

Likely Cap & Trade Costs in Ontario

This draft estimate of the likely impact of Cap & Trade on Ontario energy prices is based on the following:

- Experiences in the Quebec program, which is linked with the Ontario program, and where the cost to consumers is expected to be similar, if not the same.
- Information provided in Ontario government documents and statements.
- The emissions factors for various fuels, as published in Ontario's cap & trade regulations.

1. Quebec Experiences

- a. Petro-Canada (Suncor) regularly publishes the cap & trade cost to consumers of various energy products that it sells (for example, as of March 1):
 - 4.16 cpl on conventional gasoline
 - 5.30 cpl on diesel
 - 4.82 cpl on heating oil
 - <http://www.petro-canada.ca/en/rack-pricing/6687.aspx>
- b. An ad-hoc survey of propane industry members who operate in Quebec found that the average cap & trade cost per litre of propane is 2.5 cpl
 - Example - <https://www.superiorpropane.com/quebecs-carbon-tax-and-propane/>
- c. GazMetro regularly publishes the cap & trade cost to consumers of natural gas (for example, as of May 1):
 - 3.28 cents per cubic metre
 - <http://www.gazmetro.com/en/business/natural-gas-supply-and-compressor-fuel-prices/>

2. Government Statements

- a. "Based on the current carbon price forecast, the price of gasoline is estimated to increase 4.3 cents a litre in 2017.....an estimated average monthly increase of \$5 for natural gas for households....." - <https://www.ontario.ca/page/cap-and-trade>

3. Regulatory Emissions Factors

- a. The Ontario Government's Guidelines for Greenhouse Gas Emission Reporting – http://www.downloads.ene.gov.on.ca/envision/env_reg/er/documents/2016/012-6837_Guideline.pdf - sets out the GHG emissions factors that will be used to measure emissions (and therefore the credits required to cover those emissions), allowing comparison across energy sources:
 - Propane – 1.544 (tonnes of CO2 equivalent per kilolitre)
 - Auto Gasoline – 2.361 (tonnes of CO2 equivalent per kilolitre)
 - Diesel – 3.007 (tonnes of CO2 equivalent per kilolitre)
 - Light Fuel Oil – 2.735 (tonnes of CO2 equivalent per kilolitre)
 - Heavy Fuel Oil – 3.146 (tonnes of CO2 equivalent per kilolitre)
 - Natural Gas – 1.863 (tonnes of CO2 equivalent per thousand cubic metres)

What This Means for Households

Based on the information provided on page 1 and assumptions about energy consumption, the following conclusions can be made about likely home heating costs.

- Assumed Typical Annual Home Energy Use for Heating – 75 million British Thermal Units (BTUs).
- Energy volume to achieve 75m BTUs (see http://www.edproenergy.com/solutions/knowledge/Energy_Cost_Comparison.htm):
 - Propane – 3093 litres
 - Heating Oil – 2082 litres
 - Natural Gas – 2089 cubic metres
- Possible cap & trade charge by energy:
 - Propane – 2.5cpl
 - Heating Oil – 4.82cpl
 - Natural Gas – 3.28cpm3
- Annual cost based on energy volume and cap & trade charges:
 - Propane - \$77.34
 - Heating Oil - \$100.33
 - Natural Gas - \$68.52

Notes:

1. Calculations are based on home heating use only and do not take into account fuel use for other purposes, e.g. cooking, clothes drying, etc.
2. Calculations do not take into account relative efficiencies of appliances, e.g. oil furnaces are often slightly less efficient than those for propane and natural gas; newer furnaces are more efficient than older ones.
3. Annual household energy use will decline if houses become more energy efficient.
4. It is likely that the cost of cap & trade credits will rise as the number of credits is reduced.