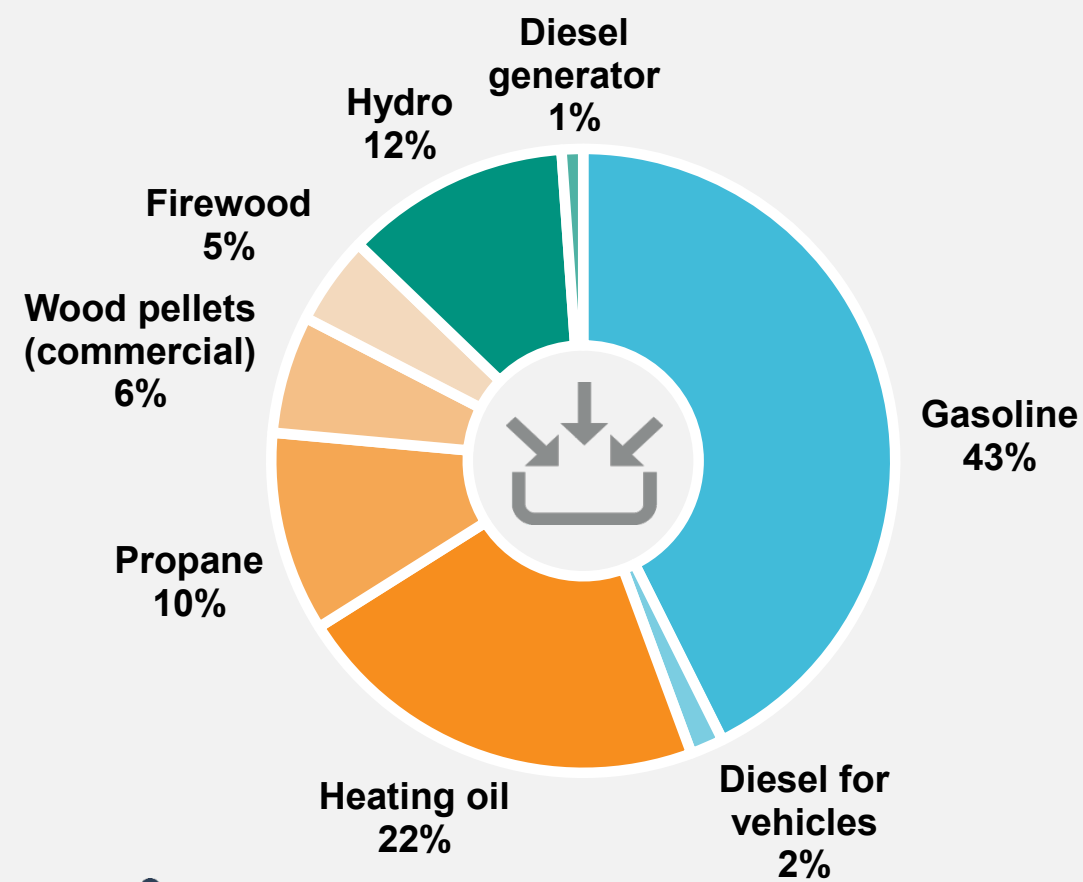


Energy Sources – 1 Year



Diesel generator produces electricity and heat

34% electricity
66% waste heat



Energy cost

Total: \$9,740,000

Cost per person: \$4,800

39% gasoline
1% diesel for vehicles
31% hydro
1% diesel generator
16% heating oil
8% propane
3% wood pellets
2% firewood



Renewable energy

23% of total energy
12% of total from hydro
6% of total from wood pellets
5% of total from firewood
0.1% of total from solar PV

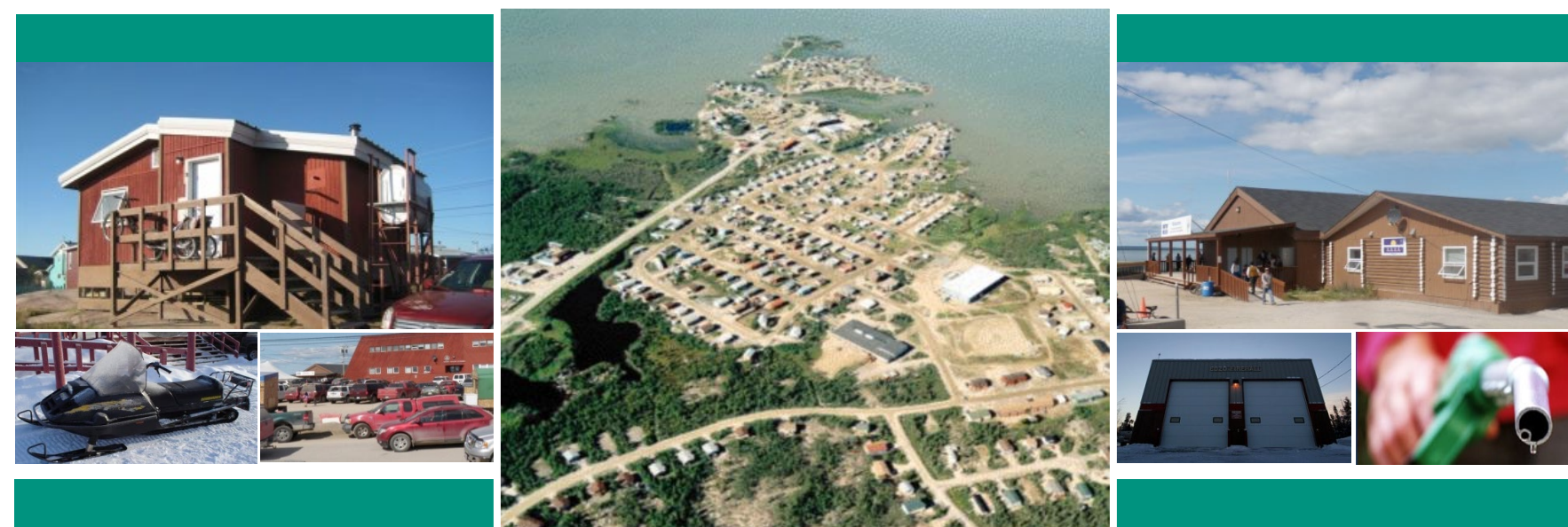
Unless otherwise noted, numbers reflect energy sources purchased or sourced in the community, and do not include industry or commercial transport. Percentages may not add to 100% due to rounding.

