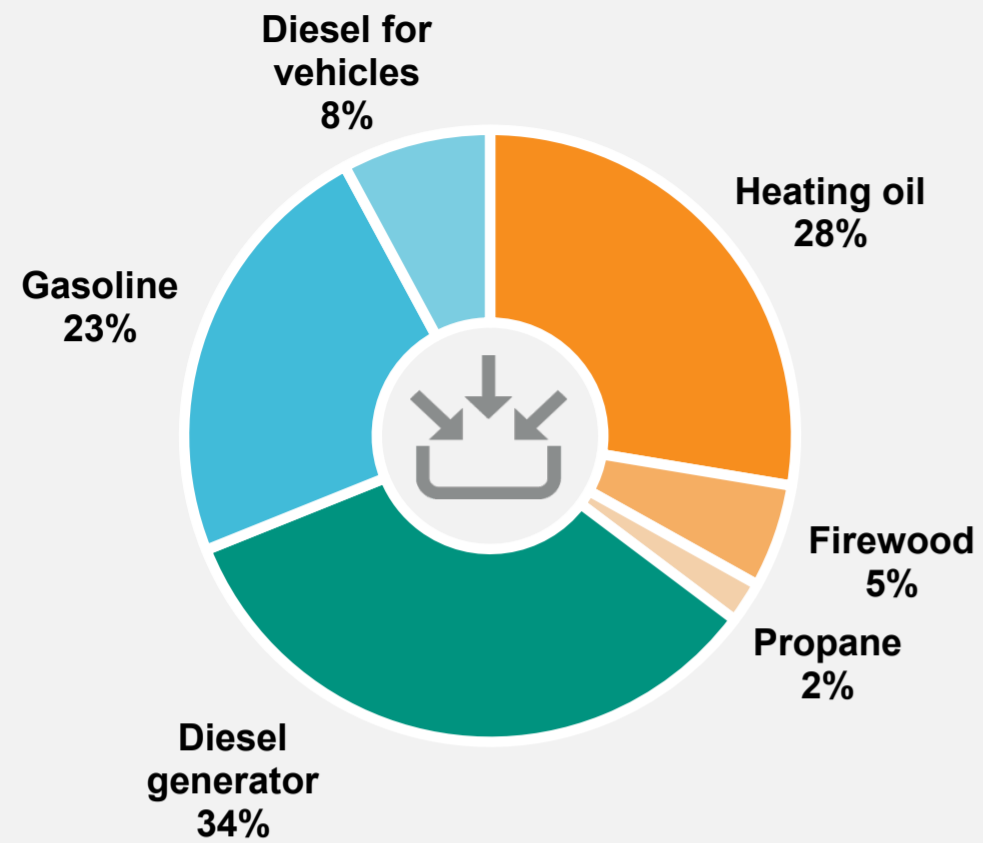


## Energy Sources – 1 Year



### Diesel generator produces electricity and heat

26% electricity  
74% waste heat



### Energy cost

Total: \$1,490,000  
Cost per person: \$12,700

63% diesel generator  
16% heating oil  
2% firewood  
1% propane  
14% gasoline  
4% diesel for vehicles



