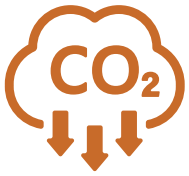
CARBON EMISSIONS & CARBON REDUCTION

- Newfoundland and Labrador's GHG emissions have increased 12% since 1990 [5].

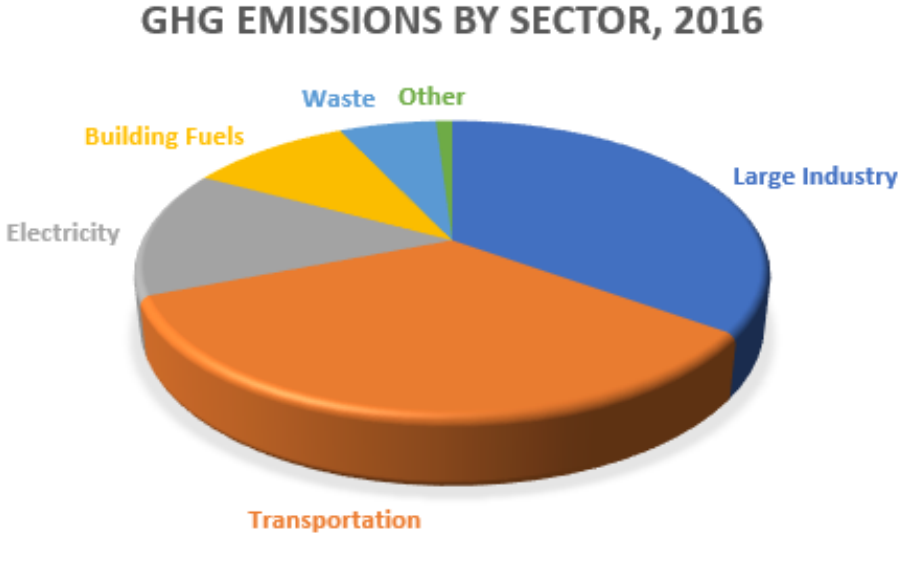
- Total energy demand in Newfoundland and Labrador ranked as the 9th largest in Canada, and 4th largest on a per capita basis [5].

- Newfoundland and Labrador released its climate change action plan "The Way Forward" in 2019, targeting a 30% reduction in Green House Gas (GHG) emissions by 2030 [1].



- The largest GHG contributor in Newfoundland and Labrador is large industry accounting for 35% of emissions. Large industry includes oil refining, mining, offshore petroleum and newsprint [1].

- Following closely behind large industry is transportation accounting for 34% of emissions, including road, marine, and air transportation [1].



According to numbers from 2016, the major contributors are as follows [3]:

- Large Industry: 35%
- Transportation: 34%
- Electricity: 14%
- Building Fuels:10%
- Waste: 6%
- Other: 1%

WHAT ARE GHGS?

- The earth is surrounded by a layer of naturally occurring gases (known as its "atmosphere"}, which includes water vapour, carbon dioxide, methane and nitrous oxide. These are commonly referred to as "greenhouse" gases because, like the walls of a greenhouse, they trap some of the heat from the sun and this warms the planet and makes it livable. Over the past 150 years, humans have been releasing more and more greenhouse gases into the atmosphere, preventing heat escaping into space and causing global temperatures to rise and climates around the world to change [9].
- Carbon dioxide (also known as CO2) is a type of GHG. It is emitted into the atmosphere through the burning of fossil fuels (coal, natural gas, and oil), solid waste, and biological materials like trees. Carbon dioxide is considered to be the most important GHG (some reports on GHGs don't consider the impacts of other GHGs like methane and nitrous oxide for example, and only include CO2, but this can lead to an understatement of total climate change impacts) [3].
- Carbon is stored in rocks and sediments, oceans, living organisms and the atmosphere, and is released through a variety of natural ways, including when an organism dies, when volcanoes erupt, and when fires blaze, in addition to human activity such as land development and the burning of fossil fuels [4].

Economic Opportunities in Carbon Reduction

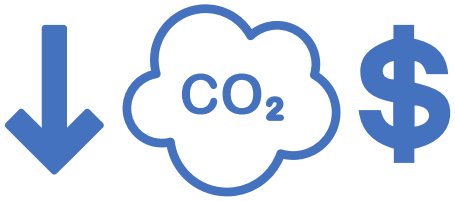
Consumers are seeking out more environmentally friendly products and services. This means a growing demand for new products and technologies, which in turn means more opportunities to diversify the economy and create new jobs in NL [1].

A low carbon future also means there will be a high demand for key minerals. Nickel and cobalt are highly sought-after materials for the production of solar panels, electric vehicle batteries, and other forms of renewables. These minerals are produced in NL by an industry with a long history in the province, which may prove to be a great potential for economic growth in carbon reduction [7].

There is also a demonstrated need to rethink transportation, one of the biggest contributors to carbon emissions in the province. Economic opportunities related to transportation include: the shift to electric vehicles, possible innovative transportation solutions like bicycle sharing programs, as well as a revitalized public transit system in NL.

MOVING FORWARD

Newfoundland and Labrador introduced carbon pricing in 2019, under a program tailored specifically to the province's circumstances. The plan was approved by the Federal Government to meet at least the required measures under the federally mandated plan in 2018 [1].



Carbon pricing (e.g., carbon taxes) captures the external costs of carbon emissions (what the public pays for in other ways (like health care costs from heat waves or damage to crops) and ties them to their sources to help shift the burden for the damage to the people who are responsible for and can ultimately reduce emissions

- The provincial government will also introduce various other programs to reduce GHGs through helping industry improve its energy efficiency, implementing performance standards on onshore and offshore industry, and assisting businesses, governments, not-for-profits organizations, and households reduce their GHG emissions [1].

- Strategies to reduce GHG emissions and increase energy efficiency in the province include renewable energy solutions, the design and construction of energy efficient buildings, investments in sustainable agriculture, aquaculture, and forestry activities, investments in the development of clean technologies, modern waste management infrastructure, and investments in sustainable tourism [1].

- On the individual level, people can work to reduce carbon in Newfoundland and Labrador through reducing waste, electricity use and fuel consumption [1].

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Please note that this is a fluid and changing document. If any information is missing, outdated, or otherwise inaccurate please contact the Harris Centre and the document will be updated accordingly. This document is not intended to be a comprehensive or authoritative report on the topic, but to spark discussion and engagement.

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