CARBON TRADING

Loopholes and low ambition hinder carbon market progress

UN negotiators cannot seem to agree the rules for operating a global carbon market. *Jennifer Johnson* looks at whether it's truly possible to create an equitable trade in carbon credits.

When last year's 25th Conference of the Parties (COP) meeting was gavelled to a close at 2pm on 15 December, negotiations had run a gruelling 44 hours over schedule. The talks in Madrid ground to a standstill multiple times as delegates struggled to resolve outstanding issues with the Paris Agreement. 'Article 6' of the deal – a passage designed to assist governments in implementing their climate targets through voluntary international cooperation – was chief among the sticking points.

While the text itself is only a handful of paragraphs long, Article 6 has proved to be one of the most thorny and dense sections of the Paris accord. If and when its rules are ironed out, the mechanism could provide the foundation for an international carbon market system, which would theoretically allow nations to decarbonise their economies at least cost.

Under such a scheme, countries struggling to meet their emissions targets, known as nationally determined contributions (NDCs) in COP jargon, can purchase 'credits' from nations that have managed to exceed their own ambitions. The aim is to generate financial incentives for countries to slash their emissions, while spurring much-needed investment in the energy transition.

Article 6 of the Paris Agreement outlines two market-based pathways for driving global cooperation on carbon emissions. The first route, Article 6.2, establishes a framework that allows one country to move an 'internationally transferred mitigation outcome' (ITMO) to another country, which can then use the credit toward its NDC. ITMO transactions can occur via a number of approaches, including bilateral cooperation agreements, or national emission trading schemes (ETS).

The second mechanism, Article 6.4, would establish an international carbon market – to be governed by a UN body – for the trading of emissions reductions generated anywhere on the planet. For instance, one country could pay another to build a utility-scale solar farm instead of investing in a new coal-fired power station. The country that built the solar plant reaps the air quality benefits of clean power generation and the funding nation gets credit for the CO2 reductions.

Loopholes

On paper, properly structured carbon markets could go a long way towards helping countries hit their NDCs in a cost-effective manner. In fact, analysis from the Environmental Defense Fund, a US advocacy group, found that the practice of international emissions trading could nearly double global CO2 reductions between 2020 and 2035. But this potential can only be realised if governments agree to close loopholes in carbon market rules – and no such consensus was reached at COP25.

Several countries, including Brazil, India and Australia, spent much of the conference pushing for permission to use old carbon credits to meet their new climate targets. These outdated credits were generated under a 1997 agreement known as the Kyoto Protocol, which divided participating countries into 'industrialised' and 'developing' economies. The former worked in their own emissions trading market, wherein they could sell surplus emissions credits to peers that failed to achieve their Kyoto-level goals.

Meanwhile, developing countries could earn certified emission reduction (CER) credits for initiating domestic clean

energy projects. These CERs were subsequently traded, sold and used by industrialised nations to meet their own targets under the Kyoto Protocol.

The mechanism was designed to drive sustainable growth in less-developed places, while giving industrialised countries (with economies built on and sustained by fossil fuels) flexibility in cutting emissions. But now, some countries holding onto excess Kyoto-era 'units' want to ensure they can still cash in.

Critics argue that the carryover of Kyoto credits could undermine or restrict present-day climate ambition. Carbon Market Watch, a Brussels-based NGO that focuses on the role of carbon pricing in the energy transition, has insisted that Kyoto-era units are banned from entering the Paris Agreement. In the wake of lengthy debate and indecision at COP25, the NGO also emphasised the need to prevent the 'double counting' of new carbon reduction credits. This is a loophole that Brazilian negotiators, in particular, were keen to exploit.

'We need to make sure that when a country is buying an emission reduction from another country, then the country that sells it is not also counting it,' explains Gilles Dufrasne, Policy Officer at Carbon Market Watch. 'This is basically what Brazil is asking for. They want to be able to reduce their emissions through a project, count this reduction toward their own target and then sell the reduction to another country.'

