



# Government of Yukon greenhouse gas emissions: 2020

August 2022

# Table of Contents

Highlights.....	2
Overview.....	3
Third party verification.....	3
Methodology.....	4
Reporting boundary and scope.....	6
Data sources .....	8
Methodology updates .....	8
Results.....	10
Total Government of Yukon greenhouse gas emissions .....	10
Department emissions .....	11
Corporation emissions .....	22
Conclusions and next steps .....	27



# Government of Yukon: 2020 greenhouse gas emissions

## 2020 emissions:

Total operations:

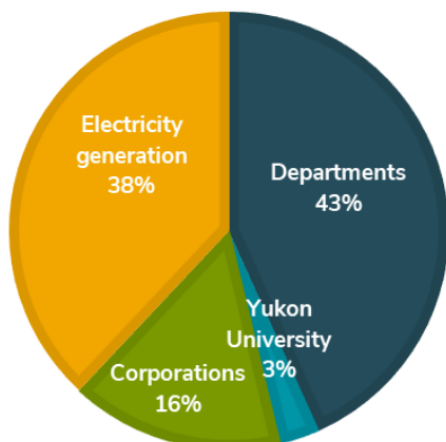
**78.8**

kilotonnes of CO<sub>2</sub>e

Department buildings:

**22.2**

kilotonnes of CO<sub>2</sub>e



## Comparison to 2019:

Emissions were higher than expected in 2020 due to exceptionally cold temperatures and low hydro energy availability.

Total operations:

27% increase

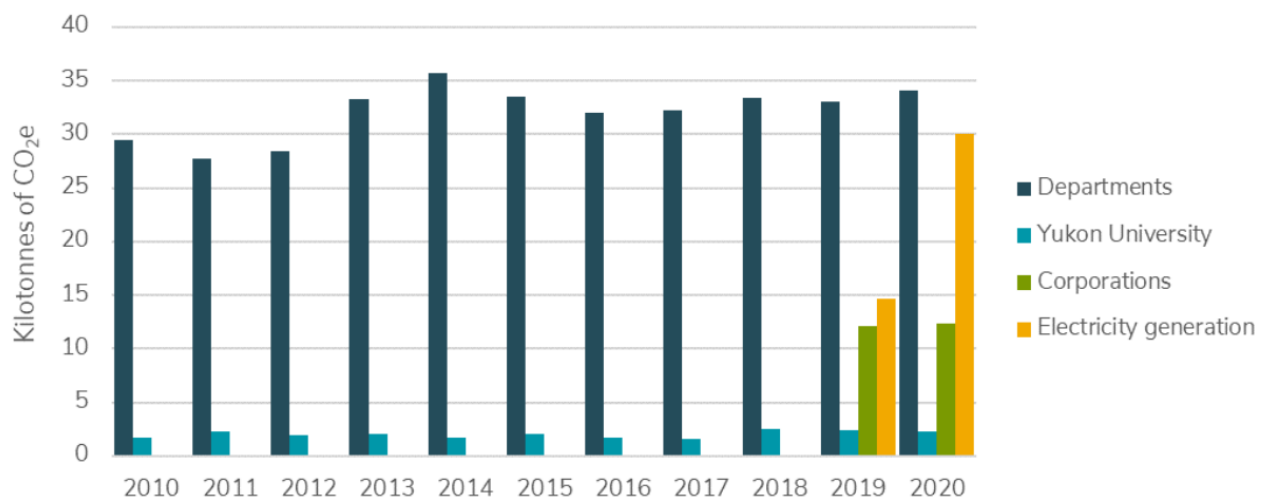


Department buildings:

8% increase



Government of Yukon total greenhouse gas emissions



## Connection to Our Clean Future Goals:

Our Clean Future action H1 is to reduce greenhouse gas emissions from Government of Yukon operations with a focus on heating and powering department buildings.

# Overview

The Government of Yukon is committed to tracking greenhouse gas emissions from our internal operations. This report communicates the Government of Yukon's total greenhouse gases in 2020. It identifies major emission sources and provides an analysis of the major factors that have influenced emissions over time. This report also presents the methodology used to calculate the Government of Yukon's greenhouse gas inventory. The greenhouse gas emissions reported in this document are not additional to those reported in *Greenhouse Gas Emissions in the Yukon: 2020*; they are a sub-set of the Yukon's emissions which come from Government of Yukon's operations. For example, the fuel used to heat Government of Yukon buildings would also be counted as part of the Yukon's overall emission from heating.

## Third party verification

We undertake rigorous work each year to calculate the Government of Yukon's emissions. Every five years, these calculations are verified by an independent third party to ensure the data is accurate and adheres to all greenhouse gas reporting standards. This is done through [The Climate Registry](#), a non-profit organization that designs and operates global greenhouse gas reporting programs for organizations to accurately track their emissions.

Verification by The Climate Registry is an important quality assurance step. It provides a higher level of confidence in the methodology used to calculate the Government of Yukon's emissions inventory. It also helps ensure we track emissions reductions against an accurate baseline. Currently, the Government of Yukon's [2010](#) and [2015](#) greenhouse gas emission reports are available through the Climate Registry Information System. The Government of Yukon's 2020 greenhouse gas emission calculations are currently being third-party verified according to The Climate Registry's standards.

## Methodology

All greenhouse gas emission calculations are undertaken in adherence to the principles and standards set by The Climate Registry. These standards specify the types of emission sources that must be included and the specific methods to be used to calculate greenhouse gas emissions based on the source. This includes the emissions factors that must be used to calculate greenhouse gas emissions from different sources.

Emission factors are the conversion factors used to measure the amount of greenhouse gases emitted per unit of fuel or energy consumed. The Climate Registry provides guidance based on national and international greenhouse gas emission reporting standards. As a result, The Climate Registry uses emission factors to calculate the Government of Yukon's greenhouse gas emissions that come from Environment and Climate Change Canada's National Inventory Report.

Greenhouse gas emissions are reported in tonnes of **carbon dioxide equivalent (CO<sub>2</sub>e)**. This means that greenhouse gases other than carbon dioxide (such as methane and nitrous oxide) are included in the calculations based on their potency relative to carbon dioxide. For example, one tonne of methane is the same as 28 tonnes of carbon dioxide in terms of its climate impact. The measure of a greenhouse gases' potency relative to CO<sub>2</sub> is known as its **global warming potential (GWP)**, and is used as a multiplier to convert volumes of non-CO<sub>2</sub> gases into their volume in CO<sub>2</sub>e.

### Grid-specific electricity emissions

Given the Yukon's unique electricity generation context, the Department of Highways and Public Works' Energy Management Unit produces annual emission factors for the Yukon Integrated System (electricity produced by the Yukon Energy Corporation) and each off-grid community (electricity produced by ATCO Electric Yukon) based on data from these entities. This ensures the actual carbon intensity of purchased electricity throughout the territory is accurately reflected and captures year-to-year variations. These variations are based on factors such as annual rainfall, drought, winter temperatures, demand, and the integration of new renewable electricity sources.

These emission factors are developed based on the total amount of electricity generated with hydro power and the total amount of electricity generated with thermal (diesel or LNG) sources during the reporting year. Table 1 shows the emission factors used to calculate emissions from purchased electricity in 2020. Yukon's five off-grid communities (Old Crow, Watson Lake, Beaver Creek, Destruction Bay and Burwash Landing), and the Swift River highway camp each have their own emission factor to reflect their specific carbon intensity. All other Yukon communities use the Yukon Integrated System emission factor.<sup>1</sup> The territory-wide average electricity emissions factor, which was not used, is included for comparison.

**Table 1. Yukon average and grid-specific electricity emission factors in 2020.**

Electricity grid	Carbon intensity (gCO <sub>2</sub> e/kWh)
Yukon Integrated System	65.7
Old Crow	748.6
Watson Lake	720.2
Beaver Creek	810.5
Destruction Bay/Burwash Landing	755.4
Swift River	965.3
Yukon average	100

As can be seen in Table 1, the Yukon Integrated System (predominantly hydro electricity) emission factors and the off-grid community (predominantly diesel

---

<sup>1</sup> Note that grid-specific emission factors apply to electricity **purchased** by Government of Yukon reporting entities. They are not used to calculate Yukon Energy Corporation's emissions from electricity generation.

generation) emission factors are substantially different from the Yukon average. This highlights the importance of using distinct emission factors, because the Government of Yukon purchases different amounts of electricity in different communities.<sup>2</sup> A more detailed accounting of the emissions from purchased electricity means that our emissions inventory will more accurately reflect our hydroelectricity legacy infrastructure and updates and investments in energy efficiency and renewable energy in different locations.

## Reporting boundary and scope

In greenhouse gas emission reporting, a defined inventory boundary is key to ensure consistency between reporting years so that progress can be measured over time. Reporting boundaries clearly define what emission sources are counted within an organization's greenhouse gas emission inventory and what sources are not included. The Government of Yukon reports our emissions using a "Financial Control Boundary." This means that only entities we control financial policies for are included in our inventory.

Under this boundary, all entities that are included under the Government of Yukon's annual consolidated financial reports (collectively referred to as government reporting entities) are included. Therefore, the Government of Yukon's greenhouse gas inventory includes emissions from the following entities:

- all Government of Yukon departments;
- Yukon University;
- Yukon Development Corporation;
- Yukon Energy Corporation;
- Yukon Hospital Corporation;
- Yukon Housing Corporation; and
- Yukon Liquor Corporation.

