



GHG Market Sentiment Survey 2021



This year's key findings:

- 1. Increased optimism on carbon price expectations as climate ambitions ramp up.** Expected prices for 2025 and 2030 have increased for every Emissions Trading System (ETS) included in the survey, in comparison to last year's survey. This reverses the bearish sentiment expressed in the 2020 survey.
- 2. Carbon markets have been resilient to COVID-19 and the economic recovery from the pandemic will likely provide a boost.** 75% of respondents stated that carbon markets globally have remained resilient to the impacts of COVID-19, and 74% believe that recovery from the pandemic will strengthen global carbon markets, compared to before the pandemic. This is consistent with last year's sentiments that carbon markets would recover within two years.
- 3. Article 6 is seen as key to achieving the Paris Agreement goals, but participants are uncertain as to whether Parties will reach a consensus at COP26.** An overwhelming majority (89%) of respondents believe that Article 6 is essential or will play an important role in achieving the goals of the Paris Agreement. However, participants are split as to whether Parties will actually reach an agreement on the rules for Article 6 at COP26, with nearly two-thirds either disagreeing (37%) or unsure (24%).

Executive summary:

1. Increased optimism on carbon price expectations as climate ambitions ramp up. Expected prices for 2025 and 2030 have increased for every Emissions Trading System (ETS) included in the survey, in comparison to last year's survey. This reverses the bearish sentiment expressed in the 2020 survey.
2. Carbon markets have been resilient to COVID-19 and the recovery from the pandemic will likely provide a boost. 75% of respondents stated that carbon markets globally have remained resilient to the impacts of COVID-19, and 74% believe that recovery from the pandemic will strengthen global carbon markets, compared to before the pandemic. This is consistent with last year's sentiments that markets will recover within two years.
3. Article 6 is seen as key to achieving the Paris Agreement goals, but participants are uncertain as to whether Parties will reach a consensus at COP26. An overwhelming majority (89%) of respondents believe that Article 6 is essential or will play an important role in achieving the goals of the Paris Agreement. However, participants are split as to whether Parties will actually reach an agreement on the rules for Article 6 at COP26, with nearly two-thirds either disagreeing (37%) or unsure (24%).
4. Border Carbon Adjustment (BCA) mechanisms are seen as increasingly likely in the US and Europe. 71% of respondents support the European Commission's proposal to introduce a Carbon Border Adjustment Mechanism (CBAM) in the EU as an alternative to free allocation to sectors at risk of carbon leakage. 67% of respondents believe that US President Joe Biden will implement BCA taxes to help cut greenhouse gas emissions in the US.
5. Participants said that the EU's top priorities to reach its 2030 target should be to expand emissions trading to additional sectors and to strengthen the annual cap-setting reduction trajectory. 80% of respondents stated that the scope of emissions trading should be expanded to the maritime, road transport and aviation (outside the EU) sectors, in order to align with the bloc's 2030 goal to reduce emissions by at least 55%.
6. Outside of the EU and North America, most respondents expect Mexico (65%), Colombia (65%), Japan (57%), Taiwan (57%) and Peru (50%) to launch operational carbon markets by 2026. Confidence in Brazil implementing an ETS remains the lowest in Latin America.
7. Two-third of respondents expect all Chinese regional ETS pilots to be integrated into the newly launched national ETS by 2026. The biggest challenges for China's ETS implementation are finalising power market reforms (24%), replace with Measurement, Reporting and Verification (MRV) systems (21%), and agreeing an approach to allocation (21%), according to respondents.
8. Nearly half (49%) of respondents believe that voluntary carbon markets can supply enough carbon credits to match the growth in demand from corporations, with a further 28% who disagree and 23% who are unsure. One-third of all respondents are exploring the use of Natural Climate Solutions (NCS) and reforestation/afforestation schemes respectively, as part of their net zero and market growth strategy. Only 9% of respondents are exploring the use of technology-based carbon removal options such as Direct Air Capture (DAC) systems.
9. The majority of participants stated that they prefer to make claims around carbon neutrality and offsetting, ahead of those around financial contribution (78% vs 13%). Two-thirds stated that it is essential that organisations can continue to make claims of carbon neutrality post-2021.

About PwC

PwC UK helps organisations and individuals create the value they're looking for. We're a member of the PwC network of firms in 155 countries with more than 284,000 people committed to delivering quality in assurance, tax and advisory services. The Sustainability and Climate Change team at PwC UK helps both public and private sector clients address the specific and immediate issues relating to sustainability, as well as with longer-term strategic thinking. PwC's Global Sustainability network includes over 950 dedicated experts in more than 60 territories, with over 100 based in the UK. You can find out more by visiting us at www.pwc.com/uk.

