

## Solving the Carbon Crisis Will Take More Than Financial Engineering

What are carbon markets? Regulators are asking more and more companies to start paying up for the damage done by their carbon pollution.

CONDON, OREGON, UNITED STATES OF AMERICA, September 14, 2022 /EINPresswire.com/ -- Carbon emissions are an established threat to the health, safety, and economic viability of communities across the world. 68-percent of all greenhouse gas emissions stem from carbon-rich fossil fuels. Since gaseous emissions respect no political or even geographic



boundaries, and travel freely into the atmosphere where they exacerbate the ongoing threat of a runaway greenhouse effect and the climate volatility associated with it, it's a problem that requires broad cooperation.

There is a concept in economics that bears directly on this issue called an externality. Also referred to as external costs, externalities are consequences that are borne not by the person or group responsible for them, but by uninvolved third parties. Pollution is one of the most pervasive and harmful externalities.

Consider a trucking company: they have to pay for their fleet and the drivers and fuel it requires, but they are not typically required to pay anything to offset the damage done by the emissions of their vehicles to local communities or take responsibility for their contribution to anthropogenic climate change. Those costs and negative impacts get passed on to others.

When uncontrolled, externalities represent a moral hazard, a situation where there is no incentive to do the right thing because the consequences are so disconnected from the primary actors and hence provide no real deterrence. In such a case, not only is there no reason to avoid causing externalities but taking advantage of them can be seen as a shrewd, cost-saving move.

The Carbon Atom That Broke the Camel's Back

Taken even further, situations such as these inevitably result in an issue particularly relevant to ecological systems called the tragedy of the commons. The commons refer to resources and lands that large groups share. British economist William Forster Lloyd first coined the phrase in the 19th century to describe a problem where many people acting independently destroy a resource they share inadvertently because each assumes their own small actions are innocuous. Single acts may in fact be relatively harmless, but when taken together, they can cause devastation.

For example, if just one person routinely dumps polluting waste in a river, it will likely be diluted to a safe level over time. But if everyone in the community follows suit, the river will eventually become toxified, destroying its usefulness.

The nature of free markets is one in which every actor is assumed to be rational. Not rational in the way psychologists would define it, but meaning it's taken for granted that, all things being equal, they will make decisions that track closely with their own best interest. So, given that externalities save businesses money, they aren't likely to worry about them unless forced to — and that is precisely the impetus behind the development of carbon taxes and carbon markets.

## Making Polluters Finally Pay Their Fair Share

Carbon taxes are levies imposed by regulators on the hidden costs of carbon emissions. The intent is to make it more expensive to rely on carbon-polluting technologies so that companies will seek alternatives and innovation will be accelerated in sustainable solutions.

The main drawback to simple carbon taxes is that they are not well aligned with real-world market conditions and it can be a slow process to update them to accurately reflect the current cost/ benefit relationship between pollution and profitability. To correct that imbalance, nations and geopolitical partner groups all over the planet have instituted a different framework called emission trading.

Also referred to as cap and trade or carbon pricing, emissions trading refers to the creation of a market for carbon emissions (or, more briefly, a carbon market). There are many such markets and they operate on different principles. Some are more aggressive in their goals than others, but generally they all lower the competitiveness of fossil fuels relative to renewable energy sources by setting an upper limit on the total emissions of all participants bound by the agreement. Ergo, the price of polluting floats naturally with the actual activity in the market; when emissions rise, so does the price of offsetting the carbon that is released.

On a practical level, the process works like this: if a company exceeds its allowable carbon emissions, they are required to purchase offsets from another company that has not fully used up its own. That way the total emissions of the group stay within limits, the polluting company is penalized for going over their individual limit, and the non-polluting company is rewarded.

This system encourages companies to seek out cost-effective carbon emission reduction strategies. In some trading schemes, a regulator distributes emissions allowances at no cost, in others, they are sold in auction to the highest bidder, but in either case, once established, natural market forces will dynamically move the price up or down. Recent models attempting to determine the social cost of carbon estimate that every ton of CO2 emitted results in \$3,000 in damage.

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Despite their advantages, carbon markets are far from a panacea and cannot alone tackle the
carbon crisis this planet is facing. Most current frameworks only cover certain types of
emissions. For example, the European Union's carbon market is focused primarily on heavy
industries, meaning smaller sectors of its economy are able to continue polluting.

The United States does not currently have a nationwide emissions trading framework. However, several states, notably California and Washington, have passed their own cap and trade programs. There is also a cooperative carbon market called the Regional Greenhouse Gas Initiative (RGGI) which several states in New England have joined.

Carbon trading is also susceptible to manipulation. In one alarming example, companies in China were caught intentionally producing unneeded greenhouse gasses for the sole purpose of destroying them to earn carbon permits under a U.N. program. Those permits were then sold to polluters in the U.S., effectively rewarding polluters. Thankfully, international regulators are aggressively pursuing rulebreakers.

Regardless, carbon markets are just one more tool in the battle to repair our planet's ecosystems. Read More

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