IETA

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EMISSIONS TRADING 101

There are two types of emissions trading markets: compliance (eg, cap-and-trade systems) and voluntary.

Compliance market

In a compliance market such as cap-and-trade, there is a limit on the amount of greenhouse gas (GHG) emissions that covered industries (eg, power generation, metals) can emit in a single year. Emissions of gases such as CO_2, methane and N_2O are measured by industry and reported to the government or regulator who monitors emissions and runs the programme.

Most existing cap-and-trade systems apply to the power sector and heavy industry (eg, cement manufacturers, metals, chemicals, the oil and gas industry, ceramics, pulp and paper, mining, etc). An increasing number of programmes – including California, Québec, China's pilots and Korea – also cover transport fuels, New Zealand's covers forestry, while the EU ETS includes aviation and, from 2024, shipping, and the bloc is creating a new system – dubbed 'ETS 2' – for fuels used in road transport and buildings. The Regional Greenhouse Gas Initiative (RGGI) is the only existing cap-and-trade programme that only applies to the power sector.

Jurisdictions accounting for 55% of global GDP have implemented an emissions trading system, according to ICAP's Emissions Trading Worldwide Status Report 2023. This includes China, South Korea, Kazakhstan, New Zealand, the EU, 10 US states (including California and New York), Québec and Tokyo. Other types of compliance market include hybrid tax-and-offset models (eg, Colombia) and baseline-and-credit (eg, Australia).

How does it work?

In order to control emissions, the government sets a cap on emissions of these gases. It does this by giving or selling companies "allowances" (or permits), each one typically representing one tonne of CO_2 equivalent (CO_2e).

Allowances are distributed via allocation and/or auctioning. Companies that are required to reduce emissions are called "regulated entities".

At the end of the compliance cycle (eg, calendar year, financial year, etc), regulated entities must submit a verified emissions report, developed by independent third parties. Companies will then have to surrender emissions units – allowances or, if permitted, carbon credits – equal to their emissions; by acting to reduce their emissions, regulated entities can reduce their carbon liability.

Those which have reduced their emissions could also potentially end up with surplus emissions units, which can be sold to those which have exceeded their cap, or expected emissions; this can typically be done via exchange or intermediary.

Voluntary market

The voluntary carbon market allows companies, governments, other organisations and individuals the opportunity to buy or sell carbon credits for emissions which are not part of a compliance system, eg to offset flights and travel, residential energy use or as part of corporate net zero or sustainability strategies. Similar to a compliance market's allowance, these carbon credits also each represent one tonne of CO_2e.

Carbon credit sources

The credits are issued by 'standards' – organisations which offer an array of approved methodologies for projects to implement to reduce or remove emissions. All reduction/removal claims are assessed in accordance with these methodologies by an independent third-party before the standards issue any credits. Examples of project types include clean cookstove distribution, reforestation, landfill gas methane capture, and energy efficient lightbulb distribution programmes.

Credits are directly purchased from the project developer in the first instance once issued. They can then either be retired (ie, cancelled and removed from circulation) to account for the purchaser's own emissions, or traded on for example via an exchange, a broker or other intermediary.

Only credits from projects accredited by third parties according to internationally recognised standards should be considered. IETA's voluntary market initiative, the International Carbon Reduction and Offsetting Accreditation (ICROA), provides a framework for responsible corporate climate action via its accreditation programme. All of ICROA's Accredited organisations (including carbon credit providers) adhere to ICROA's Code of Best Practice and therefore, the highest environmental integrity and quality in the voluntary carbon market. The ICROA Accreditation Label certifies that the company is compliant with the ICROA Code through an annual cycle of third-party audits.