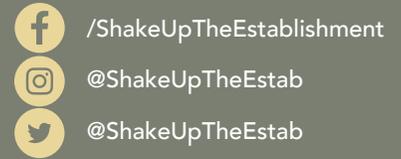


# Carbon Pricing

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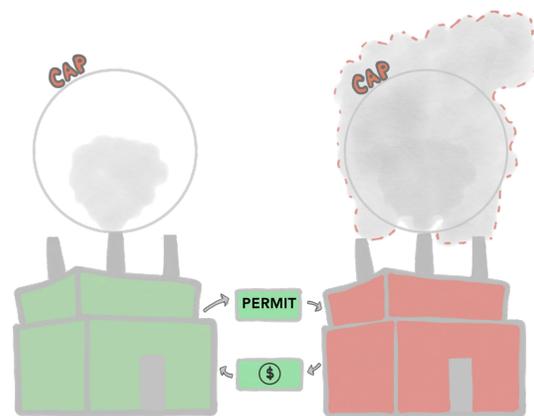
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Carbon pricing is a tool that attempts to offset the costs associated with greenhouse gas (GHG) emissions, such as the burden upon healthcare or the costs associated with natural disaster mitigation, by linking this cost to the sources of GHGs, such as the oil and gas industry (1). The aim of carbon pricing is to place the financial responsibility of GHG emissions onto their sources and provide motivation to reduce those emissions. There are 2 main types of carbon pricing used by governments around the world: carbon taxes, and cap-and-trade strategies.

A carbon tax is a strategy some governments use to encourage people to reduce their GHG emissions by putting a cost on major GHG emissions. This is typically charged to the companies and industries emitting the GHGs and not to Canadians directly - although we may experience second hand effects through small increases in price on the things we buy (2). In the 2019 carbon tax put in place in Canada, the Federal government set the price of carbon at \$20 per tonne (4.4 cents per liter of gasoline) - a price estimated to cost the average household \$200-\$400 per year roughly (3). To help pay back the price that Canadians will pay, the Canadian government has also implemented a climate action incentive payment which returns a large portion of the yearly cost back to the consumer through tax returns (ranging up to \$300) (3). With this refund program, most taxpaying Canadians will be refunded more money than they will originally pay in carbon taxes (3). Systems like this one hope to use

the money collected to invest further in green technologies and lower national GHG emissions (4). A 2016 study on carbon taxing in North America by the American Council for an Energy Efficient Economy found that carbon taxes do help lower GHG emissions and the amount of energy used (5). This study states that carbon taxes that are already in place will have noticeable, albeit not dramatic, effects on lowering emissions and carbon usage (5). The study also states that carbon taxes will not solve the issues from the climate crisis alone; however, when combined with other strategies, they can bring on significant reductions in GHG emissions (5).



Illustrated by: Chloe Graham

Figure 1. In a cap-and-trade model, the government limits total GHG emissions and permits portions of this total amount to businesses who require carbon emissions to function (6). Once obtained for free or by auction, a business may emit GHGs in their specific limit; moreover, they can choose to sell the unused amount of emissions to other businesses who may need more (6).

Cap-and-trade is an economic model for governments to place a “cap” on GHG emissions, while letting businesses be flexible by allowing them to buy and sell carbon allowances from and to each other (2, 6). In this model, the government places a limit on the total GHG emissions allowed and assigns (either through auction or free of charge) portions of this total amount to businesses who require carbon emissions to function (6). Once bought, a business may emit GHGs in their specific limit and can also choose to sell the unused amount of emissions to other businesses who may need more (6). This system benefits from targeting the major sources of GHG emissions and softening the effects of carbon pricing on the everyday consumer, while still setting a limit on emissions. A 2014 study from the University of Ottawa reports that Quebec’s cap-and-trade system has become important to the province’s carbon reduction strategy and has supported major shifts towards lower emission living (7). In the United States, studies on the *Massachusetts Institute of Technology Integrated Global System Model (IGSM)* concluded that cap-and-trade systems would not seriously affect GDP in a negative way while stating that these changes would prove to be beneficial in the energy sector (8). The cap-and-trade system has shown to be an effective tool to promote low-emissions within industry and could play an important role towards helping Canada to meet its 2030 emissions goals.

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