HOW A CARBON TAX REDUCES EMISSIONS

1

Most carbon-intensive fossil fuels are taxed based on how much greenhouse gas (GHG) they emit. The added cost is passed up or down the supply chain, so even if one group is taxed (industry) and another is not (homeowners), the tax still affects everyone.

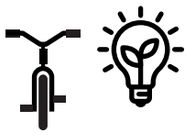
2

Most emissions are taxed by raising fuel prices across a region.

3

In most cases, governments use revenue from carbon taxes to provide personal tax breaks or to help pay for lower rates for labour and business investment. The tax funds may be used to stimulate other parts of the economy.

4



So, to avoid the higher prices of fossil fuels, consumers will turn to affordable and more energy-efficient alternatives, thus cutting their carbon emissions.

5

Higher prices on fossil fuels combined with increasing demand for alternatives will ideally encourage innovation. Then the production of low-emission technologies and renewable energy sources will become more competitive.

6

Big industry emitters will adjust their practices. They'll invest in technologies such as carbon capture and storage to help cut back on their GHG production.

7

Emissions will be reduced across the country.

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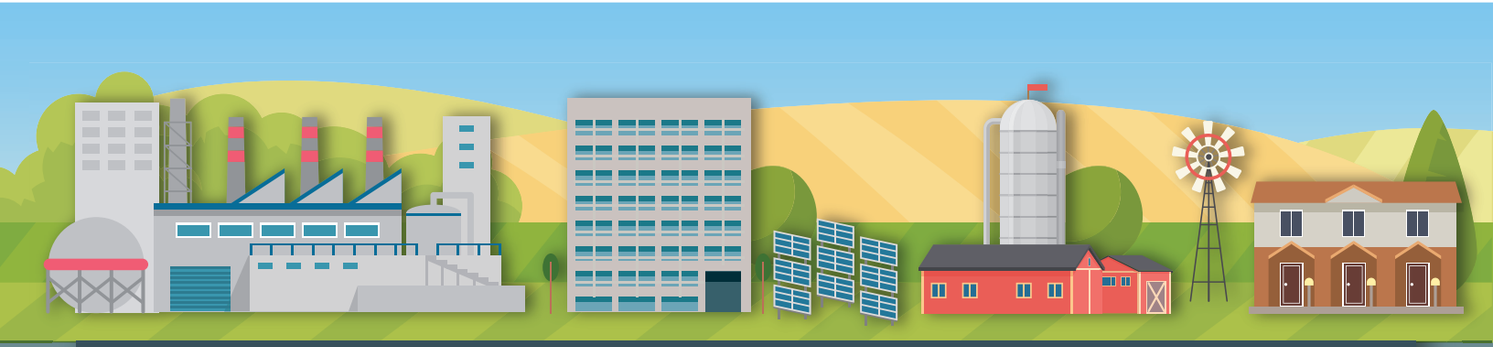
Adapted from N. Walker, "The Price is Right," Energy Exchange, Winter 2016.

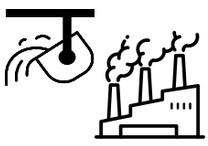


HOW A CAP-AND-TRADE SYSTEM REDUCES EMISSIONS

1

The provincial government creates an emissions-trading market by turning reductions in greenhouse gas (GHG) emissions into a commodity. It decides which sectors to regulate and sets an overall cap, or limit, on how much GHG each industry is allowed to emit each year. It also sets the lowest and highest price ([known as the] floor and ceiling) for a permit to produce one tonne of GHG.

2



Some industries (such as pulp and paper, steel and cement) are exposed to tough international competition and cannot pass on the cost to local consumers. These industries are often given some permits for free.

3

The government raises revenue by selling the remaining permits at auctions throughout a year. Businesses purchase the fewest permits needed to cover their annual emissions.

4

Businesses that produce more emissions than the cap allows attempt to reduce their carbon emissions at the lowest possible cost. Some cut down on emissions, allowing them to bank their permits or sell them to firms that exceed the cap.

5

Firms in sectors without a cap can generate "offsets"—a type of lower-value carbon permit. Firms earn offsets by lowering their emissions or taking on other carbon-reducing projects. They can sell their offsets to industries that have a cap. This broadens the reach of the cap-and-trade program and helps achieve an overall emissions reduction goal.

6

The cap is set at a lower level than many firms' current emissions, which means emissions must fall by a set amount. Firms whose emissions exceed the cap face fines and other sanctions. The pressure to meet certain levels creates incentives for industries to invest in cleaner, innovative technologies or energy research.

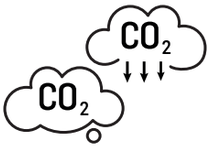
7

At the end of the year, regulated firms submit a verified emissions report and surrender permits and offsets equal to their emissions.

8

The more businesses and carbon markets are included, the less volatile the price of carbon is. Once a region's trading program is established and stable, its carbon market can be linked with others.

9



Emissions are reduced across the economy. Over the years, the government ratchets down the overall emissions cap, issuing fewer permits and slowly raising the minimum (floor) permit price.

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