



Wood Pellets



Wood Pellet Delivery Truck

Biomass Energy in the NWT

Firewood was the main heat source in the Northwest Territories (NWT) until it was replaced by oil. Rising oil costs now inspire a renewed interest in wood, and new technologies have made it a safer and cleaner source of energy. Wood pellets are one of those technologies.

Made of compressed sawdust, a tonne of wood pellets contains the equivalent of about 500 liters of oil. For example, a 40 pound bag of pellets sold for \$6 is the equivalent cost of heating oil at 67 cents per litre.

Where do wood pellets come from?

Wood residues from lumber production are usually used to make pellets. Bagged pellets found in NWT stores come from mills all over Canada. However, closer sources from Alberta or British Columbia usually mean lower transportation costs.

Can we produce wood pellets in the NWT?

Wood pellet production in southern Canada uses large volumes of wood residues available from the forestry industry. The NWT's current forestry industry is small and new sources for wood would be needed for a pellet mill. This wood could come from:

- Harvesting trees specifically for pellets
- Salvage harvests after forest fires
- Harvesting trees specifically for pellets
- Fast growing willows

Note: Biomass boilers and furnaces are made to burn one specific size of wood product at a time. For example, a pellet boiler would need to be modified to use wood chips and vice-versa.

Key Facts

- The NWT used an estimated 30,000 tonnes of wood pellets in 2015.
- The GNWT continues to install wood pellet boilers as the primary heat source in its new buildings.
- An estimated 13,500 cords of wood are used annually in the NWT.

- About 20% of the heat produced in communities comes from wood products.
- Biomass is renewable and almost carbon neutral when harvested sustainably.
- Biomass generally emits more particulate matter than heating oil or propane for the same amount of energy.
- It is preferable to burn dry wood to get more energy out of the wood and reduce smoke emissions.

Total Capacity of Wood Boilers in the NWT

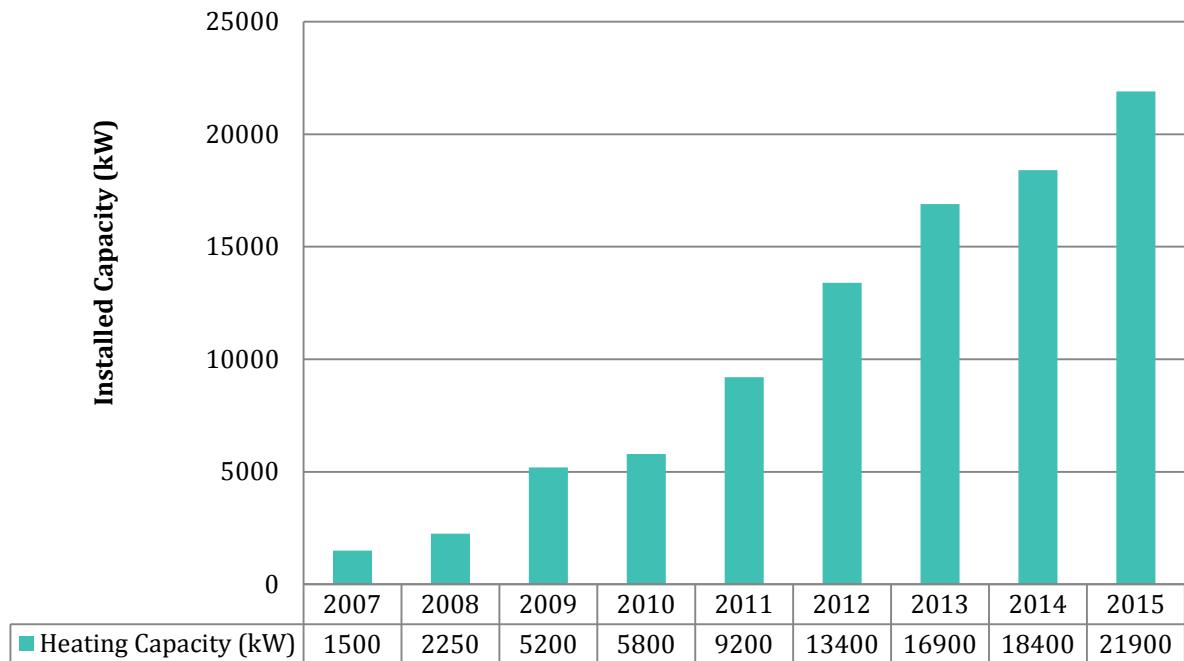


Figure 1 – Cumulative capacity of large pellet boilers in the NWT in Kilowatt