

## Putting a Price on Carbon - 11/2019



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The idea of putting a price on carbon dioxide emissions to help tackle climate change has been slowly spreading around the globe over the last couple decades. Today, according to the World Bank, 50 countries and at least 30 subnational jurisdictions - together representing a quarter of global greenhouse emissions - have imposed or are pursuing a price on carbon, through either a cap-and-trade system or a carbon tax. A carbon fee (tax) puts a price on emitted CO<sub>2</sub>. A carbon cap puts a legal limit on the amount of CO<sub>2</sub> that may be emitted from the covered sectors of the economy and payment is required to exceed the limit

### **Experiences of some countries and the European Union**

**AUSTRALIA** - In 2012, Australia's Labor Government rolled out a cap-and-trade that essentially set a price on carbon of \$23 per ton. Emissions fell nationwide under the program, but the policy faced a fierce political backlash from industry groups and voters. When the more conservative Liberal Party swept into power in 2013, it quickly repealed the program. Australia currently has a far more lenient carbon pricing program in place, in which large industrial polluters that exceed a pollution baseline need to buy carbon credits to compensate. Australia is on track to miss its overall goals for cutting emissions.

**CANADA** - Canada currently has one of the most ambitious carbon pricing programs in the world. The Liberal Government has enacted a nationwide tax on coal, oil and gas that starts at \$15 per ton of carbon in 2019 and rises to \$38 per ton by 2022. Most of the revenue will be refunded to Canadians on their tax bills; the government estimates that these refunds will offset higher energy costs for about 70 percent of the people.

Individual provinces can opt out of the federal program by designing their own local climate policies.

A number of key industries that face intense trade competition, like steel and chemicals, are exempt from Canada's tax. Instead, they will participate in a separate program in which the dirtiest companies within each sector will either have to pay the government for their excessive emissions or buy carbon credits awarded to the cleanest companies. The opposition Conservatives have vowed to repeal these carbon taxes if they take power in the elections to be held in the fall of 2019.

CHINA - Since 2011, China has been experimenting with cap-and-trade programs in several pilot cities and provinces. The country plans to gradually roll out a nationwide cap-and-trade system starting in 2020. However, given the low price on a ton of carbon emitted in China in 2019, it is questionable as to how effective this system will be in reducing emissions.

EUROPEAN UNION - The European Union has a broad cap-and-trade system, which sets an overall ceiling on emissions from key industries and allows companies to buy and sell carbon permits. Because of a glut of permits on the market, carbon prices in Europe have remained low for years and the program has had a relatively muted effect on emissions.

SWEDEN - Sweden, which currently has the highest carbon price in the world, at \$139 per ton, demonstrates that it is indeed possible to make carbon pricing work. Their carbon tax, which started low and increased in steps, covers all carbon emissions not covered by the EU's Emission Trading System. While the Swedish economy grew by 60% since the introduction of the Swedish carbon tax in 1991, carbon emissions decreased by 25%.

Sweden's carbon tax generates considerable revenues for the general budget (there is no 'earmarking' of tax revenues in Sweden). General budget funds may, however, be used for specific purposes linked to the carbon tax, such as addressing undesirable distributional consequences of taxation or financing other climate-related measures.

UNITED STATES - In the Northeast, nine states currently participate in the Regional Greenhouse Gas Initiative, a cap-and-trade system that auctions to power plants a steadily dwindling supply of carbon pollution permits. Carbon prices under this system have been fairly modest to date, and it is unclear how much the prices themselves have driven emissions reductions in the region. States have used the money raised by the auctions to invest in efficiency and clean energy programs. Virginia and New Jersey are making moves to join the Initiative. Several Northeastern states are planning a similar program for cars and trucks that would put a price on transportation fuels and invest in mass transit, electric buses or other low-carbon solutions.

California has enacted its own cap-and-trade program that goes beyond power plants and also cover manufacturers, refineries and some other polluters. Here, too, carbon prices have remained modest to date, and most of California's emissions cuts to date have come as the result of other climate policies. State officials are now struggling to tighten the cap so that it drives bigger cuts in future years.

## **Problems**

If governments proved willing to impose carbon prices that were sufficiently high and affected a broad enough swath of the economy, those prices could make a real environmental difference. However, political concerns have kept governments from doing so.

Even when China rolls out its program, only 25% of our planet's emissions will be covered by some form of carbon pricing, which is far short of the 50% of global emissions that a World Bank panel has said needs to be covered by carbon pricing within a decade in order to meet global carbon-reduction goals set forth in the Paris climate accord.

Builders rarely occupy the buildings they build, which means they don't pay the energy bills and thus have little incentive to foot the capital cost of more efficient buildings.

Carbon pricing doesn't work well to curb emissions from transportation. Studies show that drivers are usually unresponsive to modest increases in gasoline and diesel taxes. Although they do respond to big hikes, taxes that high tend to be political nonstarters.

Of the global emissions now subject to a carbon price, just one percent are priced at or above the \$40 per ton considered the floor of ecological relevance. Three-quarters are priced below \$10 per ton. Thus, more than two years after the ostensible watershed moment of Paris, a mere 0.25% of global greenhouse gas emissions are subject to a carbon price that economists deem high enough to make much of an environmental difference.

Because carbon pricing is giving humanity the illusion that it is dealing responsibly with climate change, it is reducing the pressure to adopt other carbon-cutting measures, ones that would hit certain sectors harder and would produce faster reductions.

## **Conclusions**

Carbon pricing taxes/fees need to be designed to steadily increase the cost of carbon. Cap-and-trade systems should have few exemptions and need to swiftly lower the cap of permitted emissions, so that the cost of emissions credits rises rapidly and moves polluters to reduce their emissions sharply.

Carefully planning for the design and implementation of these policies entails including all stakeholders and having clear communication strategies in place early on that focus on local benefits, how the revenue will be used, and on measures that prevent adverse impacts falling on the poorest households.

Proponents and supporters of prices on carbon need to be clear that such a system is only one element of several policies that will be needed to be implemented to significantly reduce a nation's or political subdivision's carbon emissions.

## **Sources**

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