



IEAGHG Information Paper 2017-IP52; Developments on Carbon Pricing

Carbon pricing is the method favoured by many economists for reducing global-warming emissions. It charges those who emit carbon dioxide (CO₂) for their emissions. That charge, called a **carbon price**, is the amount that must be paid for the right to emit one tonne of CO₂ into the atmosphere.¹ Carbon pricing usually takes the form of either a carbon tax or a requirement to purchase permits to emit, generally known as cap-and-trade, but also called "allowances". The latter system is more often referred to as an Emissions Trading Scheme.

The aim of any pricing mechanism would then be to invest in low carbon technology developments for example. The Tax on offshore emissions in Norway led to the development of the Sleipner and Snøhvit commercial CCS projects. In that, situation (unfortunately a unique situation) the carbon tax worked and help stimulate CCS deployment.

The European Union's ETS (EU ETS) is the world's biggest scheme for trading greenhouse gas emissions allowances. It covers 11,000 power stations and industrial plants in 30 countries, whose carbon emissions make up almost 50 per cent of Europe's total. However, the EU ETS has come under fire for being overly lenient on heavy users, while the EU has been accused of giving away too many permits - leading to low prices. The value of carbon credits in the EU is about €5.80 (£5.31) a tonne, which some environmental groups suggest make it cheaper for companies to pollute than change their behaviour.

Funds from the EU ETS were used under the NER300¹ programme to stimulate investment in low carbon technology. The NER300 programme has supported 38 renewable energy projects and 1 CCS project. The CCs was the White Rose Project in the UK which didn't go forward

Recent developments on Carbon Pricing

The International Carbon Action Partnership (ICAP)² is an international forum for governments and public authorities that have implemented or are planning to implement emissions trading systems (ETS). The partnership now counts 31 full members and 4 observers. At its 10th anniversary meeting, the ICAP members issued a joint statement pledging to strengthen action on climate change through renewed cooperation on carbon markets.

Key messages from the Joint statement are:

- **Need for Urgent Action to Control Climate Change** *Climate change presents significant risks to the environment, economic and social prosperity, as well as human health; hence, the need for bold, ambitious and rapid actions and measures to reduce greenhouse gas (GHG) emissions and move towards low-carbon economies. Yet, the need to decouple economic growth from GHG emissions also presents an important opportunity to spur a transition toward more sustainable and energy-efficient development. This transition can unlock significant employment and investment opportunities, allowing jurisdictions to grow in a more inclusive and sustainable manner.*
- **The Importance of implementing the Paris Agreement** *The Paris Agreement sent a clear signal that governments are committed to acting on climate change, with the goal of limiting the average rise in global temperature to well below 2°C and pursue efforts to limit it to 1.5°C. As Parties work toward the implementation of their commitments under the Paris Agreement, and subnational jurisdictions implement their own climate change programs, emissions trading and cooperation across borders will be a key building block in many jurisdictions'*

¹ https://ec.europa.eu/clima/policies/lowcarbon/ner300_en

² <https://icapcarbonaction.com/en/>



strategies. Emissions trading can help ensure that the goals of the Paris Agreement are met in a cost-effective manner.

- **Emissions Trading as a Key Element in Decarbonisation.** A well-designed emissions trading system (ETS) puts an adequate price on GHG emissions, guarantees emissions are reduced at the lowest cost, and offers governments certainty that mitigation targets will be met. Over the past decade, the number of ETSs has grown gradually and these systems now cover close to 15% of global emissions. Interest in emissions trading is rising, including in major emerging economies.

A press release from the 19th anniversary meeting can be found at:

https://icapcarbonaction.com/en/?option=com_attach&task=download&id=504

The full joint statement can be found at:

https://icapcarbonaction.com/en/?option=com_attach&task=download&id=505

Other publications include:

- ICAP and the World Bank's Partnership for Market Readiness (PMR) Emissions Trading in Practice have developed a handbook on design and implementation of ETSs. The Handbook synthesises input from over 100 practitioners and experts from four continents, reflecting both the latest theoretical insights and best practices from existing emissions trading systems (ETSs). This can be found at: <https://icapcarbonaction.com/en/icap-pmr-ets-handbook>
- ICAP co-authored a paper entitled 'Emissions Trading and the Role of a Long Run Carbon Price Signal' which was published in June 2017. The paper looks at market and regulatory imperfections that could disrupt the dynamic cost effectiveness of an ETS, including options as to how these imperfections can be addressed.

