



# GeoExchange at THE RISE

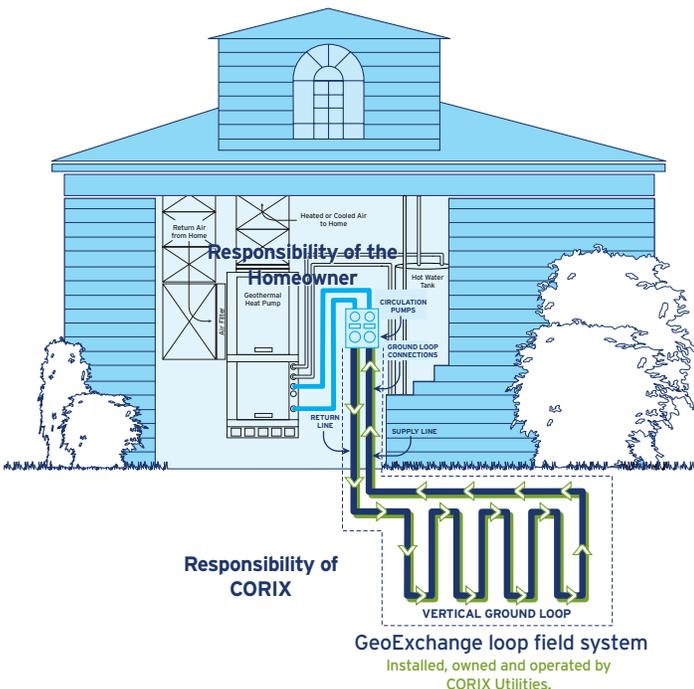
SIGNATURE RESORT COMMUNITY

## Tapping into an energy-wise way to live at The Rise

Sustainable. Energy efficient. Added Comfort. These are just some of the reasons why more and more homeowners are choosing GeoExchange. At The Rise all of this can be reality.

Today as more and more Canadians take action to reduce our environmental footprint and choose an energy-wise way to live, a GeoExchange system is becoming an increasingly popular choice, particularly for new homeowners.

GeoExchange technology (also known as geothermal) relies primarily on the earth's natural thermal energy, a renewable resource. The ground acts as a heat reservoir, storing the energy from the sun. During the winter, the heat stored in the ground is transferred through a vertical or horizontal closed pipe network called a GeoExchange loop field system. The GeoExchange loop field system circulates environmentally friendly liquid to transfer the heat. Connected to the loop field system is a ground source heat pump which is then connected to a standard method of delivery within the home either via ductwork or a radiant in-floor system. In the summer the process is reversed and the heat pump moves heat from your home to the ground.



## Making the best environmental choice

Installing GeoExchange has the same impact on greenhouse gases as planting an acre of trees or taking two cars off the road!

A GeoExchange system promises the highest level of efficiency of any heating and cooling system available in North America. A small amount of energy is required to operate the heat pump but the GeoExchange system eliminates the need for a separate furnace and air conditioner.

## Making your home more comfortable

GeoExchange systems significantly reduce our reliance on fossil fuels, directly reducing pollutants and greenhouse gases, such as carbon dioxide, sulfur dioxide and nitrous oxides, emitted into the air we breathe. This system is also exceptionally quiet. Your home will be comfortably warm in the winter with no hot-air blasts that are typical of oil or gas furnaces, and cool throughout the warm summer months. Hidden under your lawn, garden or driveway, the GeoExchange system will not affect the aesthetics and natural beauty of your yard the community.

## CORIX Utilities and The Rise

CORIX Utilities helps communities build and manage sustainable utility infrastructure for water, wastewater and energy. CORIX is a leader in designing, installing and maintaining this sustainable alternative energy source and we make it simple and economical to add GeoExchange systems to new housing developments like The Rise.

CORIX has the expertise and offers a fully guaranteed GeoExchange loop field system for your home. As your utility provider for the loop field system, we will own, operate, maintain and provide customer care billing services enabling customers of The Rise to access the system at an affordable price.