About IETA

For the past 22 years, IETA has been the leading voice of business on market-based ambitious solutions to climate change. Our objective is to build international policy and market frameworks to reduce greenhouse gases at lowest cost, delivering real and verifiable emission reductions with environmental integrity. To produce meaningful prices that drive change, we support market-based policies with effective emissions targets, clear rules and flexible compliance choices. See www.ieta.org for more information.



Message from President and CEO of IETA

The past year has seen our collective resilience tested as the COVID-19 pandemic threatened to bring economies to a standstill and forced us to rethink our approach to everyday life.

It was an economic hammer-blow that has prompted massive government efforts to rebuild economies, but with a significant twist.

For 2020 was not just the year of COVID-19. It also became the year of climate ambition. As governments worked tirelessly to plan the recovery, it quickly became clear that preventing catastrophic climate change needs to be at the very centre of these efforts. And governments rose to the twin challenges.

The European Union's Green Deal specifically links climate and sustainability to the vast amounts of money that will be spent in re-tooling the region's economy. The EU's Emissions Trading System (ETS) will be harnessed to this recovery by providing the all-important price signal that will drive emissions abatement, while investment in clean energy will take us even closer towards net zero.

In the US, the Build Back Better programme set out by President Joe Biden specifically targets climate goals, such as transitioning away from fossil fuels in the country's power sector and expanding mass transportation. Congress is considering proposals for carbon pricing systems for clean electricity, green aviation, voluntary markets and Natural Climate Solutions (NCS).

And in Canada, the Supreme Court ruled that the national carbon price is constitutional, underpinning the government's plan to set a minimum price across the nation.

It wasn't just governments that heeded the call to boost climate ambition: the private sector has wholeheartedly adopted net zero ambition as well. Through initiatives like the Taskforce on Scaling Voluntary Carbon Markets, corporates around the world are engaged in the task of making emissions abatement more efficient, driving investment to where it can reduce greenhouse gases at the least cost.

The pandemic did little to adversely affect the prevailing sentiment in the various carbon markets around the world. Our survey shows strong belief that carbon prices will only increase as regulators tighten the parameters of their markets.

And amid the upheaval of COVID-19, we saw the emergence of new carbon markets. China is set to kick off trading in its nationwide ETS this Summer: even covering just the electricity sector, it will be as large as all the other emissions markets combined.

The UK has successfully launched its national ETS after leaving the EU ETS last year. Britain has a long history of innovation in carbon markets and its ETS was designed specifically to make linking to others easy, something that will be increasingly important if we are to engage with more countries.

Other markets are starting to emerge as well. Colombia and Mexico are expected to develop trading systems in the months to come, while South Africa, Singapore and Chile are considering ways to add trading flexibility to carbon tax systems. Indonesia, Vietnam, Russia, Turkey, Thailand and Pakistan are all studying how to develop carbon pricing.

Our report this year can be summed up in one word as we emerge from the pandemic: optimism. Optimism that our economies have proven resilient to the impact of COVID-19. Optimism that carbon prices will rise even higher as carbon targets become more ambitious, reinforcing the all-important signal to business that reducing emissions pays both climate and business dividends, and optimism that growth of net zero ambition will drive expansion in the deployment of NCS.

I'm sure you'll agree that, in the wake of a global pandemic, the outlook for market mechanisms looks unexpectedly bright at the moment. We look forward to reporting a year of even more exciting developments in Spring 2022.

A handwritten signature in blue ink that reads "Dirk Forrister". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Dirk Forrister
President and CEO of IETA

About the survey

This year's IETA greenhouse gas (GHG) Market Sentiment Survey reflects key issues and developments in GHG markets against a backdrop of significant changes, as well as political and economic uncertainty. We designed the survey to assess key dimensions of market sentiments, such as future price and policy expectations. The survey was conducted among IETA members, with more than one response per organisation possible, and was open from 19 April to 5 May 2021.

We received responses from 158 IETA member representatives, from a broad range of locations and companies. Multiple responses were provided by some member companies, and as a result, we did not receive responses from 158 different companies. Participants were given some freedom to select which sections and

topics they answered, and therefore some statistics are based on samples smaller than 158. Anonymous quotes from survey respondents are presented alongside the survey results.