---

<sup>2</sup> Conversely, when reporting Yukon's total emissions from electricity generation, this level of specificity is not necessary. For Yukon-wide emissions reporting, we look at the total amount of fossil fuels combusted for electricity generation across the territory and do not need to factor in the location where these fuels are combusted.

The Government of Yukon began collecting greenhouse gas emissions data for departments and Yukon University (previously Yukon College) in 2010. Up until 2018, we only reported on emissions from Government of Yukon departments. Emissions from government corporations and Yukon University were newly added to this reporting process in 2019 according to the requirements of the Financial Control Boundary.

The Government of Yukon's reporting boundary also defines which emission sources within each entity are to be included. Each emission source is classified as one of three scopes:

- **Scope 1:** Direct emissions from assets owned by Government of Yukon reporting entities. This includes emissions from:
  - building heating;
  - transportation;
  - waste management; and
  - refrigeration.
- **Scope 2:** Indirect emissions from the generation of purchased electricity.
- **Scope 3:** Other indirect emission sources. This includes emissions from leased buildings and vehicles.

The Government of Yukon's emissions reporting includes Scope 1 and 2 emissions only. Scope 3 emissions include upstream and downstream emissions that occur as an indirect result of the Government of Yukon's operations. These include emissions from leased buildings and vehicles, and emissions from staff commuting. These emission sources are addressed through other policies implemented as part of *Our Clean Future: a Yukon strategy for climate change, energy and a green economy*. They are not included in Government of Yukon emissions reporting, as they are considered out of scope.

In this report, we will present emissions from Government of Yukon departments first. Since data for these entities dates back to 2010, their 2020 emissions inventory will be compared against previous years. Next, the emissions from government corporations are reported on, with a focus on the key emissions sources for each entity, as well as comparison between 2019 and 2020 emissions.



## Data sources

Two main sources of information are used to calculate the greenhouse gas emissions from Government of Yukon departments and Yukon University:

- **Public Building Energy Tracker (PBET):** tracks the amount of heating fuel and electricity used in each Government of Yukon department and Yukon University building. This database is the most significant source of information for our greenhouse gas inventory. This is because more than half of departmental emissions come from heating buildings.
- **KEYS database:** tracks the volume of fuel used by departmental and Yukon University fleet vehicles, which accounts for nearly one-quarter of the government's emissions.

The remaining emission sources that are not captured in these two databases are:

- **Fuel associated with non-fleet vehicles:** fuel usage from vehicles not managed through the Government of Yukon's Fleet Vehicle Agency are collected via direct correspondence with the responsible branches. The main source of non-fleet vehicle emissions are heavy-duty vehicles used to maintain Yukon's transportation infrastructure.
- **Waste management** (landfilling, waste water treatment, solid waste incineration): includes emissions from Government of Yukon-owned landfills, septic pits, sewage lagoons, and sites where waste is incinerated. This makes up a relatively small proportion of total emissions. It is estimated based on the population that each site services.
- **Refrigeration:** includes air conditioning in fleet vehicles and stationary refrigeration systems. As part of [The Climate Registry](#) reporting standards, all refrigerants that are regulated under the Kyoto Protocol must be reported. These include common refrigerants such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).

All data on government corporation emission sources are collected via direct correspondence with each corporation.

## Methodology updates

The Government of Yukon continuously improves the quality of our reported emissions. When more precise methodologies or more accurate data sources become available,

they are retroactively applied to all previous annual inventories. This ensures that the emissions reported each year are calculated in the same way, and therefore are directly comparable to one another. Table 1 summarizes the changes to historical emissions in this report as compared to those reported last year.

**Table 2: Changes to historical departmental emissions due to methodology updates**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Emissions reported in 2019 (kt CO <sub>2</sub> e)	31.08	30.60	31.33	33.33	33.17	33.80	31.36	32.25	33.67	34.35
Current emissions (kt CO <sub>2</sub> e)	29.49	27.71	28.38	33.27	35.64	33.53	31.97	32.21	33.43	32.99
% change	-5.1	-9.4	-9.4	-0.2	7.4	-0.8	2.0	-0.1	-0.7	-3.9

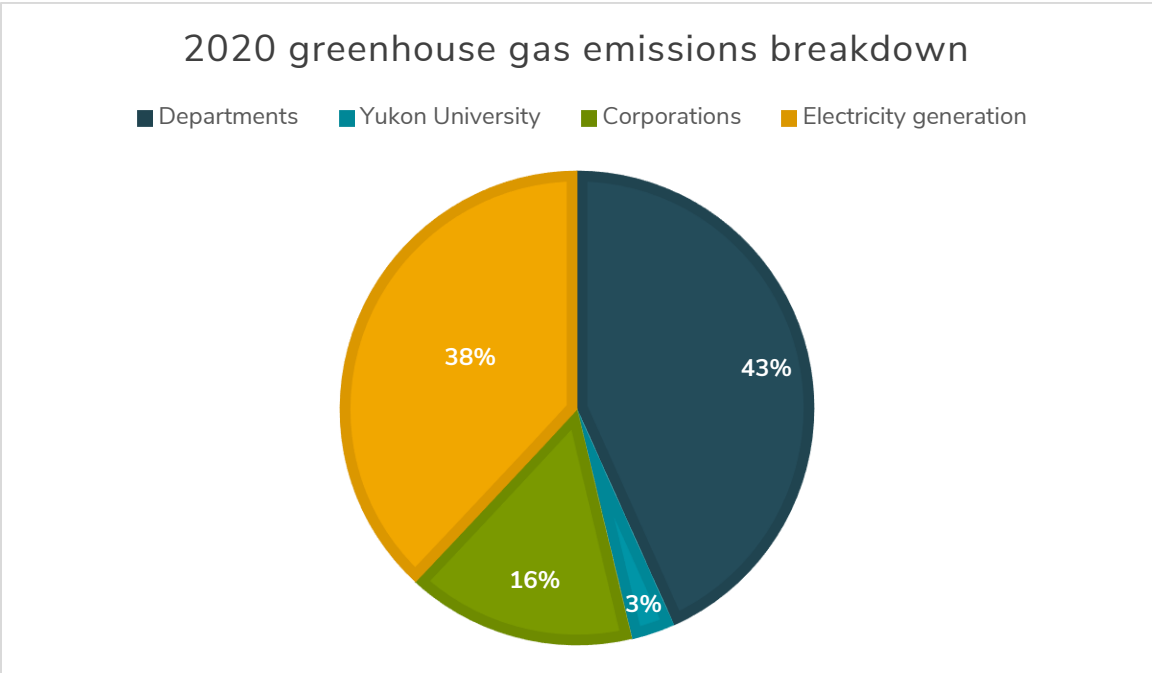
As seen in Table 2, there was a consistent decrease in historical greenhouse gas emissions, with the exception of 2014 which was revised upwards. This is due to accounting improvements undertaken to remove double-counting and more accurately reflect fuel end use.



# Results

## Total Government of Yukon greenhouse gas emissions

Greenhouse gas emissions from the Government of Yukon's operations, including all departments, Yukon University and government corporations, were 78.8 kilotonnes of CO<sub>2</sub>e in 2020<sup>3</sup>.



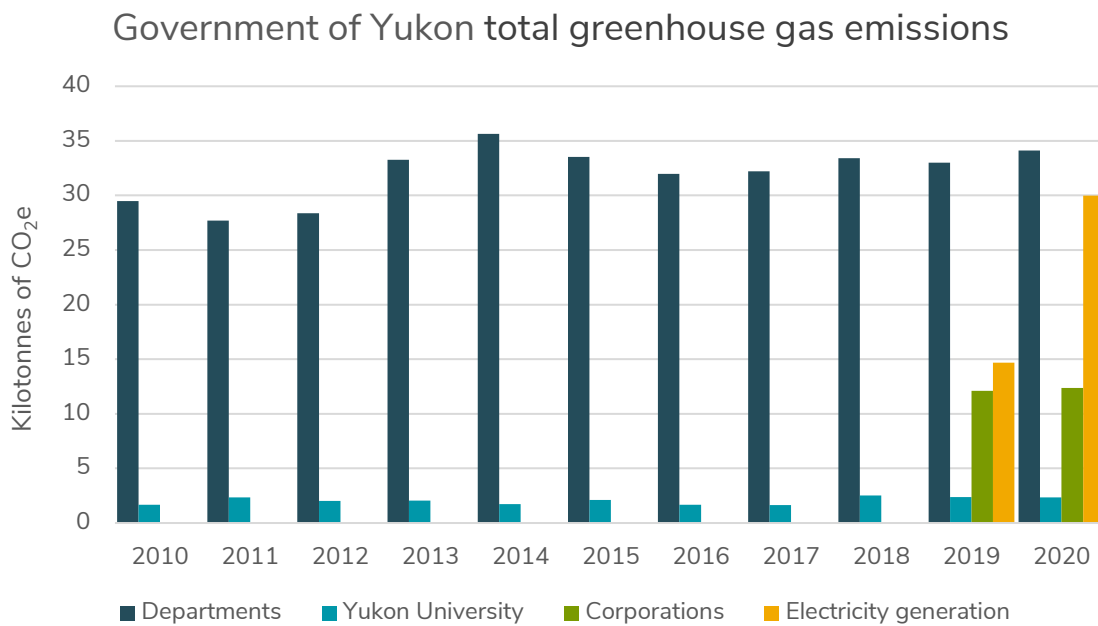
**Figure 1: Breakdown of the Government of Yukon's 2020 greenhouse gas emissions.**

Government of Yukon departments made up 43 per cent of total emissions; Yukon University made up three per cent; government corporations<sup>4</sup> were responsible for 16 per cent and electricity generation by Yukon Energy Corporation comprised the remaining 38 per cent (Figure 1).

