been in use for decades, newer developments in geothermal technology have made it more practical, efficient and affordable. Geothermal heating and cooling uses electricity to run compressors and fans, but it uses only a little more electric power than conventional heating systems during the winter months and uses far less electricity than conventional cooling systems during the summer months. The energy output of geothermal systems is three to four times as great as the energy needed to run them because they use the earth's stored heat and stable temperature as an energy base.

Therefore geothermal heating and cooling has many advantages:

- It is cheaper than conventional methods, reducing energy bills by 40 percent to 70 percent;
- It provides consistently comfortable living and working temperatures;
- It does not burn fossil fuels, greatly reducing carbon and other greenhouse gas emissions and thus contributes to slowing the global climate change process;
- It contributes to good health by greatly reducing particulate pollution in the building, as well as reducing carbon monoxide, nitric oxide and sulfur dioxide emissions;
- It reduces our dependence as a nation on fossil fuels such as oil and gas.

The National Guard will realize these advantages when the geothermal system comes on line this spring.