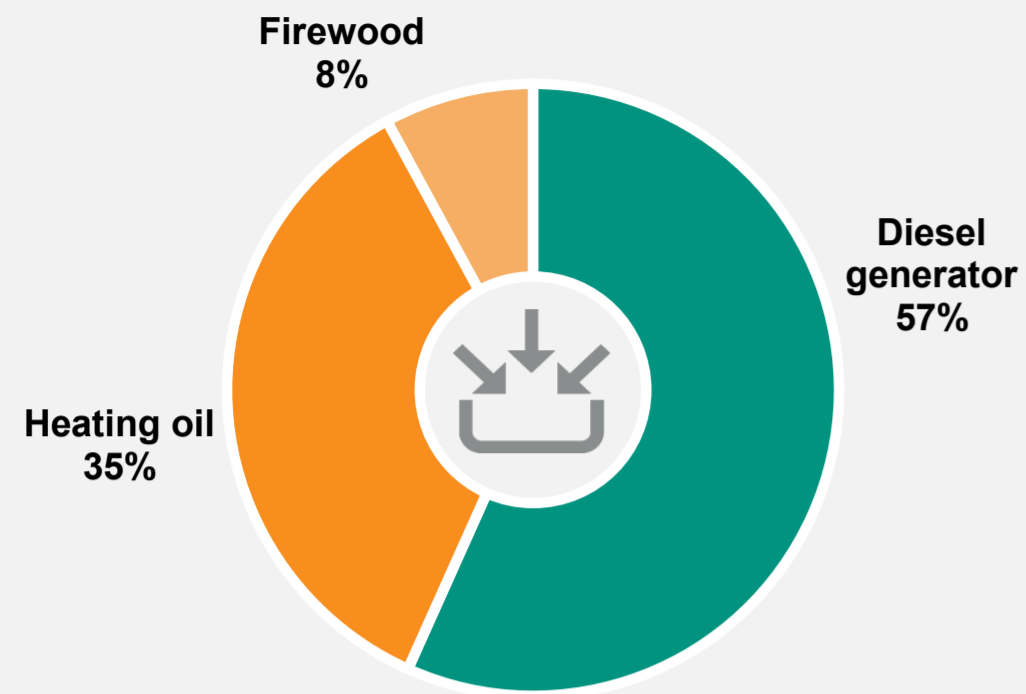


## Energy Sources – 1 Year



**Diesel generator produces electricity and heat**

**29%** electricity  
**71%** waste heat



**Energy cost**

**Total: \$318,000**  
Cost per person: \$6,100

**73%** diesel generator  
**25%** heating oil  
**2%** firewood



**Renewable energy**

**8%** of total energy  
**8%** of total from firewood

# ENERGY PROFILE

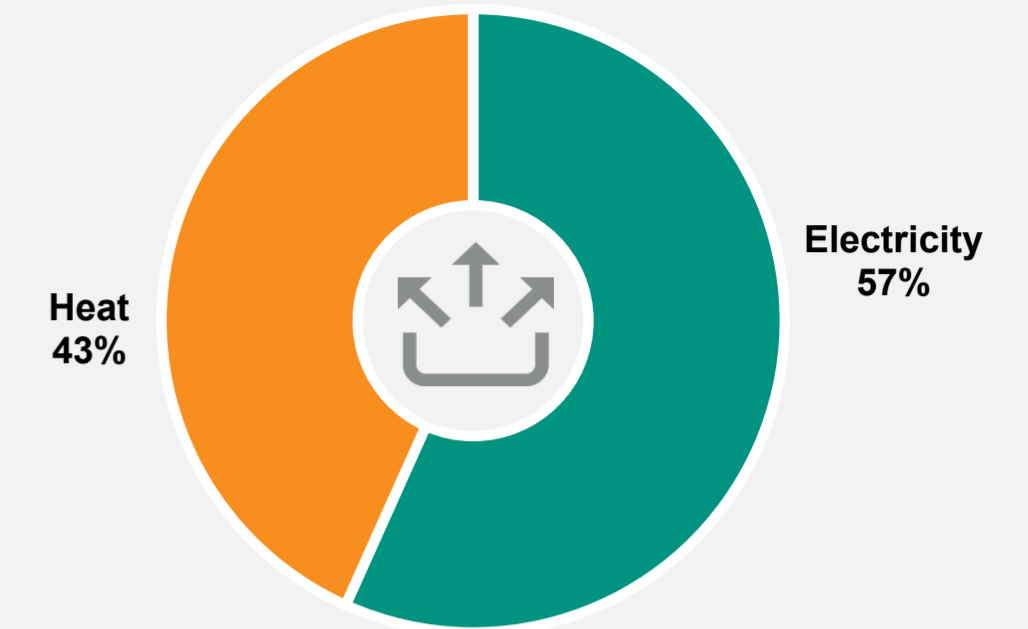
Where we get energy and how we use it

## KAKISA 2018

Population: 52



## Energy Use – 1 Year



**Energy use in homes**

**25%** of total energy use  
**43%** of total electricity  
**44%** of total heating oil  
**100%** of total firewood



**Energy use in other buildings**

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

**25%** of total energy use  
**57%** of total electricity  
**56%** of total heating oil



**Transport (local – no air transport)**

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

**0%** of total energy use  
Fuel purchased in the community.



**Waste energy**

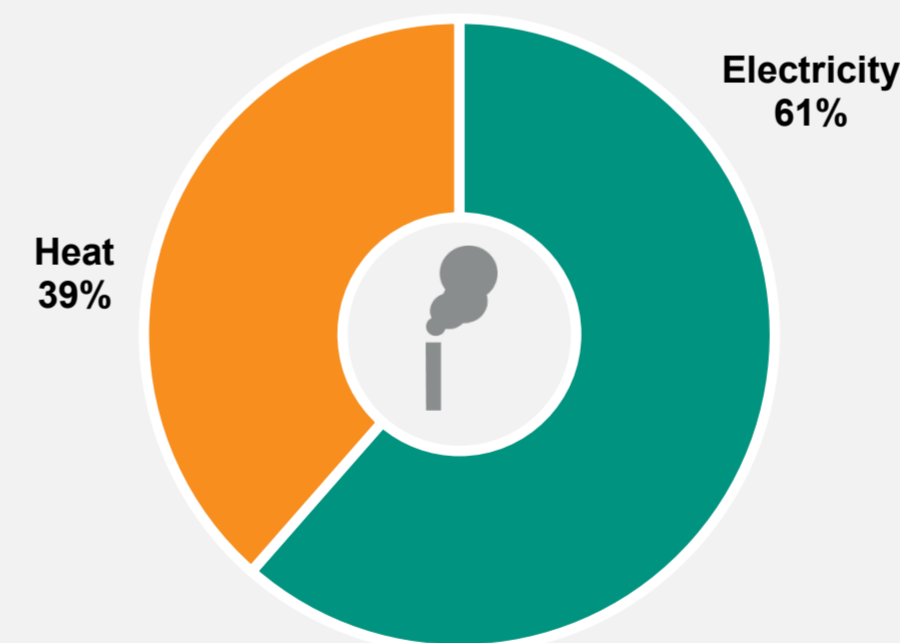
From electricity production and heating