<sup>3</sup> To avoid double-counting, the emissions from electricity which Government of Yukon purchases from the Yukon Integrated Grid are subtracted from Yukon Energy Corporation's electricity generation emissions when reporting total Government of Yukon emissions.



As shown in Figure 2, emissions from Government of Yukon departments were 34.1 kilotonnes of CO<sub>2</sub>e in 2020, which is a 15 per cent increase over 2010 emissions and a three per cent increase over 2019 emissions. Departmental emissions were four per cent lower than the previous peak of 35.6 kilotonnes in 2014. Emissions data from Yukon’s government corporations was collected for the first time in 2019, so limited historical comparisons can be made.



**Figure 2: Total greenhouse gas emissions from the Government of Yukon’s operations from 2010 to 2020.**

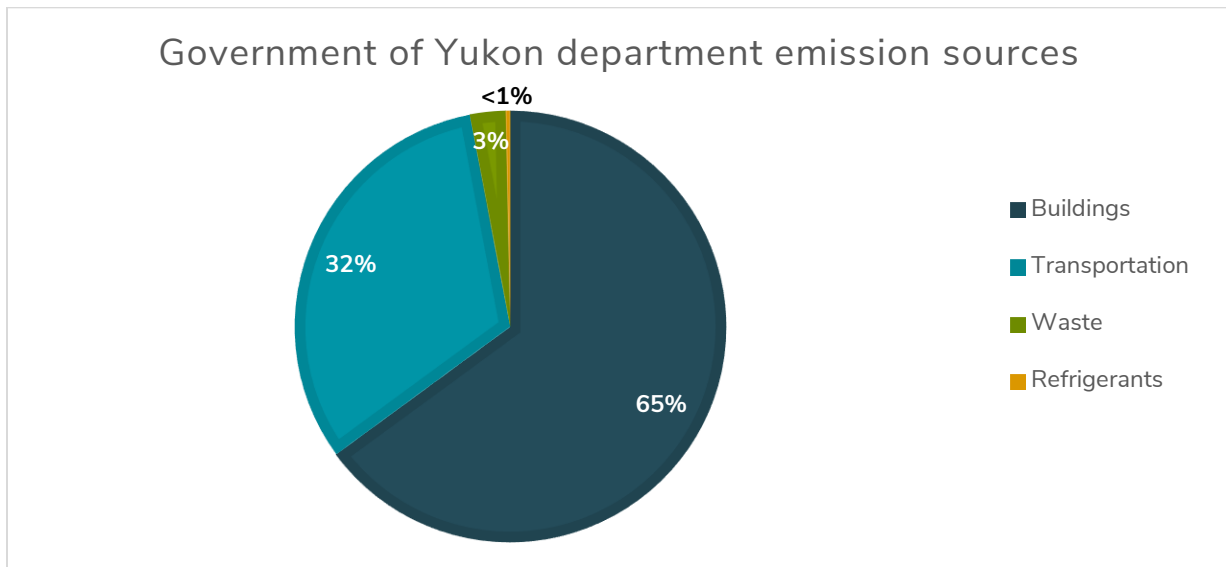
## Department emissions

### Emissions by source

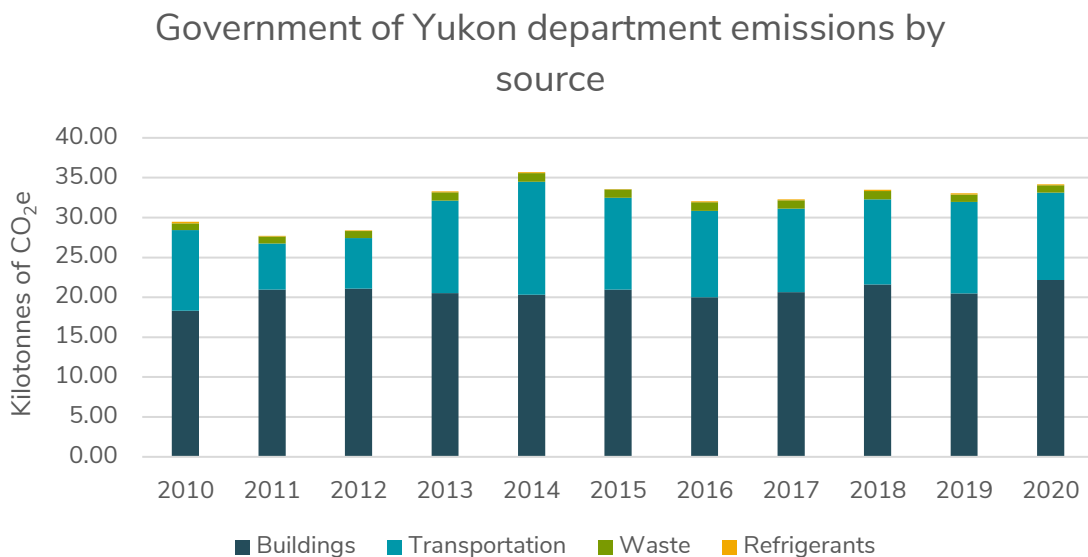
**Together, buildings and transportation made up 97 per cent of emissions from Government of Yukon departments in 2020.** Although there was some variation between 2010 and 2020 in the proportion of emissions from each category, the remaining emissions sources (waste management and refrigeration) consistently make



up a small percentage of the Government of Yukon's total emissions, as seen in Figure 3.



**Figure 3: Government of Yukon department emissions sources in 2020.**



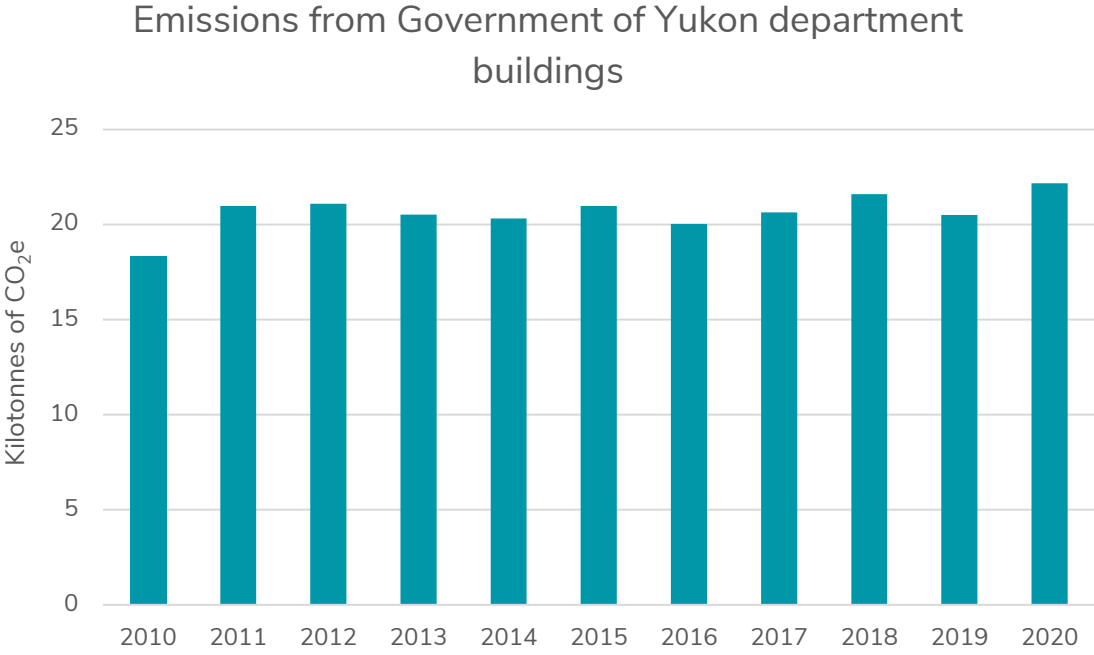
**Figure 4: Government of Yukon department emissions by source, 2010 – 2020.**

As shown in Figure 4, greenhouse gas emissions from both buildings and transportation increased from 2010 to 2020, while emissions from waste treatment and refrigerants decreased slightly. Trends observed in each of these four categories are discussed below.