Offsets

A handful of existing regional emissions trading schemes have laid a blueprint for negotiators hoping to create an international system. The largest and most mature of these is the European Union's ETS, which is based on a 'cap and trade' principle.

This means there is a limit set on the total greenhouse gas emissions allowed by all of the system's participants – and this cap is converted into tradable emissions credits. These allowances, which give their holders the right to emit one tonne of CO2, are allocated to the market's 11,000 or so participants, most of which are industrial plants or power stations.

California runs a similar cap-and-trade system, which allows major polluters to buy and sell emissions allowances. However, somewhat controversially, the state also lets market participants purchase a restricted number of so-called 'offset' credits from businesses across the US. These companies must have altered their practices to avoid emissions, or otherwise sequestered CO2, to participate. Examples include farms that install anaerobic digesters to turn crop wastes into biogas, or timber firms that engage in forest preservation activities.

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But the quality of an offset credit can vary widely, depending on the project in question. In many cases, it can be difficult to fully assess the positive lifecycle impacts of an offsetting initiative.

Take, for instance, the case of coal mines, which infamously emit methane as deposits are extracted. The California programme allows polluters to buy credits from mining firms that have taken action to slash their methane emissions. There are a number of tried-and-tested ways to do this, from flaring the gas to injecting it into a pipeline for use elsewhere in the energy system.

These mitigation activities will result in CO2 emissions, but they're still considered preferable to letting methane, with its greater global warming potential, out into the atmosphere. However, in August 2019, researchers from Stanford University published a report that expressed concerns about whether California's methane reduction programme had overstated the avoided emissions at mines.

This could have happened because baseline emissions were overestimated to begin with, or because the reductions that were created would have happened anyway. Worse still is the possibility that offsetting schemes have helped mines to stay open by keeping them financially viable for longer.

'Project developers need to estimate emission reductions against an unobservable, and therefore uncertain, counterfactual scenario of what would have happened in the absence of the offset programme,' explained the report, *Managing Uncertainty in Carbon Offsets: Insights from California's Standardized Approach*. 'Project developers have a financial incentive to exaggerate emissions estimated in the counterfactual scenario in order to claim greater reductions and generate more credits.'

Designing markets

According to Dufrasne, carbon markets can only drive climate progress if they're set up as emissions trading systems – not as offsetting systems. This means that any future global market must be structured and operated along the lines of the EU ETS, rather than trading in dubious offsets. But some critics believe that funnelling time and energy into creating carbon markets of any kind is a distraction from the task at hand: decarbonising every sector of the global economy.

'The problem is that if you just rely on buying carbon credits instead of reducing your emissions, at some point you're going to hit a wall,' Dufrasne says. 'Ultimately, every country needs to go to net zero domestically. If you've been buying international credits for the past 25 years – and realise other countries are going to stop selling them because they need them to meet their own targets – suddenly it looks like your own emissions have massively increased.'

At the moment, the future of global carbon markets remains unclear. And there are still more questions than answers surrounding the implementation of Article 6. When talks resume at COP26 in Glasgow this November, it seems unlikely that countries such as Australia and Brazil will have shifted their stances significantly. Another diplomatic deadlock could result.

Meanwhile, the UN's International Civil Aviation Organization (ICAO) is scheduled to meet in March to agree what kind of credits can be used in its forthcoming carbon market scheme, known as CORSIA. It's expected that Brazil, India and China will push to allow airlines to purchase their old Kyoto-era credits here – just as they did in Madrid. Countries with higher climate ambitions – EU member states and Costa Rica among them – are expected to push back. Thus, the fight continues.

At the closure of COP25, UN Secretary-General António Guterres tweeted that he was 'disappointed' with the results of the summit. 'The international community lost an important opportunity to show increased ambition on mitigation, adaptation and finance to tackle the climate crisis,' he wrote. But when it comes to carbon markets, it's arguably much better to continue negotiating than it is to deploy a scheme that flies in the face of true climate ambition. ●