ENERGY PROFILE

Where we get energy and how we use it

BEHCHOKO 2018

Population: 2,032

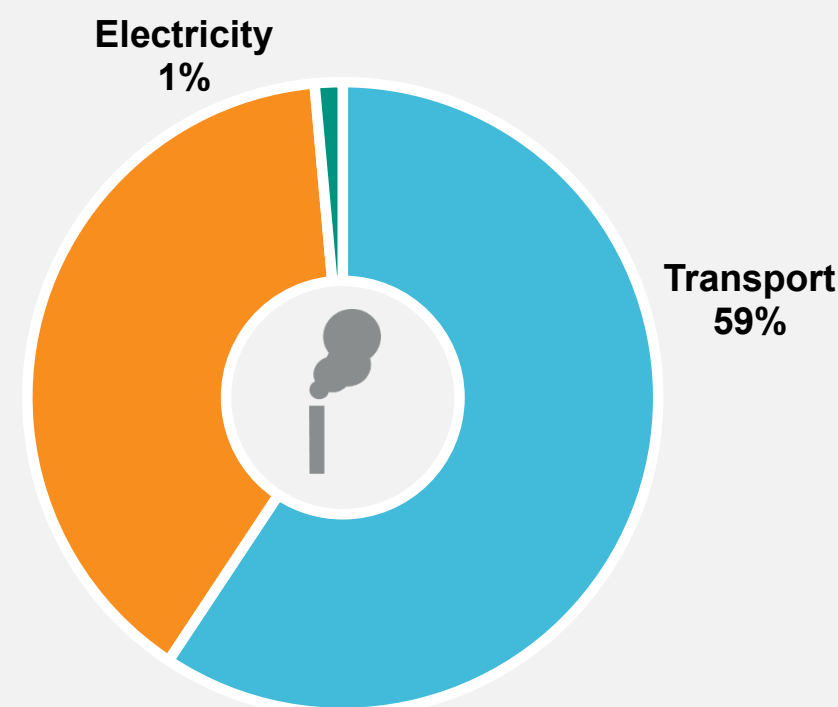
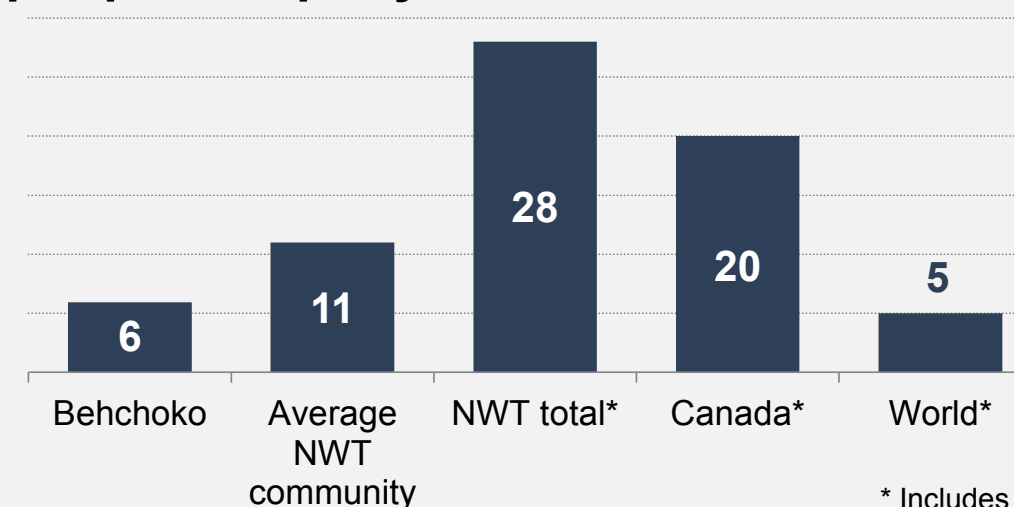


