

## **Church's decision to go with geothermal heating system looking good now**

*Mark Evans, Herald-Tribune staff, Alberta Daily Herald Tribune (March 7, 2003)*

High natural gas prices aren't sending shivers through the congregation at People's Full Gospel Assembly.

The church is sucking all the heat it needs out from underneath its snowy parking lot essentially for free with a geothermal heating system installed in the building which opened about a year ago.

There's no natural gas in the building, no open flame to heat the building filled with large windows and high ceilings.

The building has a 2,340-square-metre footprint but has three floors so the actual area of the building being heated is larger.

"It was something that was new and we took a look at it and thought let's take a risk on it," said associate pastor Bob Cowie.

Natural gas cost was one of the main reasons they decided to look at geothermal heat, he said.

While the system costs more up front, they predict in three to four years they will recoup those initial costs.

"Then it's a fairly inexpensive system to run," he said. Their power bills are a little higher because of the pumps and fans used in the system. However, said Cowie, that is more than offset by not having a natural gas bill.

In simple terms the system works by circulating fluid through pipes in the ground, explained Gerry Marcotte, of G&M Plumbing and Heating Ltd., who installed the system.

Energy is extracted from the earth, then equipment in the building uses that energy to heat the building.

There's 12,000 metres (40,000 feet) of pipe about two metres deep (6-7 feet) in the ground under the parking lot supplying energy to 15 heat pumps throughout the building.

Marcotte got interested in geo-thermal heating systems about two years ago. He got the training to install them and has since put them in three houses and two commercial buildings in the Grande Prairie area.

"It's a good heating system," he said. "We're basically happy with it," Cowie said. They are still working out a few bugs in the system. The large auditorium space doesn't heat up as they would like but they have some engineers coming into to look at it.

"The rest of the building, the office areas and the classroom are all very good," he said, describing it as a comfortable heat.

The system also cools the building in the summer. It essentially works in reverse to act as an air conditioner, just without the high costs that usually come with running an air conditioning system, said Cowie.

Heat recovery units also continually clean the air so they constantly have fresh air. The building is pressurized so they don't get dust particles coming in from the outside.

"So that really works in our favour as well," he said. And with near record cold temperatures in March this winter and continually climbing natural gas costs, "we're really glad we went this route," Cowie said.

There are certain applications that are better than others, said Marcotte.

"It's not a one-size fits all," he said. It's ideal for rural areas where there isn't gas service or it would be a large cost to bring in gas.

It can work in city residential lots as well, but the pipes need to go vertically into the earth which is more costly to set up.

"There is a large capital cost," he said, but most systems pay for themselves in about six to 10 years.

With each spike in natural gas prices interest in alternative heating increases as well.

"I get steady phone calls," Marcotte said. It's already become common in the United States and used more often in southern Alberta.

Cochrane has a new arena and is using a geothermal powered system to heat the building and make ice.

"It definitely has a need in places," he said. People are interested in the conservation aspect of it as well as the cost savings in the long run, Marcotte said.

That was part of the appeal for the People's Full Gospel, said Cowie. "The cost was an attractive part of it but just what it does for the environment was an attractive part of it as well," he said.

"I think in the society today we have to move more in that direction. What are alternatives to maybe some of how we've done things in the past?" he said.

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