This report consists of five sections, which reflect the key areas of focus for carbon markets over the past year:

1. The European Union and the United Kingdom
2. China and Asia-Pacific
3. The Americas
4. Price trajectories
5. International: Voluntary carbon markets & COP26

Figure 1: Location of survey respondents

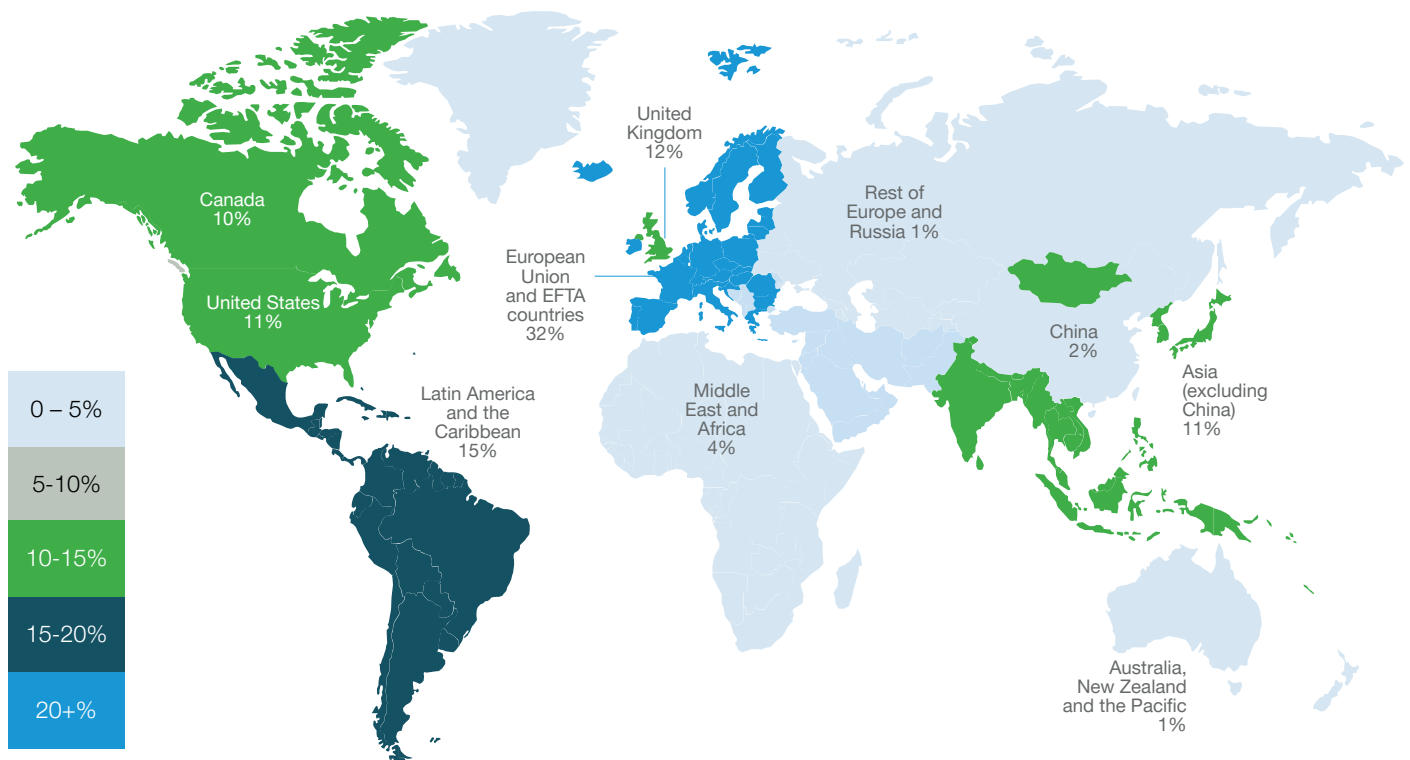
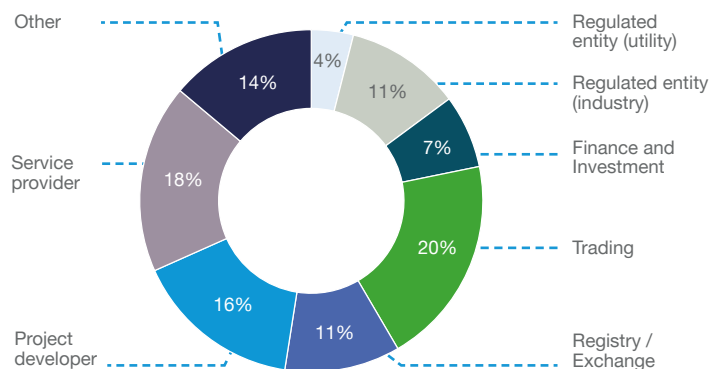
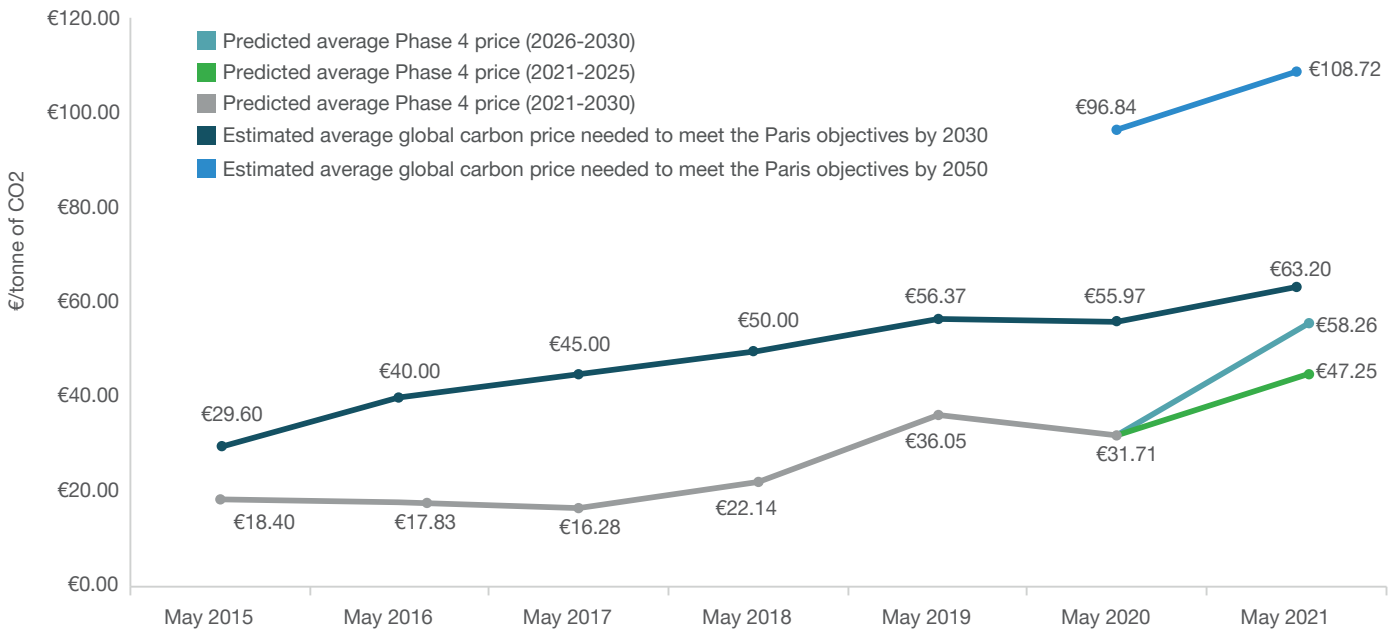


