In Minnesota, temperatures are already hovering around freezing, so the time to think about how you are going to heat your home has passed — either your home is running as efficiently as possible or it isn't. Still, it isn't too late to track how your home is handling the wintertime temperatures and consider changes to your heating strategy for next time around. Specifically, you should mull over this key question: Should you rely primarily on electricity to keep your home warm, or should you invest in a gas heating system? Read on to find out.

How Gas Heating Works

A furnace is the typical gas heater used in homes, a permanent heating fixture that provides forced-air heating to an entire home — or at least where the ducts and vents go. Gas heating typically relies on natural gas, which burns hot and relatively clean, allowing its widespread use in homes.

When you set your thermostat to heat, the furnace pulls in an appropriate amount of gas through an intake duct. The natural gas passes over the pilot light, which is a flame that remains burning even when your furnace isn't actively heating your home. The pilot light uses a small amount of gas to ignite the rest of the gas within the furnace. Then, cool air is pulled into the furnace, usually through a heat exchanger — a zig-zagging line of pipe that serves to keep the cool air separate from the burning gas. Heat exchangers are necessary because a byproduct of burning natural gas is carbon monoxide, an odorless, colorless gas that is toxic to animals. As the air travels through the heat exchanger, over the burning gas, it heats up, at which point it is forced through ducts to heat the various rooms of your home.

Gas Pros and Cons

Gas heaters are perhaps the fastest and easiest heating systems available. Because natural gas burns quickly and with high heat, you can enjoy a warm home exceedingly swiftly after you modify your thermostat. Plus, gas tends to be less costly than electricity, oil, wood or other methods of warming a home, so you can keep costs low while enjoying fast temperature control. If you already have a gas heater, you can enjoy minimal maintenance and relatively inexpensive repairs until the furnace reaches the end of its lifespan, which occurs after about 20 years. Then, you will need to replace your furnace and update your ductwork, which requires professional care.

Unfortunately, though gas heaters may be fast, they aren't particularly efficient or eco-friendly. Natural gas is cleaner than coal or oil, but it isn't free from emissions; carbon

monoxide and dioxide, the biggest byproducts of burning natural gas, are greenhouse gases that contribute to climate change. What's more, furnaces can be dangerous to the home because they can leak toxic gases or cause housefires. It is worth considering what is important to you — cost savings vs. environmental safety — when determining how to heat your home.

How Electric Heating Works

Gas heaters use an open flame fueled by natural gas to heat air, and as you might expect, electric heaters use electricity to accomplish the same goal. This is achieved by using conductive materials (usually nickel- or iron-based) to channel electricity into the heater and then applying resistors, which convert the electrical energy into heat. The more resistance an electrical current encounters, the hotter it gets. Most often, electric heaters have wire in long, straight bars, which allows the heater to heat up a greater volume of air. Because heating elements don't produce dangerous byproducts, the heater can pull cool air directly over the coils to heat up.

From there, different things happen depending on what type of electric heater you have. Unlike gas heaters, which primarily take the form of furnaces — as other gas-based heating isn't safe for indoor use — you can find an electric heater in almost any form, from central heating to ductless wall-mounted or baseboard units to smaller, portable heaters to carry with you from room to room. An electric heater used in a central heating system will send heated air through ducts to different parts of the home, whereas smaller heaters might merely heat the surrounding air, with no dispersion system whatsoever.

Electricity Pros and Cons

The variety of sizes and shapes of electric heater is just one benefit. Smaller electric heating tools are incredibly easy to set up and use; many come ready for use just out the box. Electric heaters tend to be less expensive because they are less complex and easier to build. Plus, most homeowners can provide annual service to their own electric heaters, only calling professional services when the equipment breaks down. An electric heater, well-maintained, will fun for over 30 years, and they never produce the noxious gases and fire risk of their gas counterparts.

On the other hand, electric heaters aren't terribly efficient, which means they will increase your energy bill, and they aren't always effective at reaching every nook and cranny in your home. You might notice that rooms farthest from the furnace are colder than those

immediately next to the furnace, and the same is true of smaller space heaters — they only warm areas nearby.

Conclusions

Sometimes, heating with gas makes more sense for a home; sometimes, electric heaters are best. You need to weigh the pros and cons of your unique situation to decide what kind of heating will most benefit your home.