

## Which Home Heating Fuel is Best?

When a bitter cold forecast comes to fruition, homeowners are keenly aware of what it takes to keep the house warm. Choosing the best heating source is generally a matter of personal preference. Factors such as climate, lifestyle, and budget all play a part in deciding the most practical system.

If you have a woodlot and live by the adage that burning wood warms you twice (once when you cut and stack and again when you burn it), then a woodstove is ideal. On the other hand, if you are on the prairies with few trees or are not fond of the labour involved in cutting and splitting, a pellet stove may make more sense. You must weigh the variables.

Fortunately, many traditional fuel options, such as wood, coal, and oil, have been greatly improved with higher efficiency rates and advancements in air quality issues. It is worth taking a look at some you might have dismissed. Here is how several of the more popular options stack up ...

### Wood Heat

**Installation Costs:** Expect to pay between \$1,500 - \$5,000 for a new stove, depending on the style and chimney requirements (whether you have an existing chimney or must install a new one). Either way this source of heat for insurance purposes can only be your secondary source, so be aware of those additional costs.

**Fuel Costs:** Wood can be as cheap as the fuel and maintenance for your chainsaw if you have a cost-free source. If you are buying it, expect to spend \$80 - \$120 per cord (a stack that is 4-ft. high, 4-ft. wide and 8-ft long) depending on your location and the type of wood. Most people use 10-20 cords per season, which when comparing to the new high-efficient natural gas and propane furnaces, makes it less efficient.

If you love wood heat and have the resources, a great alternative is the new Continental Wood Propane combination. Super high-efficient wood combined with state-of-the-art propane.

### Pellet Stoves

**Installation Cost:** New stoves cost \$1,700 - \$3,500 installed. They can be vented through a wall and don't need a high-tech chimney. Pellet stoves rank high in efficiency because they burn a small amount of fuel as needed. This mini-inferno warms the air in the heat exchangers before blowing it into the house.

**Fuel Costs:** Price varies considerably based on location, but estimates are \$5 - \$7 per day.

**Fuel Availability:** Pellets are made from recycled sawdust and resemble inch-long rabbit feed. Some even burn unprocessed corn and fruit pits, (cherry). They are usually packaged in 40-pound bags, found at pellet stove dealers, as well as home improvement stores.

**Cleanliness:** A ton of pellets come on a 4 x 4 pallet, take up half the space of a cord of wood, and can be stored in the garage, basement or anywhere. Since there is no dirty wood to haul inside, pellet stoves are much cleaner. Forty pounds of pellets produce only one cup of ash.

## Propane Wall Furnaces & Forced Air Furnace Systems

Installation Cost: Wall furnaces are an easy and relatively inexpensive way to add supplemental heat or warm up a cold spot in the house. They typically cost \$1,800 - \$4,800 installed. They can be vented directly through the wall. Forced air furnaces cost between \$3,000 - \$5,000 with varying efficiencies of 92% - 96% and firing ratios described as the following:

Single Stage: Furnace activates on a call for heat and the full potential of 60, 80 or 100,00 btu's is utilized to heat your home.

Two-Stage: Furnace activates on a call for heat and the full potential of 60, 80 100,00 btu's engages and then gears down to approximately 1/3 of its full potential and operates as such until the thermostat is satisfied. If after approximately 5-7 minutes the thermostat is NOT satisfied, it becomes apparent that the house is losing heat faster or the same as the furnace is producing and it engages its full potential or 2<sup>nd</sup> stage.

Full Modulation: Furnace activates full potential of 60, 80 100,00 btu's then gears down. It then ramps up by small increments until the thermostat is satisfied.

- Other options include variable speed venters of ECM (Electronically Commutated Motor) helping the homeowner not only save on fuel but realize additional hydro savings.
- With this new technology and a comparable per btu cost as oil, propane is far more economical and efficient than any oil furnace out there. Not to mention the savings home insurance companies are applying for getting off oil.

Fuel Costs: Liquid propane prices fluctuate throughout the year and are usually cheaper during the warm months. Estimate paying \$.60 per litre.

Fuel Availability: Propane is available in most areas of the country and is a viable fuel source for those who do not have natural gas close at hand. Homeowners install either a cylinder or a larger aboveground tank that is filled as needed. There is generally a small charge for installation of about \$200.00 depending on the line lengths, tank type and location.

Cleanliness: Propane wall furnaces are a reliable, low maintenance choice to take the chill off a room or as a backup heat source. There is no mess and very little fussing.

Air Quality Issues: Propane creates no particulates, although you want to keep the exhaust vent away from open windows or doors to prevent the noxious gases from flowing back into the home.

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## Natural Gas

**Installation Cost:** Like propane, you can install a wall furnace for \$1,800 - \$4,800. The larger, self-standing units that heat the entire house will cost between \$2,000 and \$5,000, depending on the efficiency level. The best ones are 96% efficient; they cost more to install, but will make a dent in the monthly bills.

**Fuel Costs:** Costs are highly variable depending on your region. Transportation charges and taxes also play a significant part in determining your final bill. Costs per 100 cubic feet (ccf) vary in the Northeast, but the transportation costs could easily double the final payment amount. Costs can easily be compared with one call to the fuel distributor.

**Fuel Availability:** Natural gas is a popular option in many parts of country, but its availability depends on local utility companies and whether the infrastructure is in place.

**Cleanliness:** Like propane, there is no smoke or mess involved with natural gas.

**Air Quality Issues:** Natural gas furnaces must be vented to the outside because of carbon monoxide issues, but there is no smoke or other particulates.