

## GLOBAL CLIMATE TARGETS

# The carbon pricing puzzle



updated Nationally Determined Contributions (NDCs) under the Paris Agreement in February this year found that implementation of current commitments would only lead to a 0.5% reduction in global emissions by 2030 compared to 2010 levels. This figure is far short of the 45% reductions needed to limit global temperature increase to 1.5°C by mid-century, according to the United Nations Framework Convention on Climate Change (UNFCCC).

## Fear versus progress

Pricing carbon is far from a new conversation. Two nations, Poland and Finland, operated carbon taxes as long as 31 years ago. But many blueprints have long gathered dust. This in part due to the complexity of the challenge, as well as the lacklustre appetite for climate mitigation among those fearful that spurring low carbon growth would risk stranded assets – and indeed it does.

According to Lex estimates, around \$900bn, or one-third of the current value of big oil and gas companies, would evaporate if governments more aggressively attempted to restrict the rise in temperatures to 1.5°C above pre-industrial levels for the rest of this century. Such fears are only intensifying after big oil lost a landmark case in late May when a court in the Hague ordered Royal Dutch Shell to cut its global carbon emissions by 45% by the end of 2030 compared with 2019 levels.

‘You only need a third of a \$100/tonne carbon price to make every coal plant in the world unviable, and to put most gas power plants out of action. The US has half a trillion dollars invested in 500 GW of gas power plants and they are still building \$20bn a year of gas plants, so it is not going to be an easy journey,’ explains Tim Buckley, the Director of Energy Finance Studies for Australasia at the Institute for Energy Economics and Financial Analysis (IEEFA).

## Gaining speed

The value of carbon pricing today hints at its future potential. Pricing instruments generated \$53bn in revenue worldwide in 2020, climbing by 18% year-on-year, according to the World Bank. The significant market growth over

**Pieces of this critical yet convoluted conversation are finally slotting together as global momentum to decarbonise intensifies. But there is still a long way to go, Michelle Meineke writes.**

**A** silver bullet it is not, but carbon pricing is a vital tool to support complementary efforts in the race to reach the Paris Agreement targets by mid-century. The needle is certainly shifting. Nearly 50% of the world’s largest 500 companies by market value already have an internal carbon price or intend to adopt one in the coming two years, according to the World Bank.

Currently, the 64 carbon pricing initiatives selected by the World Bank as implemented or scheduled for implementation cover just 21.5% of global greenhouse gas (GHG) emissions – 6% higher than in 2020. It is meaningful progress, albeit belated. A chunk of this percentage growth is due to the May launch of China’s emissions trading scheme (ETS), already the world’s largest, plus a wave of net

zero targets from nations and corporates announced since late 2019.

Some of the most recent pledges include the world’s two biggest economies – the US and China by 2050 and 2060, respectively.

‘Pre-net zero targets, some companies thought someone else could do the heavy lifting. Now everyone must contribute as there is nowhere to hide, which links to putting a price on carbon. This certainly is not the only way to solve climate change, but we probably will not reach environmental targets without it,’ says Joseph Dutton, Managing Consultant of Climate Policy and Carbon Pricing at consultancy South Pole. Missing the targets is already a very real risk – and some would argue it’s an inevitability.

Analysis of the 48 new and

the last year is especially telling. During the global financial crisis of 2007–2008, environmental momentum waned, yet it has soared amid COVID-19 and a period described by the International Monetary Fund (IMF) as the worst economic strain in nearly 100 years.

But for now – and perhaps permanently – the complexity of a global price on carbon means that plans are largely off the table. Aligning complex and cross-border supply chains, protection against geopolitics, differing jurisdictional contexts and variations between developed and developing nations are just some of the considerations. On the latter alone, the average footprint of someone in the richest 1% of the world's population could be 175 times greater than that of someone in the poorest 10%, says Oxfam.

'Carbon prices have the potential to do a lot more, but I do not think we will see a global price in the next ten years. Jurisdictions are more focused on local solutions right now,' says Marissa Santikarn, a Climate Change Specialist at the World Bank and Co-Author of the 2021 *State and Trends of Carbon Pricing* report.

The UK launched its ETS in May in support of the nation's 2050 net zero goal, with prices of €50/tonne at one point exceeding that of the much more mature EU ETS. The distinct similarities between the ETS in the UK and EU is what Dutton describes as a 'backhanded compliment' to the EU – especially amid the political quagmire surrounding Brexit. It is also widely recognised that the UK would benefit from linking its ETS to the EU's, as Switzerland does.

