Nebraska's 1st Geothermal

Neighborhood Under Development



An innovative new development in Lincoln, Nebraska boasts one of the cleanest – and greenest – energy systems around. The Bridges, Nebraska's first totally geothermal neighborhood, is a 100-acre development that offers gracious living surrounded by the beauty of nature. With 35 acres of home lots, the remaining land area in the development is devoted to common areas with native grasses, covered bridges, waterfalls, paved roads, trails and ponds.

It is the picturesque ponds that power the geothermal technology that heats and cools the homes in the development. Geothermal technology uses the earth's natural thermal energy – a renewable resource – to heat homes. While outdoor temperatures fluctuate substantially with the seasons, subsurface ground and water temperatures remain relatively

constant year-round. A geothermal loop, running underground or underwater, capitalizes on these constant temperatures.

In the winter, fluid circulating through the loop absorbs heat and carries it indoors where it is compressed to a higher temperature and distributed throughout the home. In the summer, the system reverses, pulling heat from the home and using the loop to deposit it in the cooler earth or water.

After installation, the only operational cost is for the small amount of electricity used to operate the unit's fan, compressor and pump. So, unlike conventional systems, geothermal systems do not burn fossil fuels to generate heat – they simply transfer heat to and from the earth or pond. In fact, geothermal is recognized by the United States Environmental Protection Agency as the most environmentally-safe, cost-effective

Bridges

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heating and cooling system on the market.

Residents of The Bridges can expect their geothermal heating and cooling systems to reduce their energy costs by 30 – 70 percent when compared to conventional systems. According to Norris Public Power, this could mean an annual household savings of \$500 to \$1,500.

Not only do household geothermal systems equate to lower energy bills, but they also reduce greenhouse gas emissions. In fact, according to the U.S. Environmental Protection



Agency, installing a geothermal system is equivalent to planting 750 trees or taking two cars permanently off the road. In addition to its cost-savings and reduced environmental impact, there are several other advantages to geothermal systems, including:

Improved comfort

Geothermal systems heat and cool homes evenly—even in the basement. Geothermal heat feels warm and unlike traditional heat pumps, it eliminates the hot and cold blasts of air often experienced with conventional systems. Moreover, geothermal also dehumidifies the air during summer months.

Quiet and out-of-sight

Geothermal systems are as quiet as your refrigerator or freezer, so there is no noisy outdoor unit.

Clean and safe

Since geothermal units do not use fossil fuels such as natural gas or propane, there is no need to be concerned about flames, fumes, odors or carbon monoxide.

Lower Maintenance

Geothermal systems are practically maintenance free. When installed properly, the buried loop will last for generations. And the other half of the operation—the unit's fan, compressor and pump—is housed indoors, protected from the harsh weather conditions. Periodic checks and filter changes are the only recommended maintenance.

Longer life

Equipment life is prolonged since geothermal components are located indoors, protected from outdoor elements. Geothermal systems typically last more than 20 years if properly maintained.

In addition to its innovative geothermal systems, The Bridges also boasts one of the newest net zero homes. The net zero home combines state-of-the-art, energy-efficient construction and appliances with renewable energy systems, such as solar and geothermal power. This combination can result in zero net energy consumption.

The developers of The Bridges are passionate about being part of this groundbreaking initiative. States Gary Pickering, one of the developers, "Yes, we're building a unique community with beautiful surroundings and covered bridges – but not without first being mindful of the land and how our use of it will affect the future for us all."

To learn more about The Bridges development, visit www. TheBridgesNE.com. To learn more about geothermal power and its advantages, visit www.geoexchange.org.