**50%** of total energy use

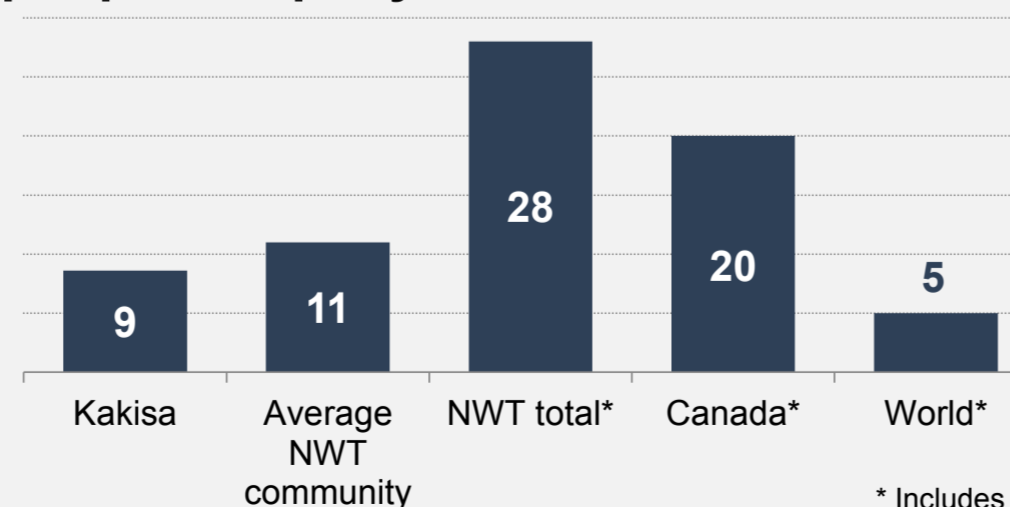
## Greenhouse Gas (GHG) Emissions – 1 Year

**Community total GHG emissions per year**

**400 tonnes**  
9 tonnes/person



**Average tonnes of GHGs per person per year**



\* Includes emissions from industry and commercial transport.

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

KAKISA 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



#### Diesel generator

- 57% of total energy
- Cost: \$232,000
- Amount: 102,000 Litres
- GHGs: 275 tonnes
- Energy: 3,920,000 MJ



#### Heating oil

- 35% of total energy
- Cost: \$78,000
- Amount: 64,000 Litres
- GHGs: 171 tonnes
- Energy: 2,440,000 MJ



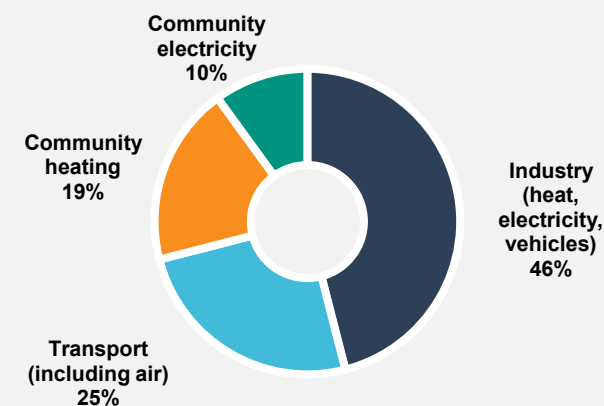
#### Firewood

- 8% of total energy
- Cost: \$7,000
- Amount: 29 Cords
- GHGs: 0 tonnes
- Energy: 548,000 MJ

### Total community energy use

- 6,900,000 MJ
- 130,000 MJ/person

### Total NWT energy use (2017)



Total: 20 billion MJ/year

### Community GHG emissions

- Homes: 20%
- Other buildings: 18%
- Transport: 0%
- Diesel generator: 61%

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