

Clean Fuel Standard CASE STUDY: NEWFOUNDLAND AND LABRADOR

Snapshot of macro effects for Newfoundland and Labrador:

Direct compliance costs:	\$264 million (\$1,040 per employed person)
Capital removed from economy:	\$0.7 billion
Job losses:	1,261
Increase in cost of gasoline:	10.5%
Increase in cost of natural gas:	n/a
Main sectors affected:	Wholesale and retail sales (221 jobs) Banking, Finance and Professional Services (227 jobs) Entertainment, including Restaurants (136 jobs) Other Manufacturing (191 jobs) Construction (117 jobs)

Household Effects

Due to Newfoundland and Labrador's (NL) unique geographic location, all import and export goods must be transported via cargo boats and planes (Transportation Directory of NFL, 2003), making the island particularly fuel-dependent. Thus transportation fuels like gasoline are an essential energy source for providing goods and services to the majority of residents of NL.



Figure 1. Nominal gasoline price in Newfoundland and Labrador, 1993-2019.

Source: Statistics Canada 2020c

Figure 1 shows the historical price of gasoline in St. John's since 1993.¹ According to Statistics

¹Due to the availability of gasoline price data by major cities, the cost estimate for households of additional gasoline expenses at the provincial level uses major city-level average prices as a proxy for the corresponding province.

Canada, 2016 Census of Population, there were 218,675 households in NL. The average annual gasoline price in St. John's was \$1.27 per litre in 2018 (Statistics Canada, 2020c). Our model estimates that of the 17% increase in production costs about 10.5% would be passed on to consumers in NL which implies the average purchase price would have been \$1.40 per litre of gasoline in 2018. Gasoline sales in NL in 2018 totaled 0.602 billion litres. Had the same volume of gasoline been purchased at the higher price the additional cost would have been \$80.3 million or \$367 per household per year. In practise people adjust their fuel purchases downward to mitigate this impact, but in doing so they forego the benefits of fuel use. We estimate the reduction in gasoline consumption would only have been about 2.9 percent.

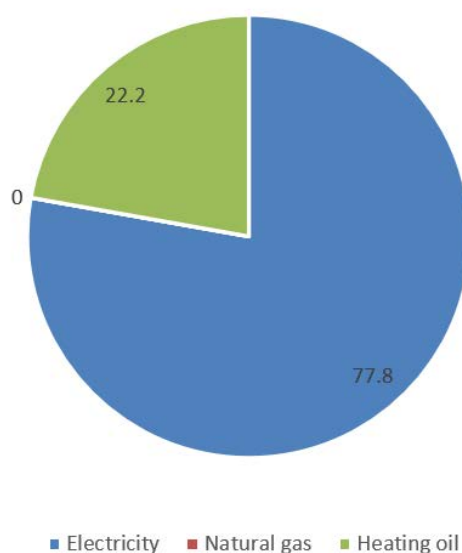


Figure 2 Percentage distribution of energy used for heating by households in St. John's 2015.

Source: Statistics Canada (2020h)

Figure 2 shows that homes in NL rely on a combination of electricity and heating oil. Our estimate of the increase in the price of heating oil in NL suggests that households would have spent additional \$284 per year to purchase the same quantity of fuel. In practise households and businesses would have reduced their oil usage to mitigate some of this cost increase, but in doing so they would have had to forego some home heating or appliance usage, reducing consumer welfare in the process.

Small Business Effects

Newfoundland and Labrador is home to 17,660 of accommodation and food service businesses (Statistics Canada, 2016). According to Natural Resources Canada (2013), the energy intensity for food service businesses is about 3.2 Gigajoules per square meter (GJ/m²) annually in the region. In NL, about 24% of the total energy consumed by the commercial and institutional sectors was light fuel oil. To compute the additional cost on heating oil faced by small business owners, we assume a restaurant size of 600 m², which is the average size of a sample of Harvey's and Swiss Chalet establishments in Sarnia, Ontario. (Energy Innovators Initiative, 2003). We find that small businesses can expect to pay additional \$1335 per year on heating oil. In practise establishments would try to cut their heating oil consumption,

either by cutting back on heating or reducing other appliance usage, both of which would be challenging for restaurants and could entail costs of other kinds. It is also plausible that an increase in the price of gasoline and heating oil could lead to a rise in the price of other essential energy sources like electricity, which would further contribute negatively to NL businesses and households.