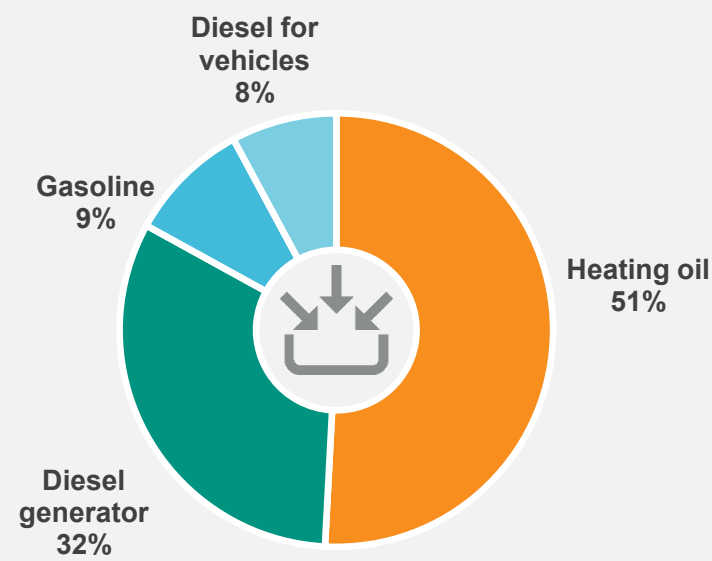


Energy Sources – 1 Year



Diesel generator produces electricity and heat

31% electricity
69% waste heat



Energy cost

Total: \$4,000,000
Cost per person: \$11,000
46% diesel generator
40% heating oil
8% gasoline
7% diesel for vehicles



Renewable energy

0.2% of total energy
0.2% 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

PAULATUK 2023

Population: 358

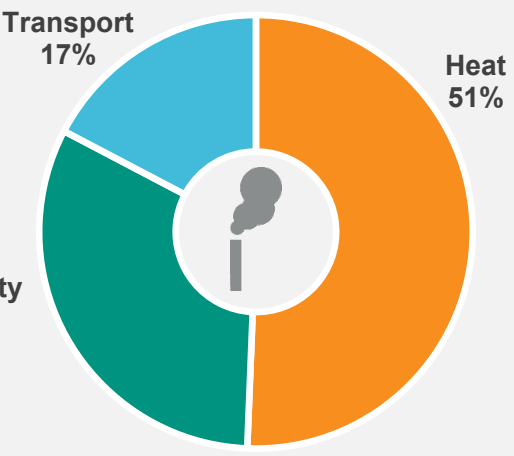
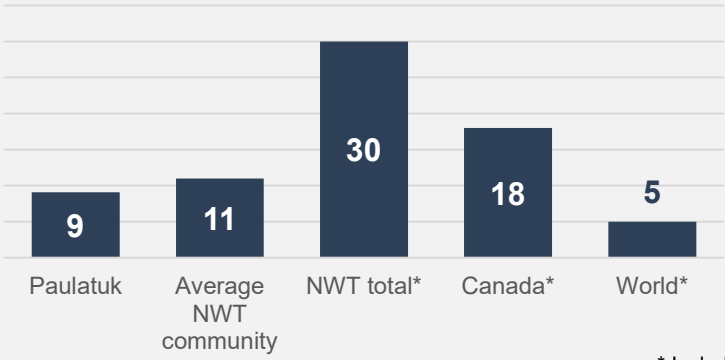


Greenhouse Gas (GHG) Emissions – 1 Year

Community total GHG emissions per year

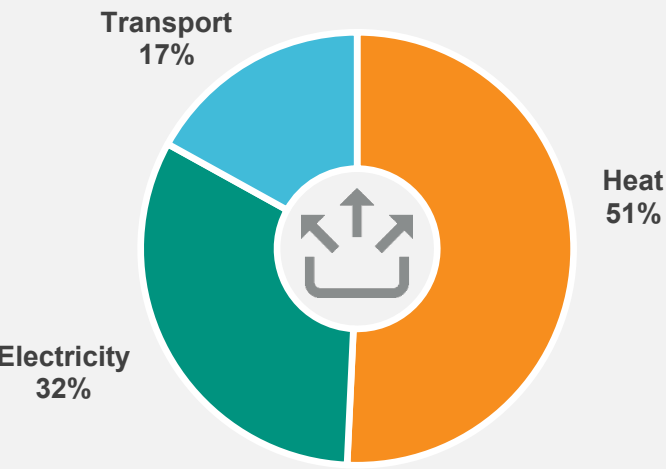
3,200 tonnes
9 tonnes/person

Average tonnes of GHGs per person per year



* Includes emissions from industry and commercial transport.

Energy Use – 1 Year



Energy use in homes

29% of total energy use
45% of total electricity
60% of total heating oil



Energy use in other buildings

Store, school, church, office, arena, library, etc.
22% of total energy use
55% of total electricity
40% of total heating oil



Transport (local – no air transport)

Cars, trucks, boats, ATVs, skidoos, etc.
17% of total energy use
Fuel purchased in the community.



Waste energy

From electricity production and heating
32% of total energy use

ENERGY PROFILE

PAULATUK 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



Heating oil

- 51% of total energy
- Cost: \$1,590,000
- Amount: 611,000 Litres
- GHGs: 1,640 tonnes
- Energy: 23,500,000 MJ



Diesel generator

- 32% of total energy
- Cost: \$1,840,000
- Amount: 387,000 Litres
- GHGs: 1,040 tonnes
- Energy: 14,900,000 MJ



Gasoline

- 9% of total energy
- Cost: \$330,000
- Amount: 125,000 Litres
- GHGs: 307 tonnes
- Energy: 4,210,000 MJ



Diesel for vehicles

- 8% of total energy
- Cost: \$261,000
- Amount: 94,600 Litres
- GHGs: 255 tonnes
- Energy: 3,630,000 MJ



Solar PV

- 0.2% of total energy
- Cost: \$0
- Amount: 24,100 kWh
- GHGs: 0 tonnes
- Energy: 86,900 MJ

Total community energy use

- 46,300,000 MJ
- 129,000 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.

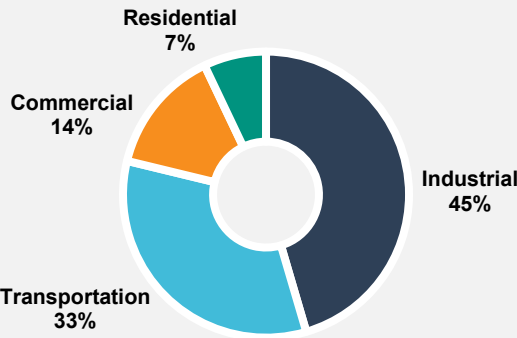
References

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



Community GHG emissions

- Homes: 30%
- Other buildings: 20%
- Transport: 17%
- Diesel generator: 32%