Building emissions

**Heating and powering buildings consistently makes up the largest proportion of Government of Yukon department emissions, comprising 65 per cent of 2020 emissions.**

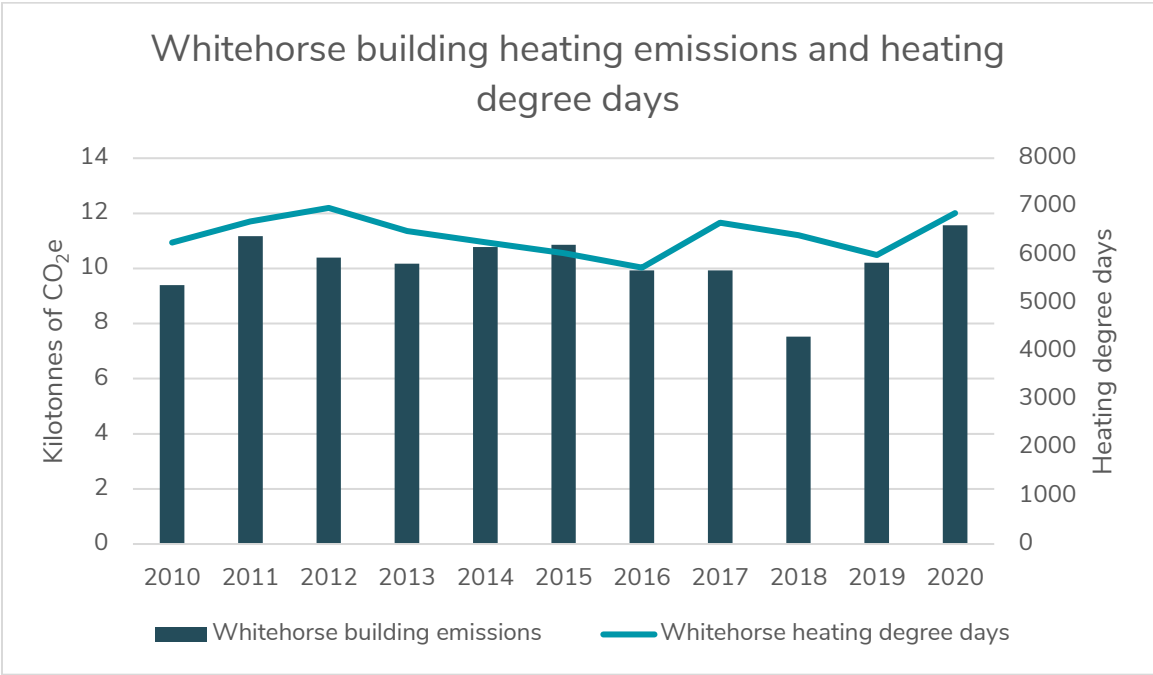


**Figure 5. Greenhouse gas emissions from Government of Yukon department buildings from 2010 to 2020.**

Government buildings such as schools, healthcare facilities and office buildings continue to be the largest emission category for Government of Yukon departments. Building emissions in 2020 were higher than expected, in large part due to a low snowpack and exceptionally low temperatures in January to April of 2020. This meant reduced hydroelectric capacity and increased electricity demand, which resulted in the territory requiring more thermal generation.



In addition, as seen in Figure 6, colder temperatures led to higher heating demands. Heating degree days (HDDs) are a measure of how far below 18 degrees Celsius each day's average temperature is. Higher HDD values indicate colder weather and higher heating demand. Although Government of Yukon's Whitehorse building emissions were low in 2018 relative to that year's HDDs, 2019 and 2020 emissions appear to be closely linked to HDDs.



**Figure 6. Whitehorse building heating emissions relative to heating degree days.**



Approximately two-thirds (62 per cent) of Government of Yukon department building emissions come from buildings in Whitehorse, as seen in Figure 7. The next most significant contributors are buildings in Watson Lake and Dawson City, making up eight and five per cent, respectively. These communities are notable contributors because they have the highest populations in the Yukon outside of Whitehorse, and Watson Lake relies on diesel-generated electricity.

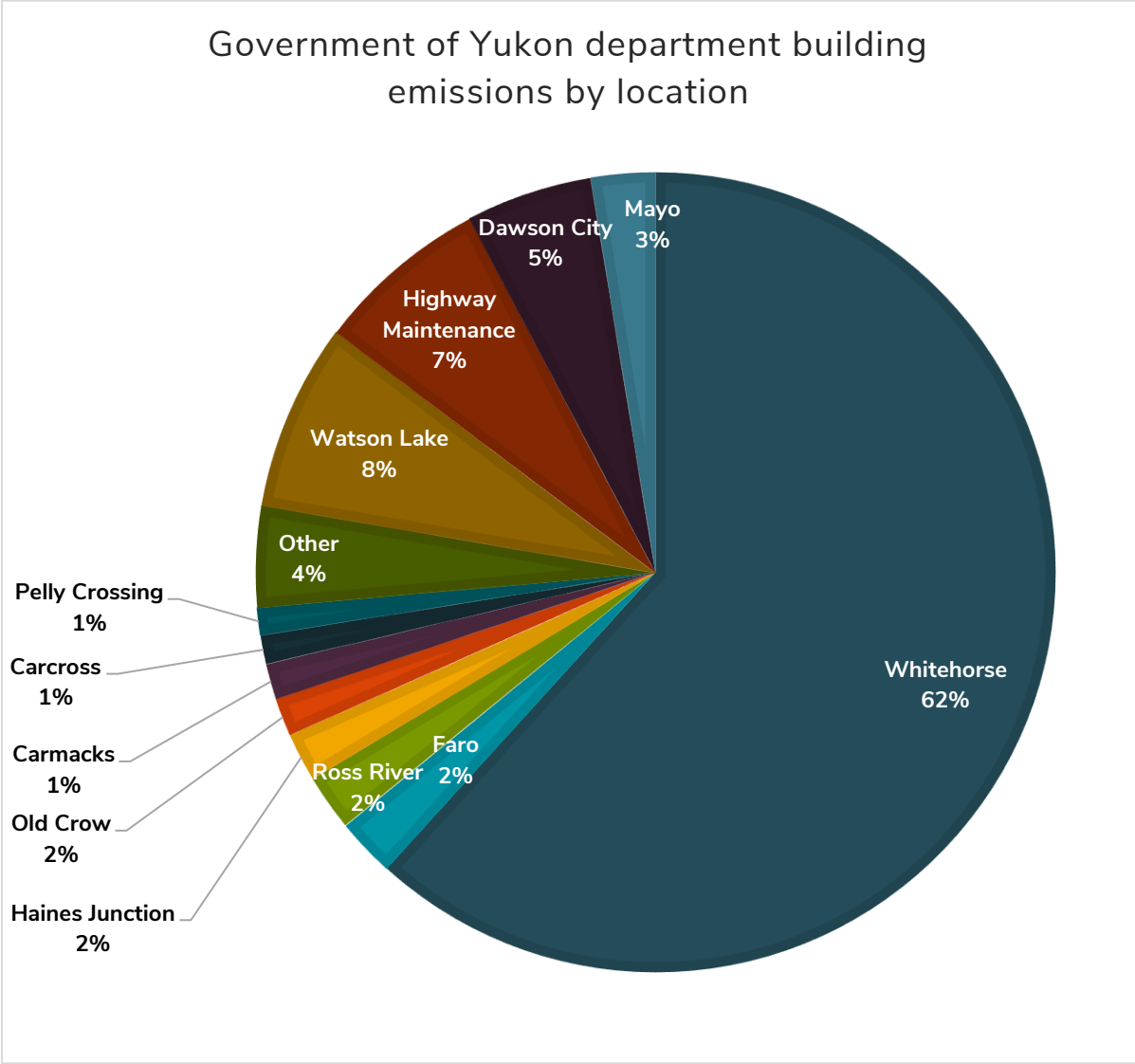


Figure 7: Greenhouse gas emissions from Government of Yukon buildings by location in 2020.



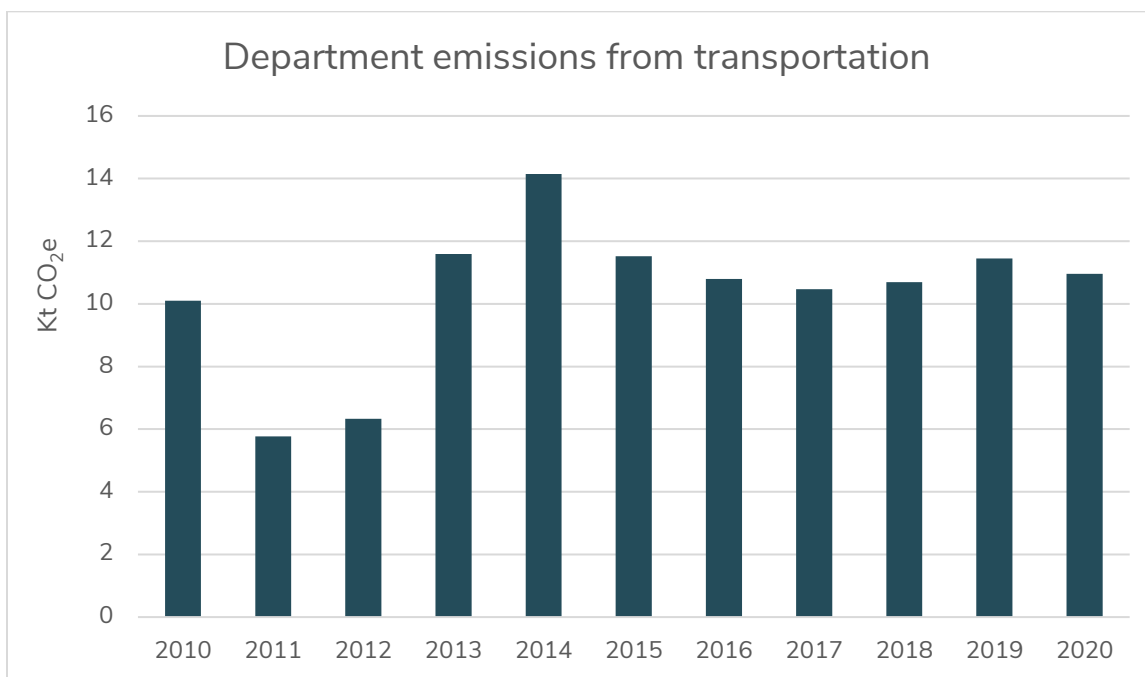


Remote highway maintenance facilities and structures collectively make up seven per cent of Government of Yukon department building emissions. These remote camps have higher emissions since they are isolated from electrical grids and rely predominantly on on-site diesel generators for power. These camps consist of grader stations, living complexes, and other related facilities along the Yukon's highways. After highway maintenance camps, Government of Yukon department buildings in Mayo, Faro, Ross River and Haines Junction are also notable contributors.