Greenhouse Gas (GHG) Emissions – 1 Year

Community total GHG emissions per year

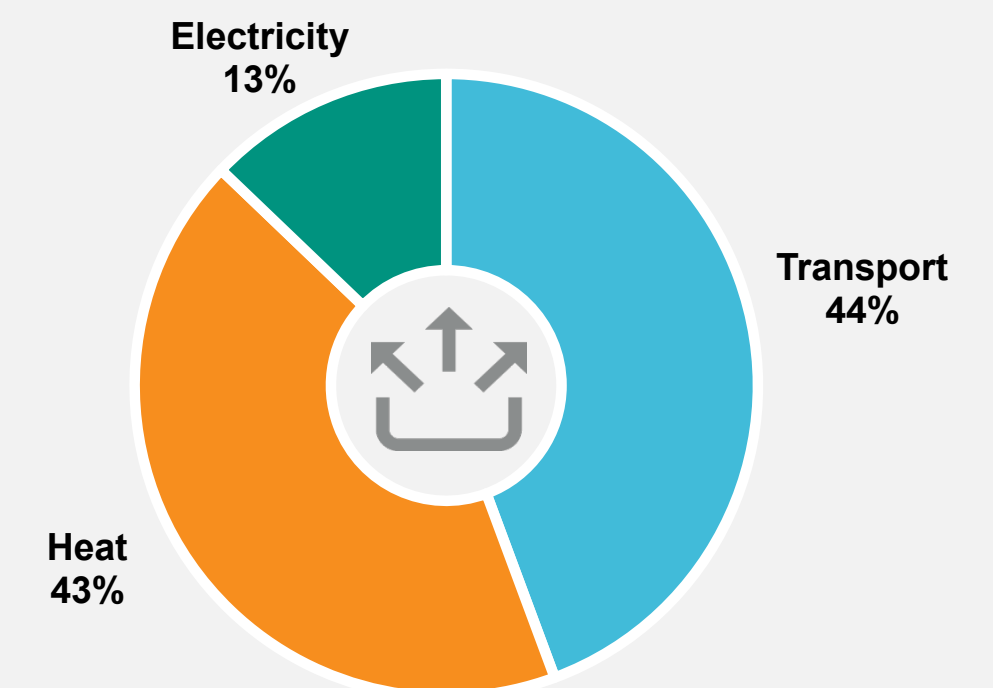
12,000 tonnes
6 tonnes/person

Average tonnes of GHGs per person per year



* Includes emissions from industry and commercial transport.

Energy Use – 1 Year



Energy use in homes

26% of total energy use
50% of total electricity
94% of total heating oil
100% of total firewood



Energy use in other buildings

Store, school, church, office, arena, library, etc.

20% of total energy use
50% of total electricity
6% of total heating oil
100% of total propane
100% of total wood pellets



Transport (local – no air transport)

Cars, trucks, boats, ATVs, skidoos, etc.

44% of total energy use
Fuel purchased in the community.



Waste energy

From electricity production and heating

10% of total energy use

ENERGY PROFILE

BEHCHOKO 2018

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

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



Gasoline

- 43% of total energy
- Cost: \$3,760,000
- Amount: 2,800,000 Litres
- GHGs: 6,880 tonnes
- Energy: 94,200,000 MJ



Heating oil

- 22% of total energy
- Cost: \$1,540,000
- Amount: 1,250,000 Litres
- GHGs: 3,360 tonnes
- Energy: 47,900,000 MJ



Hydro

- 12% of total energy
- Cost: \$2,970,000
- Amount: 7,170,000 kWh
- GHGs: 0 tonnes
- Energy: 25,800,000 MJ



Propane

- 10% of total energy
- Cost: \$776,000
- Amount: 863,000 Litres*
- GHGs: 1,330 tonnes
- Energy: 22,900,000 MJ



Wood pellets

- 6% of total energy
- Cost: \$253,000
- Amount: 706 tonnes
- GHGs: 24 tonnes
- Energy: 13,600,000 MJ



Firewood

- 5% of total energy
- Cost: \$218,000
- Amount: 546 Cords
- GHGs: 18 tonnes
- Energy: 10,200,000 MJ



Diesel for vehicles

- 2% of total energy
- Cost: \$131,000
- Amount: 99,000 Litres
- GHGs: 270 tonnes
- Energy: 3,800,000 MJ



Diesel generator

- 1% of total energy
- Cost: \$97,000
- Amount: 64,000 Litres
- GHGs: 170 tonnes
- Energy: 2,500,000 MJ



Solar PV

- 0.1% of total energy
- Cost: \$0
- Amount: 31,400 kWh
- GHGs: 0 tonnes
- Energy: 113,000 MJ

*Estimated due to lack of data

Total community energy use

- 221,100,000 MJ
- 110,000 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/nrgsstmrprfls/nt-eng.html>

https://ourworldindata.org/grapher/co-emissions-per-capita?tab=chart&country=AUS+CAN+USA+OWID_WRL

Total NWT energy use (2017)

Total: 20 billion MJ/year

