POLICY WATCH:

Carbon market rescue

Reform of carbon trading in Europe could help claw back its credibility as an instrument to cut emissions. **Sonja van Renssen** reports.

The European Union Emissions Trading System (EU ETS) was and still is plugged as Europe's 'main instrument' to reduce greenhouse-gas emissions. Yet many will tell you that it has played anything but a major role in that task over the past decade: instead, the economic crisis, and renewables and energy-efficiency policies explain the nearly 20% cut in EU emissions compared with 1990 levels. Today, the EU ETS is looking to reinvent itself. Carbon trading is far from dead, not least because the European experiment has inspired myriad other trading schemes around the world[1].

The big problem for the EU ETS's credibility has been a huge surplus of carbon allowances — caused above all by the recession in Europe and an influx of (cheaper) international carbon credits — that has kept the carbon price in the single digits since 2011. To fix this, a so-called market stability reserve (MSR) is currently being hammered out by the European Parliament and EU member states[2]. They hope to reach a deal before the summer. The MSR will mandate officials to add or remove allowances from the market according to pre-set rules. The idea is to introduce some supply-side flexibility "to make it more like a normal market," says Sarah Deblock, European Policy Director at the International Emissions Trading Association (IETA).

For climate policymakers and stakeholders alike, the most important immediate task of the new reserve is to prevent a potential doubling of the existing market surplus by 2020[3]. This surplus currently stands at over two billion allowances, equivalent to one full year of EU ETS emissions. The new reserve will send an important political signal that a carbon price is here to stay. It will help the EU ETS to accommodate other policies, such as separate targets for renewables and energy efficiency, which lower emissions and put downward pressure on the carbon price. "With the MSR, whether we have one target or more will become less important," said Jos Delbeke, director-general for climate action

