

Helpful Firewood Tips

Unless firewood is carefully seasoned, and burned in an efficient, properly sized appliance, smokey combustion may occur resulting in environmental pollution, high fuel usage, and increased potential for chimney fires. To ensure safety and efficiency, engage the services of WETT (Wood Energy Technical Training) -certified tradesmen and inspectors for the design, installation and maintenance of wood heating systems.

The most common wood heating appliances are:

- **wood stoves and fireplaces** - certified to EPA standards reduce wood consumption by a third over conventional units. Their improved combustion chamber design allows for nearly smokeless burning, thus eliminating creosote in chimneys and nuisance to neighbours.
- **furnaces and boilers** - can easily heat an entire house but are a poor choice for small homes, or those with low heating requirements. These appliances tend to be less efficient and produce more harmful emissions than modern EPA-certified appliances. Wood-fired central heating systems can be dangerous if overheating occurs as a result of fan failure or a power outage. Although safety features are included in their design, careful sizing, installation, operation, and maintenance are the best defence against fire or smoke damage. There are three major manufacturers of central wood heating appliances in Nova Scotia.
- **pellet stoves** - use fuel made from waste wood and formed under high pressure into small cylindrical pellets. They are homogenous, dry, and easy to burn. Sold in plastic bags, storage is clean, and combustion efficiency is high. Pellet stoves use automatic augers to feed the pellets into the combustion zone, and typically contain about a day's worth of fuel in a storage hopper. The high combustion efficiency results in low-temperature exhaust gases allowing for side-wall venting, or chimney venting.

If you are in the market for a new or replacement wood appliance, consider the following tips:

- Smaller is better - For maximum efficiency, avoid over-sizing your system.
- Insist on an EPA-certified appliance; they deliver more heat from each load of wood, and reduce smoke and emissions in the process.
- Hire only installer and chimney sweeps that are WETT-certified to ensure safety and performance.
- If possible, install your chimney inside your home. Outside chimneys tend to run cool, have reduced draft, and produce more creosote than the same chimney installed inside your home.
- Purchase your firewood in early spring. Cut to length, split, and stack under cover for at least six months. Unseasoned firewood should never be burned, except under emergency situations.
- Always burn hot fires in your appliance - small hot fires during mild weather, and large hot fires during cold weather.

If you burn wood in your home, these tips will help you heat safely and efficiently.

Check your chimney. If the smoke coming from your chimney is dark or smelly, your woodstove is not burning properly. It is not burning hot enough or clean enough.

Use smaller pieces of wood. Smaller pieces burn cleaner because they have more surface area exposed to the flame, which keeps your fire burning consistently clean and hot. Split wood to a maximum of 4-6 inches in thickness and 2-4 inches shorter than the size of your stove's firebox.

Build your fire slowly. Building a good, hot fire takes 15-30 minutes. Start with kindling and crumpled paper, then add small pieces of wood. Gradually increase the size of the wood.

Burn clean wood. Never toss garbage or wood that is painted or chemically treated into your wood stove. These can produce create toxic substances that affect the air you breathe and reduce your stove's heating efficiency.

Stack your wood outside. It dries best if you keep it off the ground and covered. Allow room for air to flow under the stack and to circulate between the pieces.

Don't store wet wood in your house. The moisture leaving wood as it dries will increase the relative humidity of the air in your house in the winter. Higher humidity levels increase mould and mildew growth, both of which can cause severe allergic reactions, asthma attacks and increase the number of colds and flus.

Dry your wood for at least 6 months. Sizzling wood indicates that the wood is still wet. Wood should be properly dried before burning to reduce creosote buildup, excessive smoke, and heating costs.

Use a stovepipe thermometer. This will let you make sure your woodstove is operating at the right temperature. Adding smaller loads of wood more often ensures a healthier fire.

Load your wood properly. Keep the air in your neighbourhood clean; avoid smoldering fires.

Woodstove technology has improved markedly over the last 10 years, resulting in improved combustion efficiency and reduced particulates and other emissions.