The Carbon Pricing Leadership Coalition (CPLC)³ was launched at COP21⁴. It is a voluntary partnership that brings together leaders from three major arenas - government, the private sector, and civil society - to expand the use of effective carbon pricing policies that can maintain competitiveness, create jobs, encourage innovation, and deliver meaningful emissions reductions. Through the CPLC, partners join together to share their experience working with carbon pricing, and expand the evidence base for the most effective carbon pricing systems and policies.

The CPLC now has over 200 leading organisations working to expand carbon pricing, with the goal of covering 25 percent of global emissions by 2020 – double the current level – and 50 percent within the next decade⁵.

The CPLC state that 40 countries and more than 20 cities, states and provinces already use carbon pricing mechanisms or are planning to implement them. These activities are responsible for more than 22 percent of global emissions. The CPLC claims other are developing or considering systems that will put a price on carbon in the future which if achieved will cover almost half of global CO₂ emissions⁶.

The World Bank and CPLC have produced a report this year entitled 2016-2017 Carbon Pricing Leadership Report see: <http://pubdocs.worldbank.org/en/183521492529539277/WBG-CPLC-2017-Leadership-Report-DIGITAL-Single-Pages.pdf>.

³ <https://www.carbonpricingleadership.org/become-a-partner>

⁴ http://climateinitiativesplatform.org/index.php/Carbon_Pricing_Leadership_Coalition

⁵ <https://www.carbonpricingleadership.org/become-a-partner>

⁶ <https://www.carbonpricingleadership.org/who>



The report provides information from 60-example carbon pricing schemes around the world. The biggest development in Carbon Pricing on the horizon is that of China which, after launching pilot schemes in 2013, is planning the launch of a National ETS in late 2017. The CPLC has a feature article on the new Chinese ETS on its web site at: <https://www.carbonpricingleadership.org/posts-ops/2017/8/29/chinas-ets-at-home-and-abroad>

China's national ETS will expand the scope of global GHG emissions covered by such schemes from 9 to 16 percent. It will include 8 sectors and 18 sub-sectors which consume over 10,000 tonnes of coal equivalent per year⁷.

However, it is not all-good news; Schroeders suggest that more than \$1.5tn (£1.2tn) in company profits worldwide could be erased by taxes required to meet the Paris climate agreement⁸. In what is seen as stark to investors to back more sustainable companies, the fund management group said total earnings of 12,500 global companies could fall by 20 per cent were the world to limit itself to the 2°C temperature rise target agreed in Paris through higher taxes. Schroeders found prices in emissions trading would need to rise to "well over" \$100 a tonne of CO₂e from current levels, about \$5, to encourage the move away from fossil fuels on the scale that was needed.

The fund manager estimates the move to \$100 carbon pricing across various global schemes will probably happen over the next three decades. However, they say the "hit" to earnings might not come if companies cut their reliance on fossil fuels, while new eco-friendly companies filling in the gaps could offset the decline in global profit.

The \$100 carbon price is not new, in a report of the High Level Commission on Carbon Pricing⁹ (which included leading economists including Lord Stern) that was produced in May 2016 one of the key conclusions of the Commission was that:

- *the explicit carbon-price level consistent with achieving the Paris temperature target is at least US\$40–80/tCO₂ by 2020 and US\$50–100/tCO₂ by 2030, provided a supportive policy environment is in place.*

John Gale
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[www.ieta.org/resources/China/Chinas National ETS Implications for Carbon Markets and Trade ICTSD March2016_Jeff_Swartz.pdf](http://www.ieta.org/resources/China/Chinas_National_ETS_Implications_for_Carbon_Markets_and_Trade_ICTSD_March2016_Jeff_Swartz.pdf)

⁸ <https://www.businessgreen.com/bg/news/3016598/carbon-tax-could-wipe-out-polluters-profits-in-pursuit-of-paris-targets>

⁹ <https://www.carbonpricingleadership.org/report-of-the-highlevel-commission-on-carbon-prices/>