CORIX Utilities installs, owns and operates the GeoExchange loop field system at The Rise.

As the homeowner, you own and maintain the equipment inside your home.

# GeoExchange

## Frequently asked Questions



### **Why is a ground source heat pump a better choice than an air source heat pump?**

Air source heat pumps operate at approximately 150% efficiency while ground source heat pumps operate at 300% to 400% efficiency. This means that for every one kilowatt of energy going into the unit, three to four kilowatts of energy are being outputted to heat or cool your new home.

### **How efficient is my GeoExchange system?**

On average, GeoExchange systems cost 30% to 60% less to operate than traditional residential heating systems depending on use. Typically, cooling your new home would be an additional cost, but with GeoExchange, it is all performed by the same unit.

### **How long will my GeoExchange ground source heat pump last?**

With proper maintenance, your ground source heat pump will have a longer life span than a conventional furnace.

### **What maintenance do I need to do as a homeowner?**

Your ground source heat pump will have a filter that will need to be cleaned or replaced as per the manufacturer's instructions.

### **How much space will my ground source heat pump unit require?**

Your ground source heat pump will be located in your new home's mechanical room where you would typically see a furnace. The unit is similar in size to a conventional furnace, if not smaller.

### **How safe is my heating and cooling system?**

The liquid used in the ground loop has a low toxicity level and is environmentally friendly. As for the unit inside your home, it is considered safer than a traditional natural gas furnace as there are none of the dangers associated with natural gas, including carbon monoxide and open flames.

### **How will the air quality in my home differ from that of traditionally heated homes?**

GeoExchange systems are the best choice for indoor living environments. With the elimination of fossil fuels, the risks associated with conventional heating such as carbon monoxide are no longer an issue. In addition, GeoExchange systems provide excellent indoor air quality which is why medical, surgical and research centers that require sterile conditions prefer GeoExchange heating and cooling.

### **Will my ground source heat pump be noisy?**

No, your ground source heat pump has a compressor inside that will produce sound equivalent to that of your refrigerator. If you are not in your mechanical room, you should not hear it.

### **When the weather warms up, will I have to change a setting on my ground source heat pump to cool my home?**

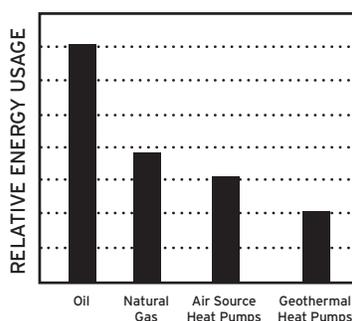
No, by setting your comfort zone on your thermostat the heat pump will do the rest. This means it will automatically adjust the temperature in your new home to your comfort zone temperature in summer and winter months.

### **What are the disadvantages of a GeoExchange system?**

The main disadvantage for many homeowners is the upfront cost of installing the underground loop system. Combined with the cost of the ground source heat pump, the complete system is more expensive than the installation of a conventional furnace. CORIX Utilities makes it possible for homeowners to take advantage of this green, renewable energy source and avoid the large upfront investment and instead charges a connection fee and monthly access fees.

### **How will heating and cooling my home with GeoExchange reduce green house emissions?**

You will no longer be burning a non-renewable carbon based fossil fuel to heat your home. Having a GeoExchange system in your home is equal in greenhouse gas reduction to planting an acre of trees or taking two cars off the road forever.



Both Natural Resources Canada and the Environmental Protection Agency in the United States have recognized GeoExchange systems as one of the most efficient heating and cooling systems available. Operating at efficiencies of 300 - 400% (a high efficiency furnace operates at around 96%) GeoExchange systems use significantly less energy, produce fewer greenhouse gases and cost less to operate.

For additional details on Sustainability at The Rise, visit <http://therise.ca/realestate-geoExchange.php>

For more information on GeoExchange at The Rise contact us at 250.377.7757 or by email at [therise@corix.com](mailto:therise@corix.com)