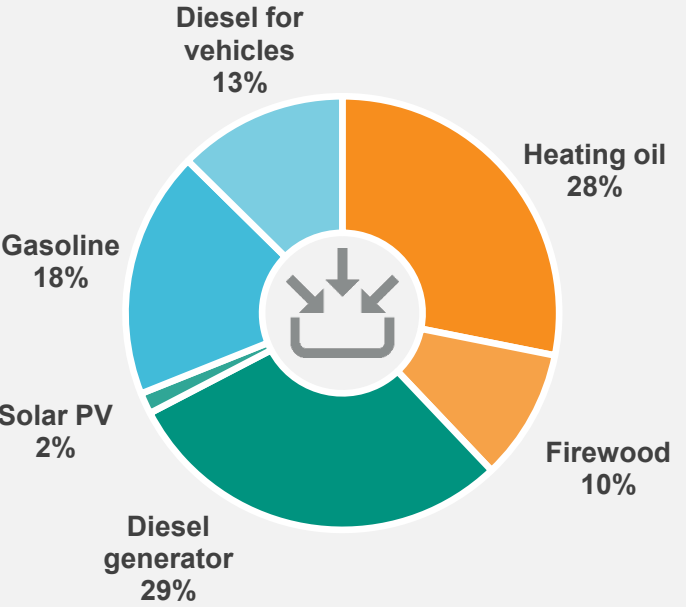


Energy Sources – 1 Year



Diesel generator produces electricity and heat

29% electricity
71% waste heat



Energy cost

Total: \$2,010,000
Cost per person: \$13,100
44% diesel generator
23% heating oil
6% firewood
16% gasoline
11% diesel for vehicles



Renewable energy

11% of total energy
10% of total from firewood
2% of total from solar PV

Unless otherwise noted, numbers reflect energy sources purchased or sourced in the community, and do not include industry or commercial transport. Percentages may not add to 100% due to rounding.

ENERGY PROFILE

Where we get energy and how we use it

COLVILLE LAKE 2023

Population: 154

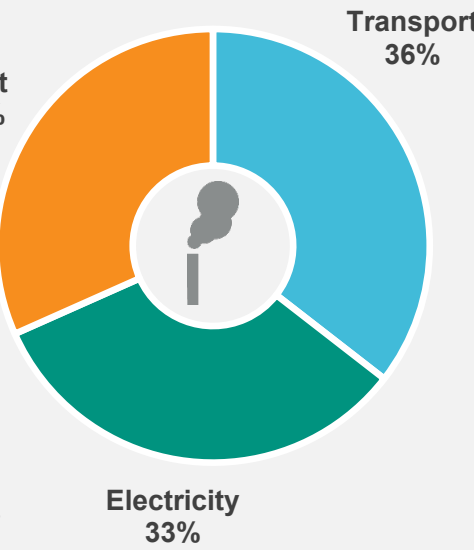
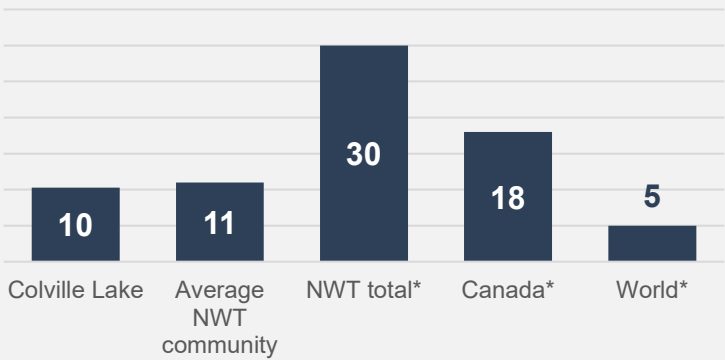