### Renewable energy

5% of total energy  
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

## WRIGLEY 2018

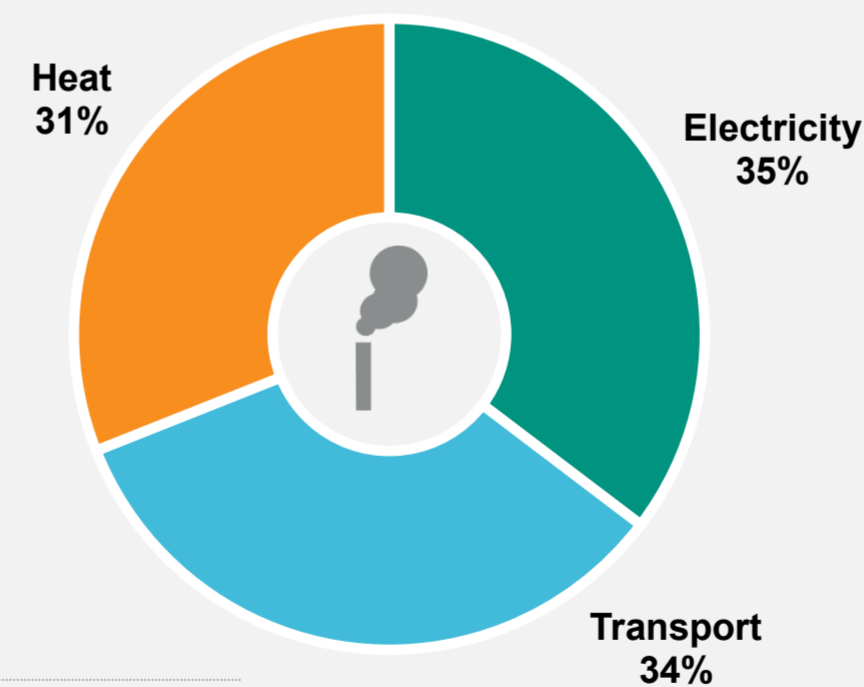
Population: 117



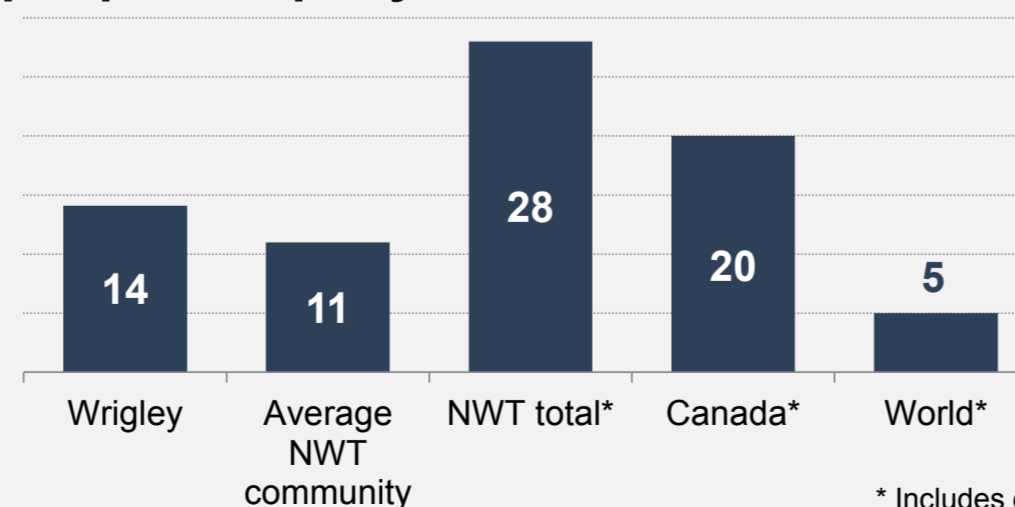
## Greenhouse Gas (GHG) Emissions – 1 Year

### Community total GHG emissions per year

2,000 tonnes  
14 tonnes/person

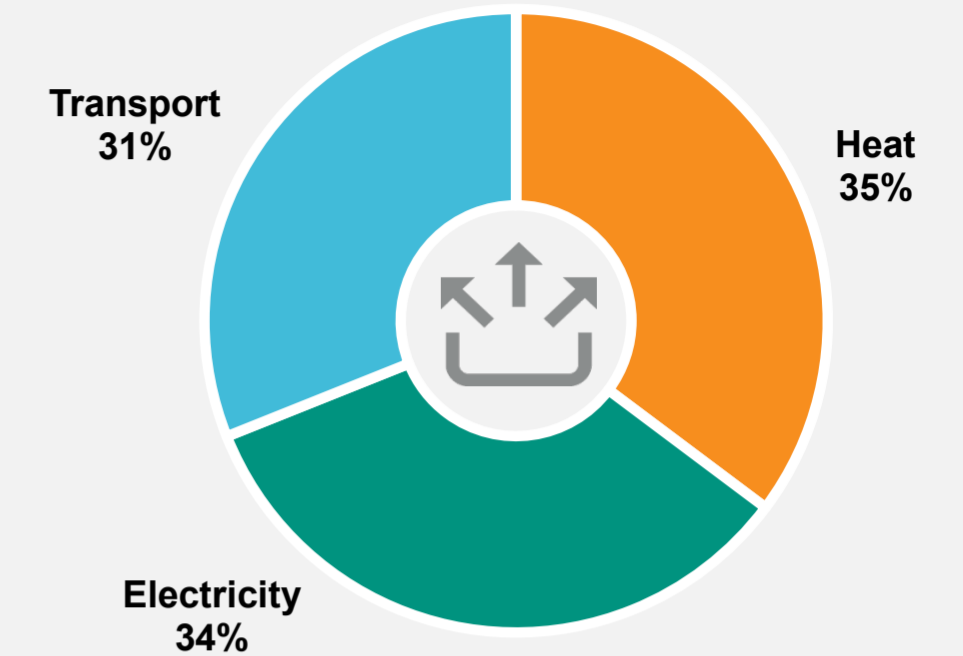


### Average tonnes of GHGs per person per year



\* Includes emissions from industry and commercial transport.

## Energy Use – 1 Year



### Energy use in homes

15% of total energy use  
43% of total electricity  
34% of total heating oil  
100% of total firewood



### Energy use in other buildings

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

21% of total energy use  
57% of total electricity  
66% of total heating oil  
100% of total propane



### 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

32% of total energy use



# ENERGY PROFILE

WRIGLEY 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

- 34% of total energy
- Cost: \$932,000
- Amount: 217,000 Litres
- GHGs: 583 tonnes
- Energy: 8,320,000 MJ



#### Heating oil

- 28% of total energy
- Cost: \$234,000
- Amount: 178,000 Litres
- GHGs: 478 tonnes
- Energy: 6,830,000 MJ



#### Gasoline

- 23% of total energy
- Cost: \$206,000
- Amount: 170,000 Litres
- GHGs: 419 tonnes
- Energy: 5,740,000 MJ



#### Diesel for vehicles

- 8% of total energy
- Cost: \$67,000
- Amount: 51,000 Litres
- GHGs: 136 tonnes
- Energy: 1,950,000 MJ



#### Firewood

- 5% of total energy
- Cost: \$29,000
- Amount: 73 Cords
- GHGs: 0 tonnes
- Energy: 1,360,000 MJ



#### Propane

- 2% of total energy
- Cost: \$19,000
- Amount: 20,000 Litres
- GHGs: 31 tonnes
- Energy: 537,000 MJ



#### Solar PV

- 0.1% of total energy
- Cost: \$0
- Amount: 6,000 kWh
- GHGs: 0 tonnes
- Energy: 22,000 MJ

### Community GHG emissions

- Homes: 13%
- Other buildings: 18%
- Transport: 34%
- Diesel generator: 35%

### Total community energy use

- 24,800,000 MJ
- 210,000 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](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

