

2019 ENERGY AND EMISSIONS INVENTORY

WHERE WE ARE

The first step in creating a CEEP is to understand which activities we do that consume energy, how much energy we use, and how much GHG emissions we are emitting from those activities. This is called an energy and emissions inventory. The inventory for 2019 shows that residents and businesses consumed over **8.4 million Gigajoules** of energy – mostly in the form of natural gas, heating oil, electricity, gasoline and diesel fuel. This led to a total of **582,000 tonnes** of carbon emissions (tCO₂e), or about 9 tonnes per person.

The 2019 GHG emissions inventory breaks down as follows:

BUILDINGS

57% of our GHG emissions come from heating, cooling and powering our buildings. The majority of these GHG emissions are from electricity consumption (about 81%) with the remaining coming from the consumption of natural gas and fuel oil.

TRANSPORTATION

39% of our GHG emissions come from using fossil fuels in our vehicles. We use a combination of gasoline, diesel and propane to get ourselves around (to work, to school, to shop, to recreation activities) and to move people and goods for our businesses.

WASTE

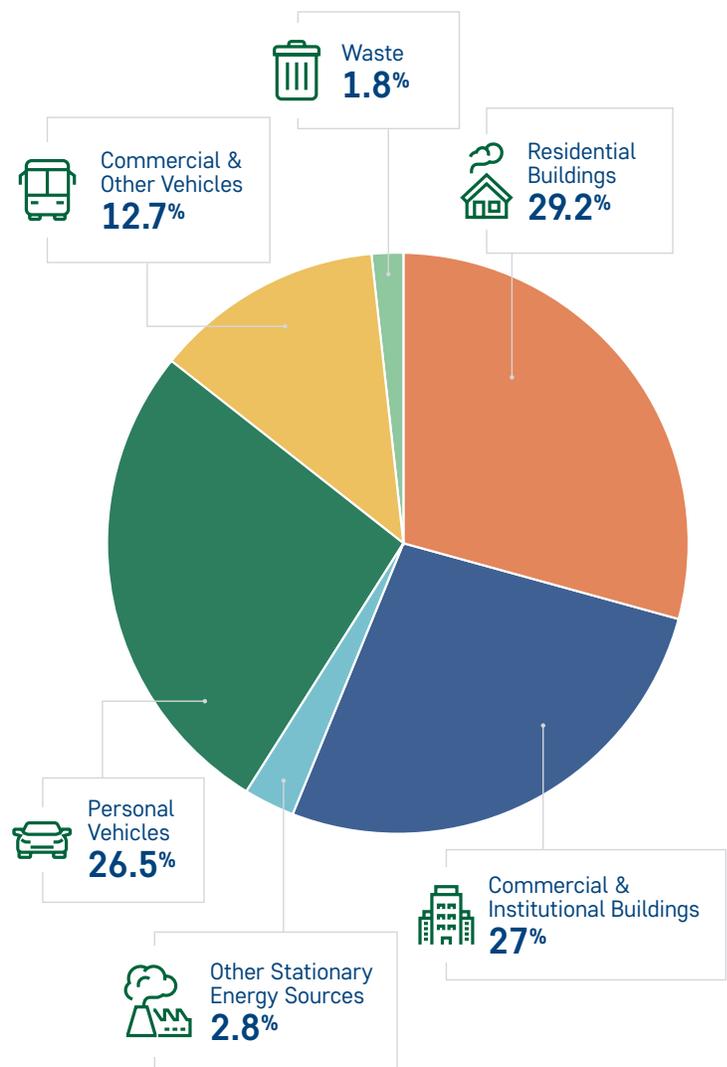
A small portion of our GHG emissions (**2%**) come from the waste that goes to landfills where it decomposes and releases methane gas, a potent greenhouse gas. Other sources of waste GHG emissions includes wastewater treatment and the composting of materials like yard waste.

OTHER STATIONARY ENERGY SOURCES

Around **3%** of our GHG emissions come from industrial, construction, manufacturing activities that occur in the City. These emission sources include fugitive emissions from

natural gas consumption and equipment used to mow our lawns and construct buildings and infrastructure.

We have set the year 2000 as our base reporting year. This is the year to which the City has established a 2050 GHG reduction target of 45% against. Since 2000, we have maintained GHG emission levels while the population in the City has grown by 33%. On a per capita basis, we have reduced GHG 34%, or 3 tonnes per person.



WHERE WE ARE GOING

As identified in our Strategic Growth Plan, our population is expected to grow to over 94,000 inhabitants by 2041 and possibly upwards of 103,000 by 2050. As our population grows, so does demand for energy and the release of GHG emissions. Based on this growth, our energy consumption is projected to increase to 10.4 million GJ by 2050. If we do nothing, our GHG emissions are projected to increase to 743,000 tonnes by 2050 – an increase of 28% over 2000 levels.



WHERE WE WANT TO BE

Through the CEEP development process, goals and targets will be established that describe where we want Fredericton to be by the year 2050 with respect to energy efficiency, energy sources, and our impact on climate change. The CEEP development process will take place over the next several months and involve staff, Council, stakeholders and residents through surveys and other events aimed at informing the content of the CEEP and to raise awareness around energy and climate change issues in the community.

HOW WE WILL GET THERE

The CEEP will define strategies, policies and measures that will help the community reach its goals and targets. The City is committed to reducing the community's impact

on climate change and will need to allocate resources to support implementation of the plan. Although the CEEP will focus on policies and measures for the City to undertake, it is crucial that residents, businesses and other organizations in the community do their part in achieving the goals and targets.

What can residents, businesses and organizations do now?

- Renovate old buildings to be more energy efficient.
- Replace old furnaces and hot water tanks with more energy efficient models.
- Install solar panels for hot water, geo-exchange systems for heat, or other alternative energy systems.
- Walk, bike or ride transit whenever possible.
- Make sure your next vehicle is fuel efficient or get a hybrid or electric vehicle.
- Shop locally as much as possible.
- Choose products with minimal or reusable packaging.

MORE INFORMATION

For more information about the **Community Energy and Emissions Plan**, please contact: environmental.leadership@fredericton.ca or call 506-460-2020.
Fredericton.ca