Greenhouse Gas (GHG) Emissions – 1 Year

Community total GHG emissions per year

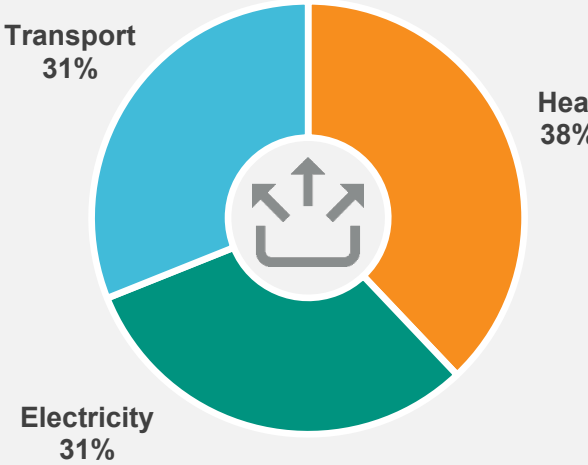
1,600 tonnes
10 tonnes/person

Average tonnes of GHGs per person per year



* Includes emissions from industry and commercial transport.

Energy Use – 1 Year



Energy use in homes

14% of total energy use
49% of total electricity
41% of total heating oil
100% of total firewood



Energy use in other buildings

Store, school, church, office, arena, library, etc.
18% of total energy use
51% of total electricity
59% of total heating oil



Transport (local – no air transport)

Cars, trucks, boats, ATVs, skidoos, etc.
31% of total energy use
Fuel purchased in the community.



Waste energy

From electricity production and heating
36% of total energy use

ENERGY PROFILE

COLVILLE LAKE 2023

EXTRA INFO

What's a megajoule (MJ)?

A joule is a unit of energy. A megajoule is 1 million joules.

Some examples:

- 1 BBQ propane tank = 500 MJ
- 1 kWh = 3.6 MJ
- 1 L of heating oil = 38.4 MJ
- 1 L of propane = 26.6 MJ
- 1 tonne of wood pellets = 19,200 MJ
- 1 cord of wood = 18,700 MJ
- 1 barrel of oil = 6,100 MJ

What's waste energy?

When fuels are burned, some of their energy is released as heat that can't be used. The amount of energy that an appliance or device can use is called its efficiency. For example:

Diesel generators can usually only convert 25–35% of the diesel's energy to electricity, while 65–75% is released as heat.

Furnaces, boilers, wood stoves and other heating appliances can use anywhere from 70% to more than 95% of the heat they produce. The rest is released up the chimney.

Energy sources



Diesel generator

- 29% of total energy
- Cost: \$888,000
- Amount: 193,000 Litres
- GHGs: 519 tonnes
- Energy: 7,410,000 MJ



Heating oil

- 28% of total energy
- Cost: \$458,000
- Amount: 184,000 Litres
- GHGs: 496 tonnes
- Energy: 7,080,000 MJ



Gasoline

- 18% of total energy
- Cost: \$329,000
- Amount: 138,000 Litres
- GHGs: 339 tonnes
- Energy: 4,640,000 MJ



Diesel for vehicles

- 13% of total energy
- Cost: \$217,000
- Amount: 82,700 Litres
- GHGs: 223 tonnes
- Energy: 3,180,000 MJ



Firewood

- 10% of total energy
- Cost: \$119,000
- Amount: 132 Cords
- GHGs: 4 tonnes
- Energy: 2,470,000 MJ



Solar PV

- 2% of total energy
- Cost: \$0
- Amount: 110,000 kWh
- GHGs: 0 tonnes
- Energy: 397,000 MJ

Community GHG emissions

- Homes: 13%
- Other buildings: 19%
- Transport: 36%
- Diesel generator: 33%

Total community energy use

- 25,200,000 MJ
- 164,000 MJ/person

The AEA has tried to ensure our data is as accurate as possible, but there could be mistakes. If something seems incorrect, please contact us to let us know.

References

Energy source and use data: Private suppliers and utilities, and the Government of the Northwest Territories Bureau of Statistics and Department of Infrastructure.

GHG emissions data: <https://www.cer-rec.gc.ca/nrg/ntgrtd/mrkt/nrgsstmprfls/nt-eng.html>
https://ourworldindata.org/grapher/co-emissions-per-capita?tab=chart&country=AUS+CAN+USA+OWID_WRL

Total NWT energy use (2020)

Total: 17.5 billion MJ/year