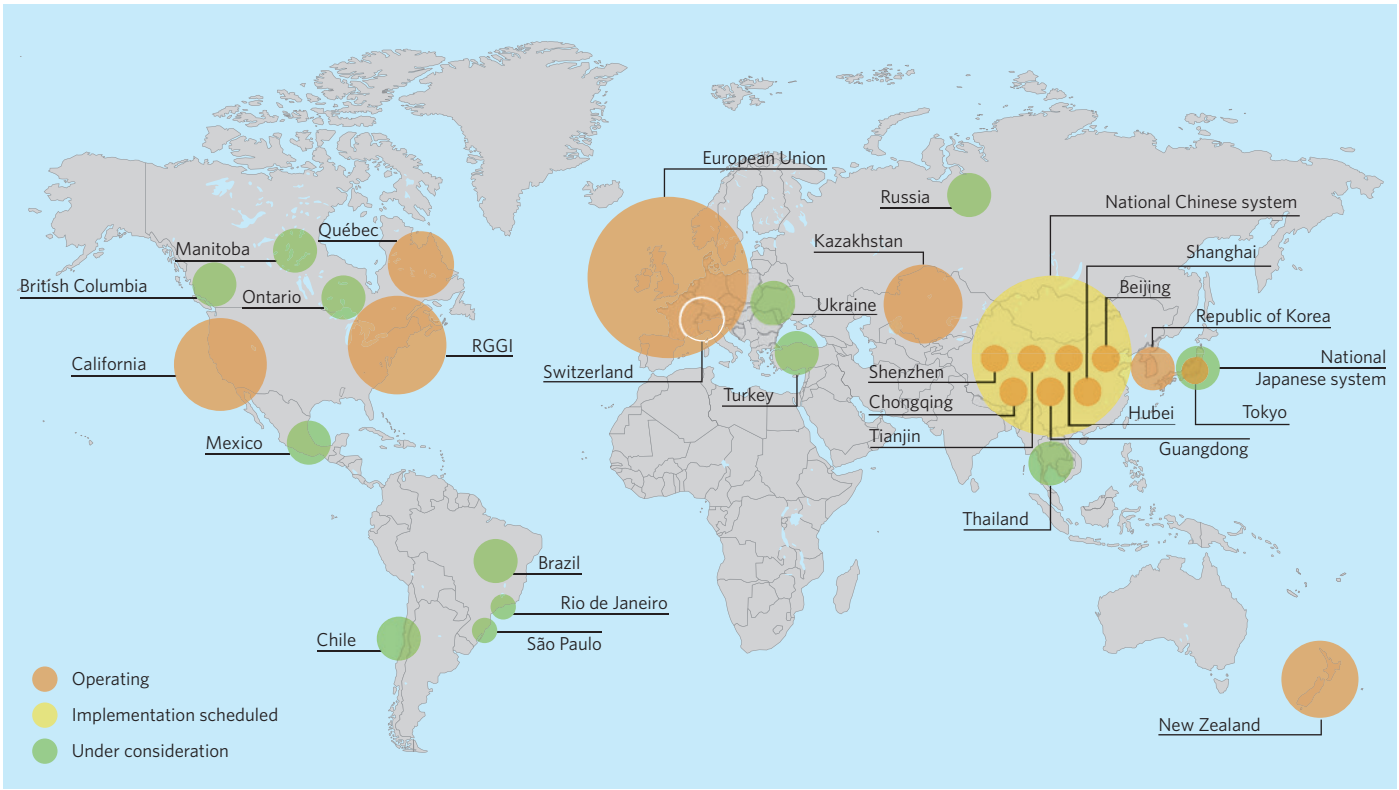

Figure 1 | Current status of ETSs worldwide. The implementation of carbon pricing through greenhouse gas ETSs is gaining momentum. Despite the troubles of the EU ETS (the world's first carbon market, celebrating its tenth anniversary this year), there has been a surge in ETS implementation, with new or expanded systems in China, California, Quebec, Kazakhstan and Switzerland since 2013. South Korea's ETS was the last to start, on 1 January 2015. The figure has been amended to reflect the latest state-of-play in the Republic of Korea and China. (Note: the size of each circle is approximately proportional to greenhouse-gas emissions covered). Figure reproduced with permission from ref. 1, © 2014 OECD/IEA.

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at the European Commission, at a debate in January. He added: "I would define the success of the MSR if we're back to an ETS that is doing what it is intended to do: encourage efficiency and fuel switching."

Not everyone is so hopeful. "I'm rather convinced that the MSR is not going to deliver anything substantial," says Georg Zachmann, a research fellow at Brussels-based think-tank Bruegel. He and other analysts such as Fabien Roques, senior vice president at FTI-CL Energy, a collaboration of energy consultants, fear that the MSR will not stop non-ETS policies from playing havoc with the carbon price. "Every time a member state chooses to change policy, it will affect the market. How can you have a reliable market that compounds the uncertainty of 28 member states?" asks Roques. Zachmann suggests that the European Investment Bank sells guarantees on the future carbon price[4].

Tomas Wyns, an ETS expert at the Institute for European Studies at Vrije Universiteit Brussel, worries about something else: "It is not clear what will happen to the [allowance] surplus over time." There is no proposal to permanently cancel any allowances before 2020 because this would equate to increasing the EU's 2020 emission reduction target, a political no-go. But in any case, the MSR was never intended to be the sole solution to the EU ETS's problems. The European Commission has promised further legislative proposals for reform later this year. These will bring the scheme in line with a 40% emission reduction target for 2030 (although Wyns fears this will not be enough to solve the surplus problem) and revisit free allowance compensation for industries at risk of leaving Europe for regions with weaker carbon constraints.

A fight over carbon leakage protection will be the biggest obstacle to a more substantial reform of the EU ETS. "What we need is no direct and indirect [carbon] costs at the level of our most efficient installations," says Axel Eggert, director general at Eurofer, which represents the European steel industry. "When the target is technically and economically achievable, we can accept a higher carbon price." Under the current rules, Europe's top-performing steel plants would only get half of the carbon allowances they need for free in 2030, he points out. In theory they should get them all for free, but the bottom-up calculation of what energy-intensive industries need is adding up to more than the total number of free allowances available.

In future, there will be more and more competition for a shrinking pool of free allowances. For EU policymakers, this means trimming down the carbon leakage risk list to focus support on those installations that will contribute more to economic growth over time. This could mean prioritizing certain sectors or investments. "Some industrial installations are cash cows," says Wyns. "We should give priority to new investments." There is fat in the system too: industries were over-allocated by 33% on average from 2008 to 2012, calculates the Danish Energy Agency. Steelmaker ArcelorMittal has accumulated an allowance surplus of 93 million tonnes, nearly twice its annual emissions, reports UK-based NGO Sandbag.

Many point out that countries such as the United States and China are doing more on climate change than when the first set of carbon leakage rules was agreed in 2009. "[Yet] there is an internal contradiction [between competitiveness and decarbonization] that is not yet resolved," says Roques. "What's an acceptable carbon price for the European economy?"[5] He suggests that this depends on the sector. Industries have argued that they should not be in an ETS with the power sector (which is not exposed to international competition and therefore pays for its allowances).