The EU ETS has also had an eventful year, hitting an all-time

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high of €50/tonne in early May. This price could double in the medium-term as caps tighten in support of the bloc's Green Deal. The Netherlands' Industry Carbon Tax Act also entered into force this year, as did Luxembourg's carbon tax, with both starting around €30/tonne. Plus, carbon prices are increasing in countries like Canada and Ireland, while New Zealand's Climate Change Act also sets out changes to its ETS.

Looking ahead, Ukraine is eyeing a 2025 launch for its ETS, the US Transportation and Climate Initiative with 13 states has drafted an ETS, while Indonesia's trial ETS for 75% of its power generation sector is scheduled to close for review in August. Meanwhile, Colombia is planning its ETS pilot programme by 2024, Turkey has finalised the draft for a pilot ETS and Russia is developing a regional system.

It is worth remembering that carbon prices – and associated indices, charters and agreements – are in flux, especially as the energy market transitions. While 64 carbon pricing initiatives is laudable – versus just two in 1990 – markets still need to mature and strengthen. Currently, only 3.76% of emissions covered by a carbon price are above \$40/tCO<sub>2</sub>e, which is the bottom range (\$40–\$80/tCO<sub>2</sub>e) of the 2020 prices that are recommended to comply with the Paris Agreement.

'We are stuck in a position where we need a carbon price that makes a difference, but we also need something to help companies – and that is where something like the cross-border carbon mechanism comes in,' says Dutton.

#### **CBAM gamechanger?**

The EU is in the process of establishing a carbon border

adjustment mechanism (CBAM), in the context of the bloc's Green Deal – a potential gamechanger in terms of effectively increasing accountability.

The CBAM would place a carbon price on imports of certain goods from outside the EU, as a way to reduce the risk of 'carbon leakage'. There are potential trouble spots, including concern that the mechanism could lead to unfair pressure on least developed countries (LDCs). But a final design of the mechanism is still being defined, with it likely to be operational by late-2022 – a very short 18 months away.

Whether other nations, especially big emitters, can fit in with the EU's plan – historically a global climate pioneer – remains to be seen. For one, eyes are on the how the US, the world's second largest emitter, will accelerate its efforts under President Biden.

'The US is still divided on carbon taxes *per se*. The CBAM – as it is not a carbon price – may be more politically acceptable as it is imposed on imports, rather than the domestic economy. In turn, this may eventually give way to a carbon price,' says Buckley.

Whispers that the US, Japan and China may join up with the EU for the CBAM are growing. 'If it is going to happen, I would say there is a good chance it will be going into COP26 this November,' Buckley adds. 'Biden likes to build layers of momentum. Such a move would build on the G7 heads of states meeting in June, where I expect Biden, the UK and Europe to put pressure on other countries to step up. It is certainly one to watch.' ●

## **China's leap**

The world's largest emitter's new carbon market is another spoke in the wheel of its push for net zero by 2060. But most importantly, it speaks volumes about how appetite for climate mitigation has accelerated worldwide and how climate policy is an increasingly powerful geopolitical tool.

China's plans all have something in common: volume. The country has established a carbon market with more than 7,000 emitting entities monitoring, reporting and verifying their carbon emissions, collecting eight years of data (2013–2020). The current, first phase only covers the power generation sector – which equates to 40% of the total emissions for the world's biggest energy supplier and consumer. By December, the data used to analyse the effectiveness of the first compliance cycle should be ready, says the Environmental Defence Fund (EDF).

'In general, the carbon price is relatively low at the start of trading, as the covered entities cannot anticipate correctly whether they are in a short or long position,' shares Jianyu Zhang, the Founder, Chief Representative and Vice President of EDF's China

Program, in response to early estimates that China's scheme will only be priced at \$6/tonne.

'According to the experience of pilot carbon markets, the carbon price normally increases significantly before the compliance deadline, as covered entities purchase allowances for compliance to avoid fines. China's cost of carbon emissions reduction being relatively low does not mean that the national carbon market is not effective,' adds Zhang.

Much of the ETS is based on the experiences of the nation's pilot carbon markets. For example, China's province of Hubei reported 9% GDP growth in 2014–2016 with 27mn tonnes of CO<sub>2</sub> emission reductions, equal to an annual 3.75% reduction.

'It is heartening that China's ETS is live, considering that plans to start the scheme began in 2017 and there has been a year of disruption with COVID-19. The system is in its early stages, so we will have to see what changes the government makes to ramp up coverage and fill in any blanks,' says the World Bank's Santikarn.