### Transportation emissions

**The second largest source of Government of Yukon department emissions is transportation, which made up 32 per cent of 2020 emissions.**

This includes fleet vehicles (on- and off-road) and heavy-duty vehicles used to maintain the Yukon's road network. On-road fleet vehicles are those registered for use on official roadways, while off-road fleet vehicles are not used on official roadways and include vehicles used for maintenance and construction purposes. Transportation emissions in 2020 were nine per cent higher than 2010 levels, but 23 per cent lower than the 2014 emissions peak.



**Figure 8: Government of Yukon department greenhouse gas emissions from transportation from 2010 to 2020.**

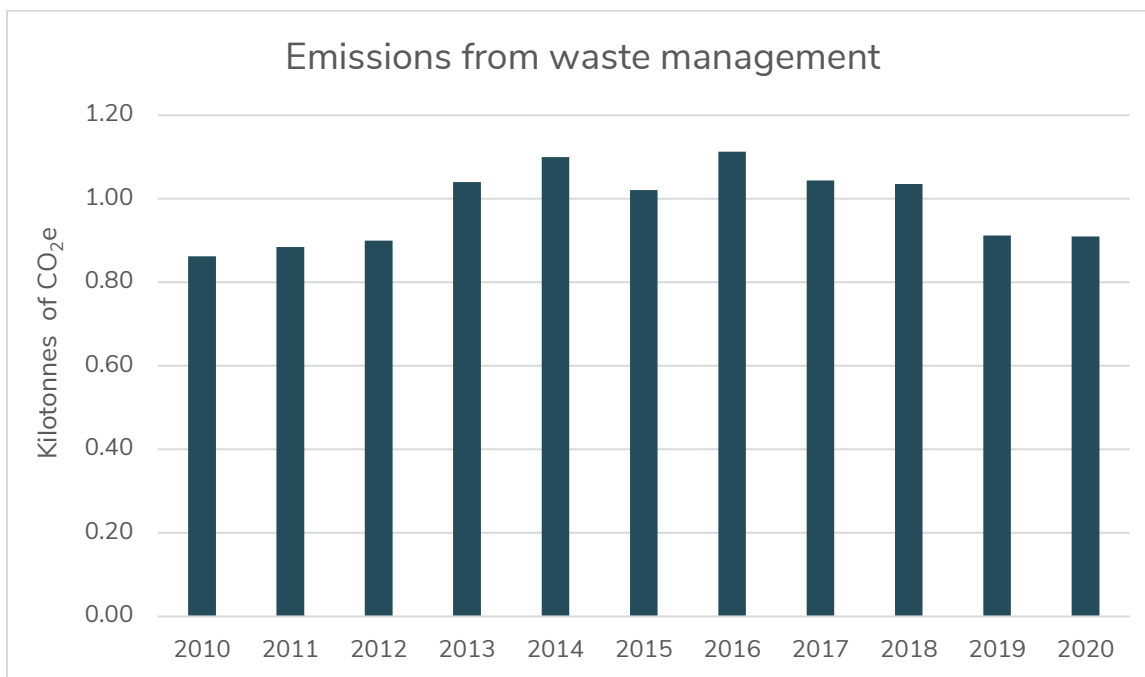


On-road and off-road vehicle emissions were fairly consistent between 2010 and 2020, whereas emissions related to transportation maintenance (specifically vehicles and equipment used to maintain road equipment) are more varied year to year according to the amount of maintenance required in a given year. This explains some of the variance seen in the overall transportation category over the last decade. The net increase in transportation emissions seen between 2010 and 2020 is likely due in part to an increasing scope and frequency of road infrastructure maintenance work.

### Waste management emissions

**Waste management makes up a relatively small percentage of Government of Yukon department emissions, comprising 3 per cent of 2020 emissions.**

As discussed, the Government of Yukon reports its greenhouse gas emissions using a Financial Control Boundary, meaning that all sites owned by the Government of Yukon fall within this boundary. This includes a number of community landfills, sewage treatment sites, and waste incineration sites across the territory.



**Figure 9: Government of Yukon department emissions from waste management (including government-owned landfills, septic/sewage treatment sites and waste incineration) from 2010 to 2020.**

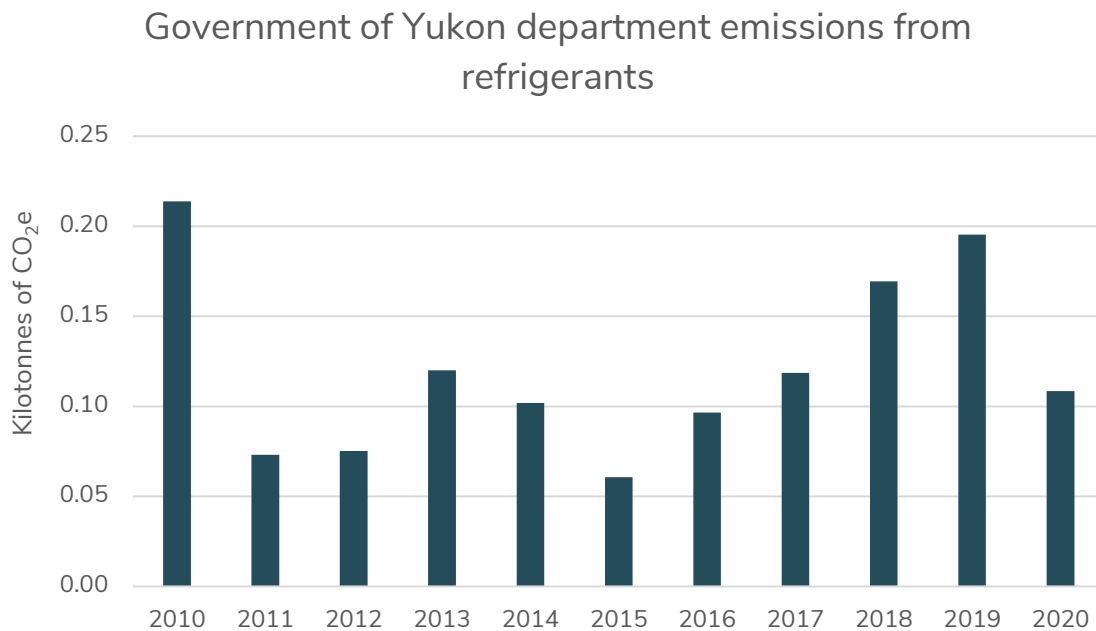


Waste management emissions have been gradually increasing as a result of the Yukon's growing population. Emissions begin to decline somewhat beginning in 2017 due to the temporary closure of a few solid waste and wastewater management sites.

### Refrigerant emissions

**Refrigerants are the smallest and most variable emissions source, making up 0.3 per cent of Government of Yukon department emissions in 2020.**

Refrigerants such as hydrofluorocarbon (HFC) and perfluorocarbon (PFC) are used for Government of Yukon refrigeration systems in buildings and air conditioning in fleet vehicles. These refrigerants have high Global Warming Potential values, meaning that they are significantly more potent than carbon dioxide.



**Figure 10: Government of Yukon department emissions from refrigerants from 2010 to 2020.**

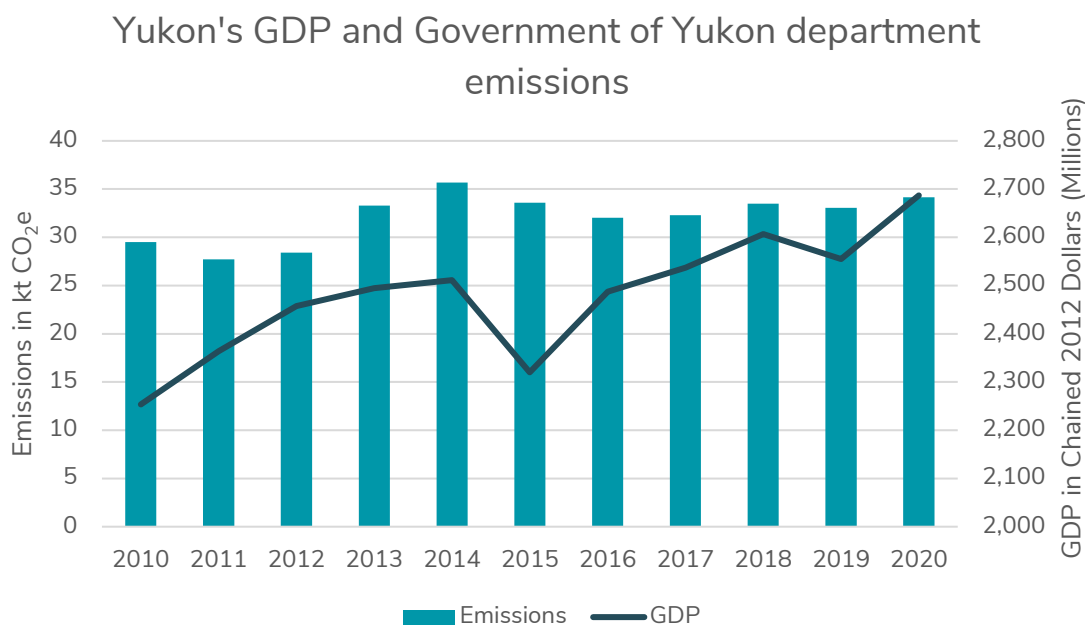
Emissions for refrigerants used in Government of Yukon department buildings are included in the year in which systems are serviced. The year in which they are serviced



is when the volume of refrigerant added to the system is recorded. This leads to the variable nature of this emission source, making inter-annual comparisons challenging.