Going forward, Wyns sees two roles for the EU ETS: one, stopping new investments into coal and lignite; and two, a greater role for revenues to support R&D, innovation and modernization. His logic for the first is that it would require a lower carbon price than fuel switching (€20–30 compared with €30–50 per tonne, varying also by country). Others too see the EU ETS more and more as a backstop to, rather than driver of, the low-carbon transition. It will deliver on the cap, yes, but the transition as a whole is about more than reducing emissions: it's about moving to a new, more flexible power system.

The Commission has always argued that the EU ETS should reduce emissions at least cost and drive innovation. Advocates such as Deblock agree. The difference going forward, Wyns believes, is that carbon market revenues rather than the carbon price per se will drive low-carbon investment. This is how the Regional Greenhouse Gas Initiative (RGGI) in the northeastern United States has worked from day one. "[In the first phase of the EU ETS] it looked like some people were making a lot of money but there was not much carbon being avoided," explains David Farnsworth, a US-based senior associate at the Regulatory Assistance Project (RAP), a non-profit group of energy and environment policy advisors.

RGGI's architects therefore decided to make companies pay for their allowances and recycle the revenues (US$700 million from 2009 to 2012) into local citizen and industry efficiency projects. "Revenue recycling depoliticized RGGI," believes Wyns. It certainly secured enough political buy-in to nearly halve the system's cap in 2013 (note, however, that RGGI only covers the power sector, not energy-intensive industries). It has arguably cut emissions despite a carbon price (under €2.50 per tonne) that has been far lower even than Europe's.

RGGI demonstrates the potential gain — rather than pain — of complementary policies. Combining carbon trading with energy-efficiency obligations "allows greater carbon reductions at lower cost to consumers and the economy," concludes RAP in a new report[6]. This supports binding energy-efficiency targets for EU member states, it suggests, a proposition that national governments have dismissed for now. Instead, some talk has resurfaced of an emission performance standard for individual power plants. But Delbeke warns against this: "It is much more challenging arguing against coal than for a better ETS."

Although not bound to do so, European countries are already spending the vast bulk of their ETS revenues on climate-related initiatives (€3 billion out of €3.6 billion in 2013)[7]. EU leaders have also endorsed the idea of a bigger ETS-fuelled innovation fund (NER400) for 2030 that will specifically support innovation in energy-intensive industries, as well as carbon capture and storage, and renewables.

So far, the EU ETS's problems have not dissuaded other countries from following its lead. China has created seven pilot systems, each designed to test particular features such as scope and free versus auctioned allowances. If China succeeds in launching its national ETS in 2016, it will be the biggest such scheme in the world, roughly twice the size of the EU ETS[8]. As of 2015, there were 16 ETSs in operation worldwide, covering jurisdictions that add up to about 40% of global GDP[9] (see Fig. 1). The World Bank's Partnership for Market Readiness provides funding and technical assistance.

For emerging economies, emission trading is a way to green growth. "Developing countries are talking more seriously about emissions reductions," says Caroline Lee, a policy analyst at the International Energy Agency. She adds: "Because of Europe's experience, newer ETSs are more seriously considering the risks of not having quantity limits or a minimum price." Most of the new schemes are building in direct price controls. But the EU's quantity-based MSR should work just

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as well, a new study by Climate Strategies argues[10]. The Hubei scheme in China has also opted for provisional allocation for its first year (in a bid to avoid over-allocating) and an innovation fund.

The next step will be connecting up all these emerging ETSs. Many believe that the era of the Clean Development Mechanism (CDM), which let developed countries buy carbon credits from developing countries, is largely over. "The CDM was, in many aspects, a development tool," explains Lee. "A lot of emerging ETSs are talking about linking with other markets, while limiting the number of international offsets." This is true for China and Korea. But linking up disparate schemes is not so easy. It helps when they are similar in design, such as those for California and Quebec. In any case, stringent monitoring, reporting and verification of reductions is paramount.

IETA wants the UN to create an 'international transfer system' that would let governments transfer parts of their mitigation pledges to others in the UNFCCC under a post-2020 global climate treaty. Such flexibility would, it argues, enable greater net emission reductions, by improving economic efficiency. In practice, the UN would need to set common rules for quality, and for recognizing and tracking reductions. "We have international exchange rates for currencies and international systems to help debt burdens of other countries," says Jeff Swartz, International Policy Director at IETA. "We need to do the same for climate change. Practical issues can always be overcome with enough political will." Ultimately, carbon trading might be a way for national, bottom-up pledges to be sewn together into a new global climate treaty. ❐

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