

What is the most efficient heating system 2020?

A lot of hot air

Condensing or high efficiency forced air natural gas or propane hot water tanks and furnaces are 90 per cent efficient or better. Think of a condensing furnace as a regular furnace with a built-in heat recycler. A condensing furnace has a secondary heat exchanger. The additional heat exchanger draws the maximum amount of heat out of the flue gases before they exit the chimney. In the process, these gases cool to the point that they condense, thus the name. The resulting water drains through the floor and the remaining gas is vented through a horizontal pipe in an exterior wall. Our equipment comes with a 10-year parts warranty.

Visit the Natural Resources Canada Energy Star website for information on energy-efficiency

<https://www.nrcan.gc.ca/energy-efficiency/energy-star-canada/18953>

Electric heat

Electric heat is the second most popular heating option in the country, with the highest concentration in hydro-rich Quebec. Natural Resources Canada estimates that 60 per cent of homes in la belle province are heated electrically.

A small percentage of forced-air and hydronic systems are electrically powered but, more often than not, electric heat is generated in baseboards and recessed floor- or wall-mounted heaters. Electric heat is unique in that it is considered to be 100 per cent efficient—all the energy consumed by the heaters is converted to heat. (This does not mean electric heat is environmentally benign. Large-scale hydro dams flood river valleys, displacing wildlife, and the reservoirs behind them produce methane, a greenhouse gas).

For homeowners, the big draw to electric heat is the low initial cost. You can buy a 1,000-watt baseboard heater with enough power to warm a 100- to 125-sq.-ft. room for less than \$30. The price increases with sleeker, space-saving designs, and enhancements such as circulating fans, but a general guideline is that you need eight to 10 watts per sq. ft. Baseboards are probably the only heating system competent DIYers should consider installing themselves, which could result in further savings.

If you are looking at electric heating, you should also take long-term operating costs into account. Depending on the size and condition of your house and whose pricing figures you use, heating electrically can cost hundreds or even thousands of dollars a year more than running a mid- or high-efficiency natural gas furnace.

Furnace Upgrades

- Maintaining a humidity level of 35 to 45 per cent inside your home reduces static buildup, moderates shrinking and swelling of wood floors and furniture, and prevents dry skin and scratchy throats. Whole-house humidifiers that are mounted on a furnace can be either passive, where the air passes through a water-filled filter, or active, where a fan forces air through a water-saturated bed. Both styles require occasional cleaning and annual replacement of the evaporator pad.
- Forced-air furnaces come equipped with a one-inch air filter. For optimal air quality (and to protect the secondary heat exchanger on condensing furnaces).
- Unlike their drafty, elderly neighbours, new energy-efficient (R-2000) homes require a mechanical ventilation system that exchanges stale air for fresh. A heat recovery ventilator (HRV) recycles heat from the exhaust air to warm the incoming fresh air, reducing the overall energy demand.
- Setback thermostats can be programmed to lower the temperature while you are asleep or at work and raise it back up to your comfort level before you get out of bed or back home. Natural Resources Canada estimates a two per cent savings on your heating bill for every degree you lower the heat.