### Drivers of emissions

Economic and population growth are well-known drivers of greenhouse gas emissions. They correlate fairly well with the Government of Yukon departments' operational emissions.



**Figure 11. GDP<sup>5</sup> and departmental greenhouse gas emissions from 2010 to 2020.**

The Yukon's gross domestic product (GDP) consistently increased from 2010 to 2020, with the exception of a dip in 2015<sup>6</sup> (Figure 11). Given that the Public Administration sector makes up 23 per cent of the Yukon's GDP<sup>7</sup>, GDP growth is linked to a greater scope of government operations, and by extension, to increased greenhouse gas emissions. This increase in scope of government operations is reflected in the 15 per

<sup>5</sup> Source: Statistics Canada table 36-10-0402-01.

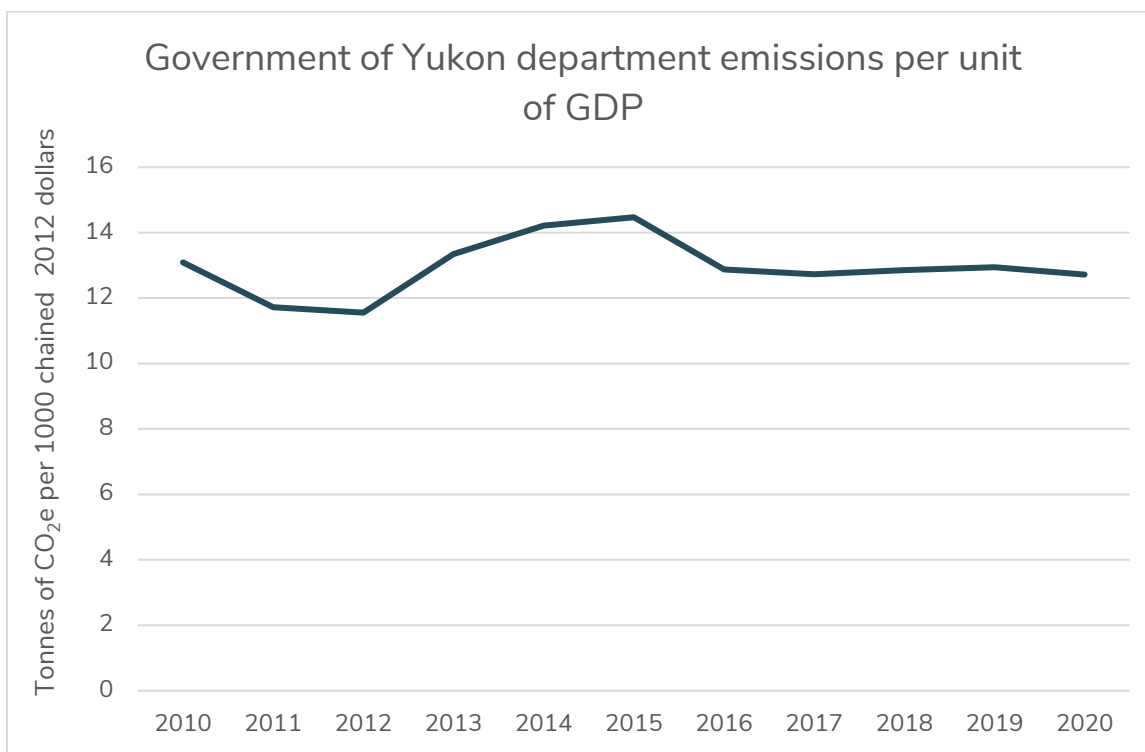
<sup>6</sup> The lower GDP value in 2015 corresponds to a dip in the mining industry. The total value of mineral production in the Yukon in 2015 was 49 per cent lower than its previous peak in 2011 (Source: Natural Resources Canada, Mineral Production of Canada Annual Statistics).

<sup>7</sup> Source: Yukon Bureau of Statistics, Gross Domestic Product (GDP) by Industry at Basic Prices, 2020.



cent increase in full time equivalent jobs with Government of Yukon's departments (between 2010 and 2017) and 24 per cent increase in gross floor area of departmental buildings (between 2010 and 2020).

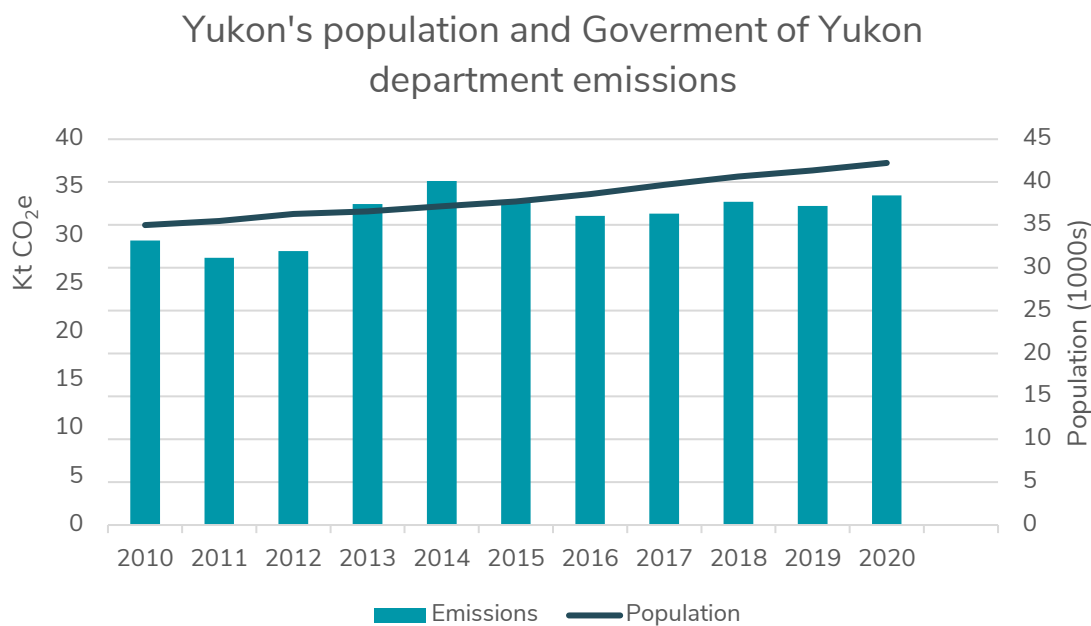
Between 2010 and 2020, Yukon's GDP increased by 19 per cent (Figure 11). This rate of growth is more substantial than that of the Government of Yukon departments' greenhouse gas emissions, leading to a three per cent decrease in emissions per unit of GDP over the same period (Figure 12).



**Figure 12. Government of Yukon department greenhouse gas emissions per unit of GDP from 2010 to 2020.**



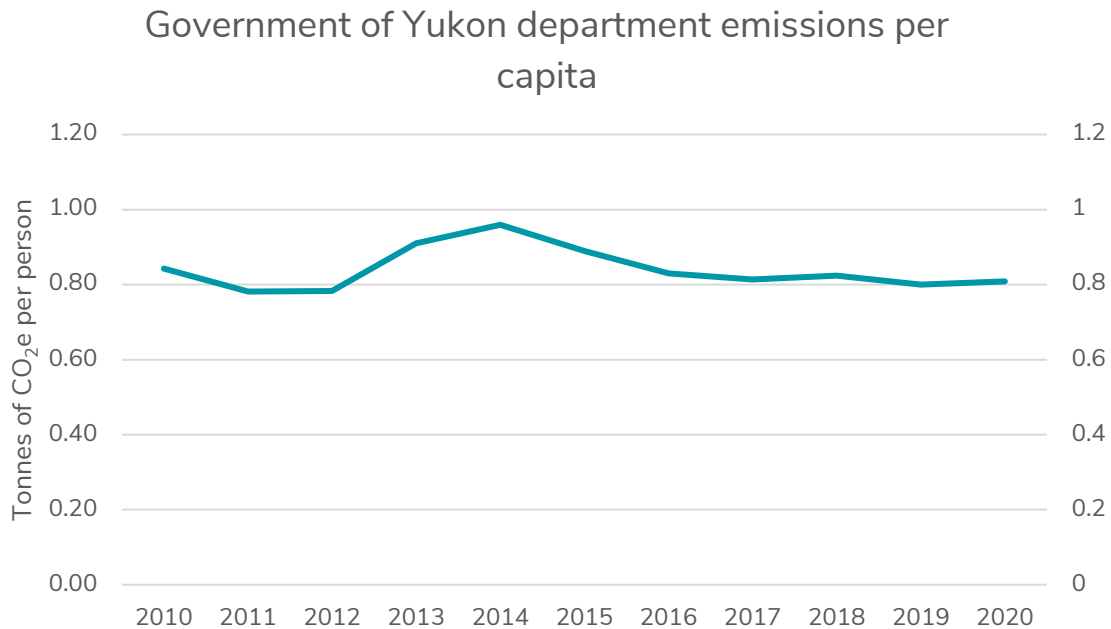
Similarly, the Yukon's population increased 21 per cent between 2010 and 2020 (Figure 13). A growing Yukon population is linked to a greater scope of government operations due to increased occupancy in schools and healthcare facilities, growth of government programs, and a greater need for permits, licences, and other government services. This likely contributed to the increase in greenhouse gas emissions from Government of Yukon departments from 2010 to 2020.



