

Why cap and trade is not the answer

It may have worked for SO₂, but cap and trade is the wrong answer to the climate change question, say **Laurie Williams** and **Allan Zabel**

When scientists believed we had several decades to address climate change, cap and trade emerged as a politically appealing market mechanism. Today, climate evidence demonstrates we are already past sustainable levels of carbon dioxide (CO₂) in the atmosphere. Only a rapid decline in burning fossil fuels and a correspondingly rapid scale-up of clean energy technologies can reduce the unacceptable risk of catastrophic climate change. Because most clean energy alternatives still cost two to three times as much as fossil fuel energy, the financial incentives for change are absent. As long-time environmental enforcement attorneys, we believe cap and trade is fundamentally unsuitable for the current challenge, but another market mechanism – carbon fees with 100% rebate – could be the centrepiece of an effective plan to solve the crisis.

The US Environmental Protection Agency (EPA) Acid Rain Program is frequently claimed to have 'proven' that cap and trade can work for climate change. This claim ignores critical differences between the two challenges. The Acid Rain Program helped reduce sulphur dioxide emissions from existing facilities with extremely accurate continuous emission monitoring systems (CEMS) by assisting with a relatively simple transition from high-sulphur coal to readily available, price-competitive low-sulphur coal. A few new rail lines were added and existing facilities made minor burner modifica-

tions and a few purchased more efficient scrubbers. This record in no way establishes that cap and trade can create the incentives needed for a rapid transition to new substitute technologies to replace fossil fuel energy rapidly with clean energy.

As shown by the recent efforts of the EU Emissions Trading Scheme and the 1990s Los Angeles RECLAIM nitrous oxide programme, cap and trade is easily undermined by the tendency to begin with an over-allocation – the issuance of more emission credits than there are actual emissions, typically to encourage industry 'buy-in'. This creates lengthy delays in reductions. In the case of RECLAIM, over-allocation was followed by market failure and the suspension of the scheme, when investments necessary to keep the lights on failed to materialise and available credits fell below actual emissions, sending credit prices skyrocketing.

Since cap and trade indirectly and uncertainly addresses the relative price advantage that fossil fuels currently enjoy over substitutes, it fails to motivate investments in replacement technologies. These flaws are compounded by two features that cap-and-trade proponents have added to the basic acid rain approach – including facilities without CEMS, and offsets from outside the capped sectors – destroying the integrity of an already inadequate mechanism.

When sources in the capped sector do not

have CEMS, they tend to exaggerate reports of likely emissions while the system is being designed and under-report actual emissions once the programme begins. The lack of accurate measurement undermines enforcement and creates the illusion of reductions in greenhouse gas emissions without actual reductions taking place.

Similarly, the environmental effectiveness of outside offsets (eg, you keep burning coal in the UK, while I set up solar panels in China) cannot accurately be measured. All agree outside offsets are only meaningful if they are 'additional' – ie, they would not have happened but for the funding provided by the offset programme. However, it is virtually impossible to prove or enforce this requirement. The race to the bottom means the cheapest/most flawed offsets will sell first, corrupting the entire system. Studies of the UN Clean Development Mechanism have revealed evidence of fraud in offsets approved under that programme.

A more appropriate model is the US tax on ozone-depleting chlorofluorocarbons (CFCs) used to meet US commitments under the Montreal Protocol. US EPA administrator William Reilly noted in a 1990 speech to the protocol nations: "This tax exceeds in value the cost of CFCs themselves and it will rise steeply in the years ahead... This added cost of CFCs sends a powerful signal: it says bring on the substitutes fast! And it reduces the comparative economic advantage CFCs would otherwise enjoy over the more expensive substitutes. This tax on CFCs has already caused the United States to reach the agreed targets for reduction earlier than required."

The difference between moving away from CFCs and moving away from fossil fuels is the enormous cost and scope of the transition. As a result, 100% of the taxes/fees collected on fossil fuels should be distributed monthly in equal per capita payments to all adults (less for children). This payment is crucial to keeping energy affordable for everyone, creating strong incentives for conservation and sending the critical message to investors – fossil fuel investments are a dead end and clean energy investments are the best way to profit in the future.

Carbon fees, gradually escalating on all fossil fuels at the point of extraction or importation, could increase over a 10-year time frame until the cost of fossil fuel energy exceeds the current cost of clean energy (including solar, wind and geothermal – see figure). This would ensure a rapid shift of investment into clean energy technologies and a drop in clean energy prices due to competition, economies of scale and innovation. Once developed countries lead, the resulting solutions could be provided to the developing world at manageable cost.

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