

CAP AND TRADE: THE BASICS



Cap and trade program overview

A cap-and-trade system places a limit on the amount of greenhouse gas emissions that industry can emit in a single year. Emissions of gases such as Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O) are measured by industry and reported to the government or regulator who monitors emissions and runs the cap and trade program. 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).

Allowances are distributed via allocation and/or auctioning. The free allocation of allowances helps to reduce cost and competitiveness burdens to affected industries, especially those competing with regions not subject to regulatory carbon constraints. Companies that are required to reduce emissions are called regulated entities. They must demonstrate that they comply with the cap and trade program every year.



What industry sectors are covered under cap and trade?

Most existing cap-and-trade systems apply to the power sector and heavy industry (e.g., cement manufacturers, metals, chemicals, the oil and gas industry, ceramics, pulp and paper, mining, etc). An increasing number of programs - including **California, Québec, China pilots and Korea** - also cover transport fuels, **New Zealand's** covers forestry, and the **European Union Emissions Trading System** now applies to flights within the bloc. **China** will also consider including aviation under its national program, set to launch in 2016 and building-on experience gleaned from its seven existing pilot cap-and-trade programs. The **US Regional Greenhouse Gas Initiative (RGGI)** is the only existing cap-and-trade program that only applies to the region's power sector.



How does a regulated entity comply?

At the end of the compliance cycle (eg, calendar year, financial year etc), regulated entities covered by the cap-and-trade program must submit a verified emissions report, developed by independent third parties. Companies will then have to surrender emissions units - allowances or, if permitted, offsets - 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 expected emissions; this can typically be done via exchange or intermediary.



How does Cap and Trade achieve the environmental objective?

The cap typically declines each year, gradually phasing-down towards the emissions reduction goal. **This is essential in ensuring the environmental outcome is met at lowest cost.**



Where have emissions trading systems been implemented?

Jurisdictions accounting for **around 40% of global GDP** have implemented an emissions trading system, according to [ICAP's Emissions Trading Worldwide Status Report 2015](#). This includes China, South Korea, Kazakhstan, the EU, 10 US states (including California and New York) and Tokyo. Other systems are being considered in Brazil, Chile, Mexico, Washington State, Russia, Ukraine and Thailand, among others. These global climate markets and finance developments are further showcased and analysed in [IETA's 2014 Greenhouse Gas Markets Report](#).