**Figure 13. The Yukon's population<sup>8</sup> and Government of Yukon department greenhouse gas emissions from 2010 to 2020.**

However, Government of Yukon department greenhouse gas emissions per capita (relative to the Yukon's total population) decreased by four per cent over this period, demonstrating that emissions have not grown as rapidly as the territory's population.

<sup>8</sup> Source: Yukon Bureau of Statistics, Population as of June 31 of each year.



**Figure 14. Government of Yukon emissions per capita (relative to the Yukon's total population) from 2010 to 2020.**

While external factors such as economic and population growth continue to be strong drivers of greenhouse gas emissions from the Government of Yukon’s departments, emissions are also influenced by operational factors like the condition of Government of Yukon buildings and the fuel efficiency of Government of Yukon vehicles. Over time, we plan to continue decoupling<sup>9</sup> the Government of Yukon’s emissions from economic and population growth by investing in improvements to our buildings and vehicles that enable us to provide growing services with fewer emissions.

### Corporation emissions

As discussed, the Government of Yukon’s greenhouse gas emissions are reported using a Financial Control Boundary. This means that all organizations falling within the Government of Yukon’s consolidated financial reporting are considered to be within its reporting boundary. Beginning for the 2019 reporting year, data is collected annually for all government corporations that meet this criterion. The emission sources for each

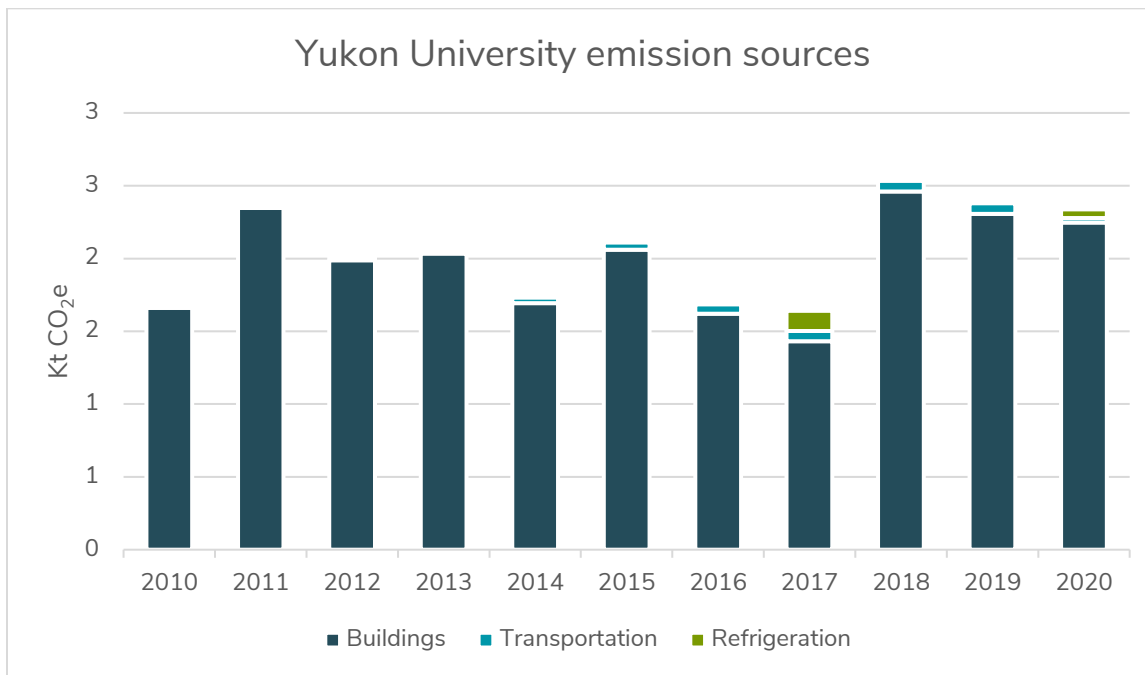
<sup>9</sup> Decoupling refers to having continued economic growth without a corresponding increase in greenhouse gas emissions.



corporation in the 2020 calendar year and how they compare to 2019 emissions are summarized below.

### Yukon University

Yukon University has several campuses throughout the territory. Heating and powering these buildings makes up 96 per cent of Yukon University’s emissions. The remaining four per cent of emissions are from fleet vehicles and refrigerant use.



**Figure 15: Yukon University greenhouse gas emissions, 2010 – 2020.**

### Yukon Development Corporation

The Yukon Development Corporation (YDC) has a mandate to work with the private sector to support the Yukon’s development. YDC falls within Government of Yukon’s reporting boundary; however, it does not own any emission-producing assets outside of its subsidiary Yukon Energy Corporation, which is discussed below. As a result, the Yukon Development Corporation’s greenhouse gas emission inventory for 2020 is zero.

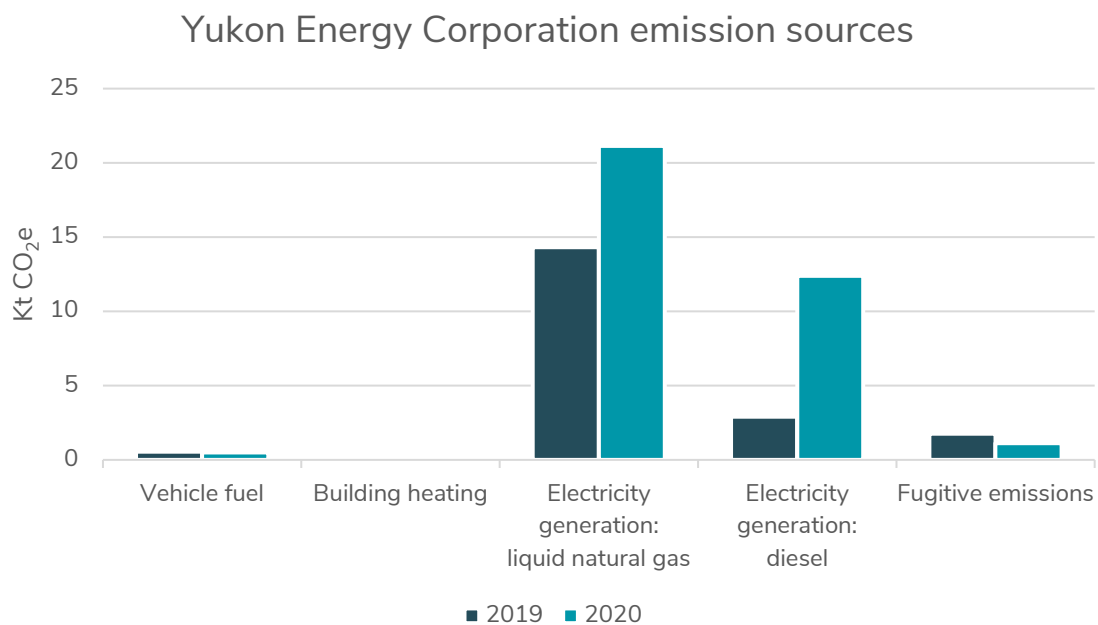




## Yukon Energy Corporation

The Yukon Energy Corporation (YEC) is responsible for the majority of electricity generation and transmission in the Yukon. Most of YEC's greenhouse gas emissions are from the electricity that it generates and sells to others in accordance with the accounting rules of The Climate Registry.<sup>10</sup>

Although most electricity generated by YEC comes from hydro power, supplemental thermal generation is needed at times when electricity demand is high. In 2020, 86 per cent of electricity produced by Yukon Energy was from renewable sources. The remaining electricity was generated from liquid natural gas (ten per cent) and diesel (four per cent). Combined, these were responsible for 96 per cent of YEC's total emissions in 2020 (Figure 16). The remaining four per cent of emissions come from assets required for YEC to operate and maintain electricity generation infrastructure (including buildings and fleet vehicles), as well as fugitive emissions from electricity generation, transmission and distribution.



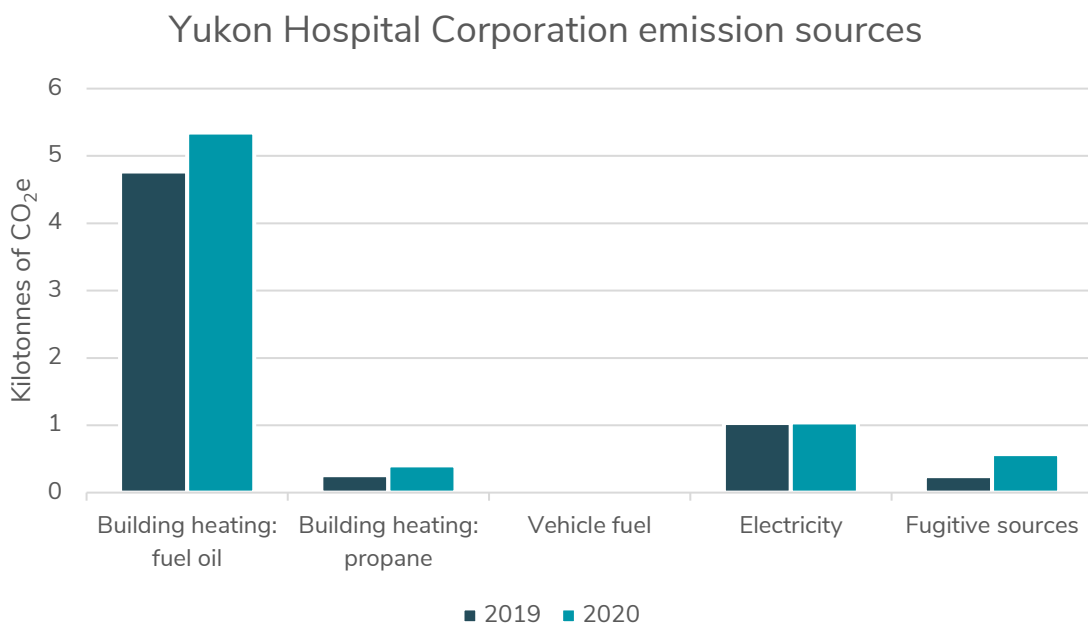
**Figure 16: Greenhouse gas emission sources from the Yukon Energy Corporation in 2020.**

<sup>10</sup> Electricity generation emissions discussed in this report overlap with electricity generation emissions reported for territory-wide emissions; they do not represent additional emissions in this sector.

Yukon Energy Corporation's 2020 emissions were higher in 2020 than 2019 due to a number of climatic factors. Drought conditions and low snow pack levels in 2019 left lower than average water levels at the start of 2020, which was compounded by low inflows. These factors, when combined with record cold temperatures in early 2020, meant that more thermal generation was required to meet demand.<sup>11</sup>

### Yukon Hospital Corporation

The Yukon Hospital Corporation provides medical services throughout the Yukon. Its three sites are located in Whitehorse, Dawson City and Watson Lake. In 2020, 77 per cent of its emissions came from heating buildings at these sites, and 14 per cent came from electricity (Figure 17). The remaining emissions came from fleet vehicles (0.2 per cent) and direct emissions from refrigerants and medical gases (8 per cent).



**Figure 17: Greenhouse gas emission sources for the Yukon Hospital Corporation in 2019 and 2020.**

As seen in Figure 17, Yukon Hospital Corporation's emissions increased 17 per cent between 2019 and 2020. This is in part due to an increased heating demand caused by extreme cold temperatures in early 2020. This may also be caused by increased

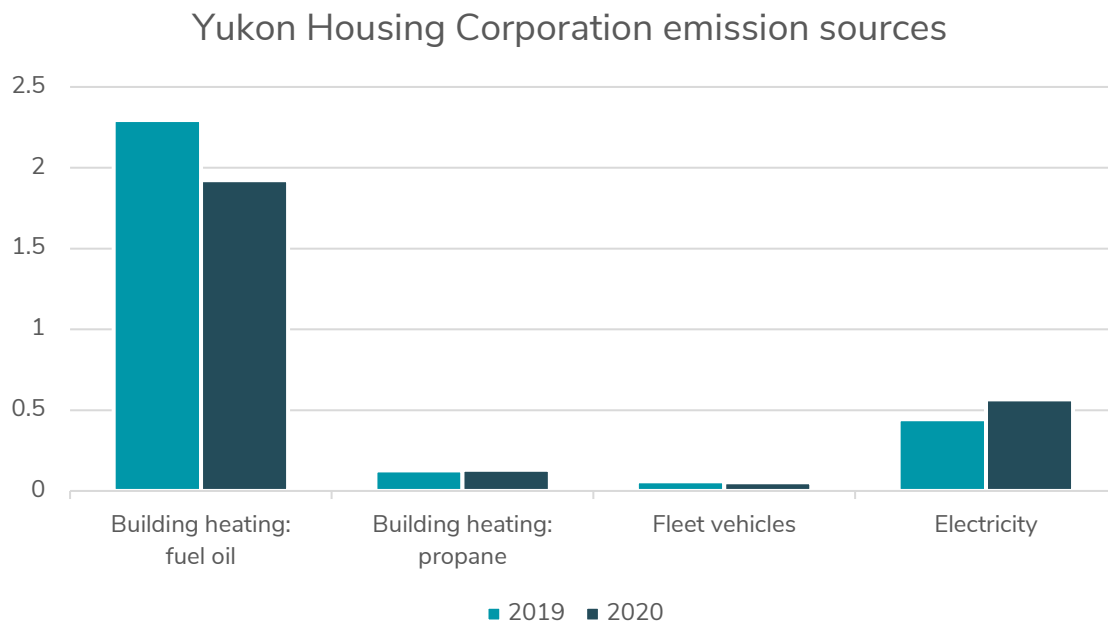
<sup>11</sup> 2020 Annual Report, Yukon Energy Corporation.



operational demand related to the COVID-19 pandemic but more analysis would be required to confirm this.

### Yukon Housing Corporation

The Yukon Housing Corporation's mandate is to ensure Yukoners have access to affordable housing. As a result, most of its assets are residential buildings and the majority of its emissions come from heating and powering these homes. Specifically, 77 per cent of the Yukon Housing Corporation's emissions are from building heating and 21 per cent comes from electricity (Figure 18). The remaining two per cent of emissions are from fleet vehicles.



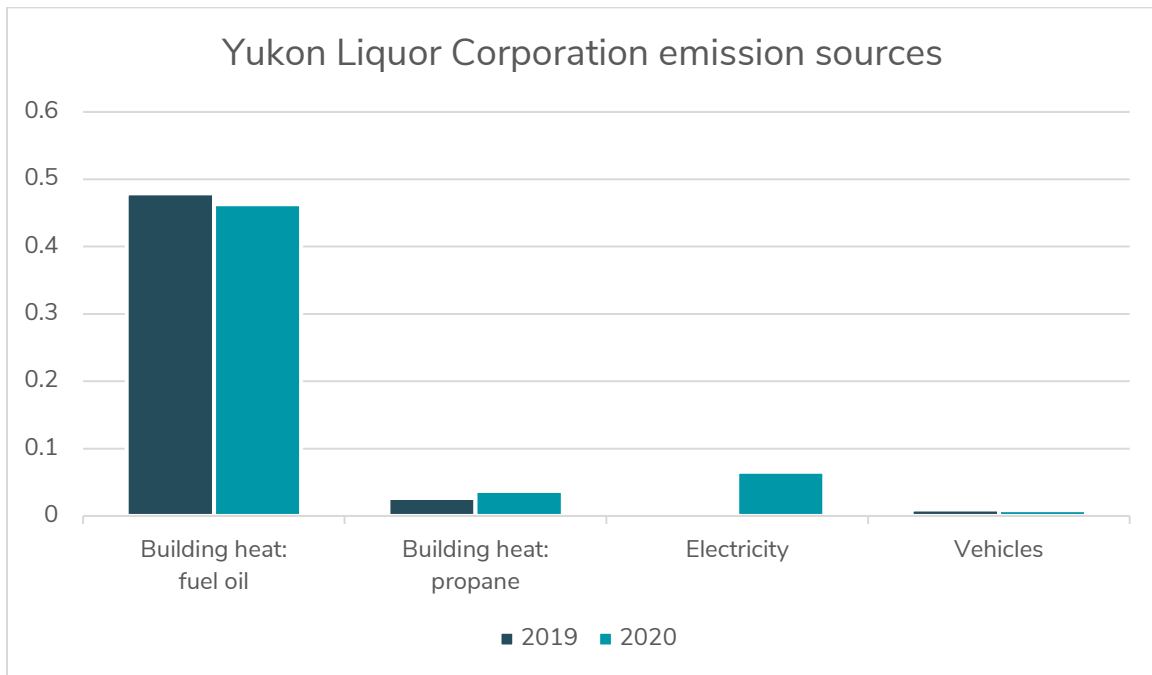
**Figure 18: Greenhouse gas emission sources for Yukon Housing Corporation in 2020.**

Yukon Housing Corporation's emissions decreased nine per cent between 2019 and 2020. Of particular note, emissions from heating homes with fuel oil decreased 16 per cent. This is likely due in part to energy retrofits and electrification of heating systems in Yukon Housing Corporation buildings.



## Yukon Liquor Corporation

The Yukon Liquor Corporation manages liquor sales in the Yukon. It is a relatively small source of greenhouse gas emissions as it only owns a few buildings across the territory. A majority (89 per cent) of its emissions come from building heating, and the remaining emissions come from electricity use (Figure 19).



**Figure 19: Yukon Liquor Corporation 2019 and 2020 greenhouse gas emission sources.**

Yukon Liquor Corporation had fairly similar emissions in 2019 and 2020. Overall comparisons cannot be made as no electricity data is available for 2019.

## Conclusions and next steps

**Overall, emissions from Government of Yukon's total operations increased 27 per cent between 2019 and 2020, and emissions from Government of Yukon department buildings increased 8 per cent. This is due largely to high heating demands and lower proportion of renewable electricity generation stemming from a low snowpack and especially cold 2020 winter temperatures. Significant GDP and population growth over this period also had an impact. However, the actions the Government of Yukon has taken, including building retrofits and renewable energy**



heating systems, have continued to decrease emissions on a per capita and per unit of GDP basis despite the weather-related uptick seen in 2020.

**As of 2020, the Government of Yukon's emissions (excluding electricity generated by Yukon Energy Corporation for consumption by end users other than Government of Yukon) contributed approximately seven per cent of the Yukon's total emissions.**

The Government of Yukon is committed to reducing our emissions and showing leadership in efforts to reduce the Yukon's territory-wide emissions.

The Government of Yukon created the Green Infrastructure Program to accelerate our efforts to reduce greenhouse gas emissions from government buildings. Since the majority of Government of Yukon's emissions come from heating buildings, the program is largely focused on reducing fossil fuel consumption through building retrofits and renewable heating sources such as biomass. More information on the actions that the Government of Yukon is taking to reduce the carbon intensity of its operations can be found in the 2021 *Our Clean Future Annual Report*.