Figure 2: Type of IETA organisations responding to the survey



1. The European Union and the United Kingdom

Figure 3: Average carbon price expectations for the EU ETS over successive surveys



Bullish sentiment for the EU ETS

Over the past 12 months, the EU ETS price has risen markedly, increasing from a base of less than €15/tCO₂ in March 2020, as market prices were able to rebound strongly after the initial impact of the COVID-19 pandemic. The price subsequently hit its highest level since market inception back in 2005, breaching €55/tCO₂ in May 2021.

The average EU ETS price predicted by survey participants this year has increased significantly, with participants expecting a price of €47.25/tCO₂ between 2021-25 and €58.26/tCO₂ between 2026-30. Last year the average price predicted for Phase 4 (2021-30) was just €31.71/tCO₂. However, the average 2030 price that would be needed globally to meet the 2°C goal is €63.20, according to respondents. It is important to note that prices increased dramatically in the period after the survey was both launched and closed, and responses may have differed as a result of these changes.

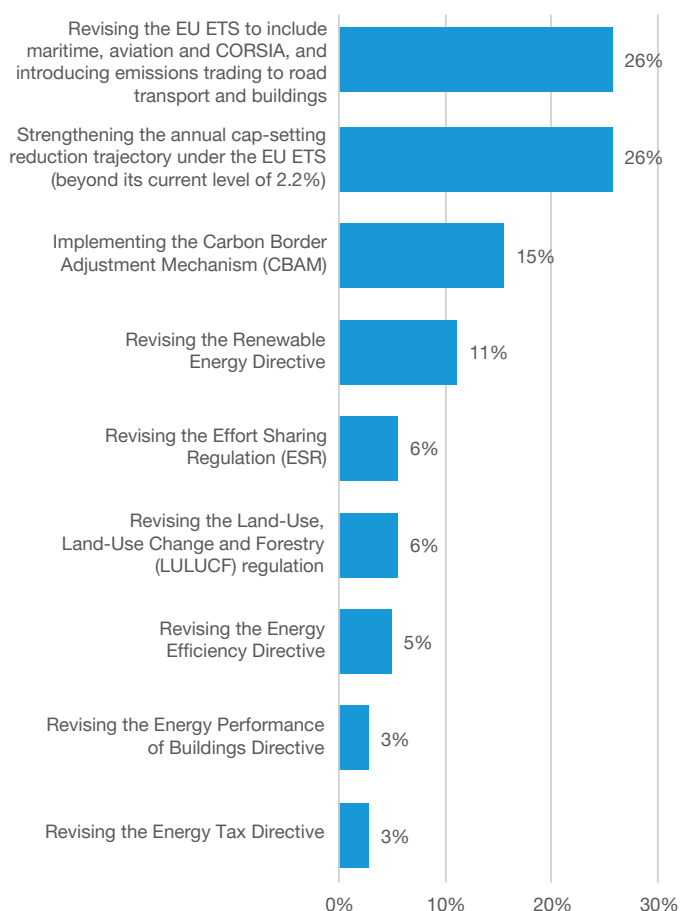
The surge in the price of EU Allowances (EUAs) and increased market confidence comes as the bloc commits to an enhanced level of ambition, to cut GHG emissions by at least 55% by 2030, compared with 1990 emissions levels. Other policy developments, such as the European Green Deal, have provided the longer-term policy context outlining how the EU will become net zero by 2050. However, respondents are not confident that the EU will be able to deliver on its net zero commitment without international credits, with 80% stating that international carbon markets (under the Article 6 framework) should play a role in the EU’s long-term climate strategy.

“ It is necessary to strengthen the cap and provide long-term visibility, reform the Market Stability Reserve (MSR) and maybe introduce hybrid elements to secure the whole regulation.”

Expanding the EU ETS to additional sectors will help to meet the EU's climate target

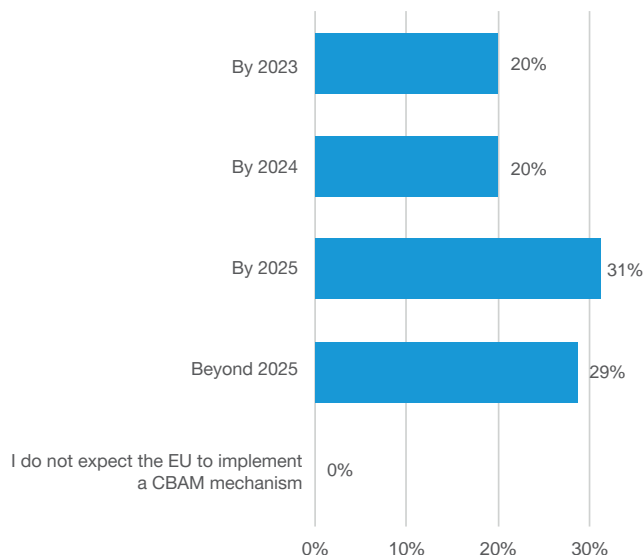
The European Commission (EC) will present new proposals for policies to meet the EU's climate target in July. Participants identified the key policy priorities for the EU, with expanding the EU ETS and introducing emissions trading to road transport and buildings highlighted as the most impactful policy change to meet the updated 55% target by 2030. Most respondents (80%) agree that emissions trading should be expanded to other sectors. When asked about which other sectors should be placed under a cap, respondents highlighted maritime (23%), road transport (21%) and international aviation to and from the EEA (20%). Other key policy changes featured by respondents include strengthening the linear reduction factor from its current level of 2.2%, and implementing a Carbon Border Adjustment Mechanism (CBAM).

Figure 4: What should be the current climate policy priority for the EU?



Carbon market participants expect a CBAM to be introduced by 2025

Figure 5: By when do you think the EU is likely to implement a Carbon Border Adjustment Mechanism (CBAM)?

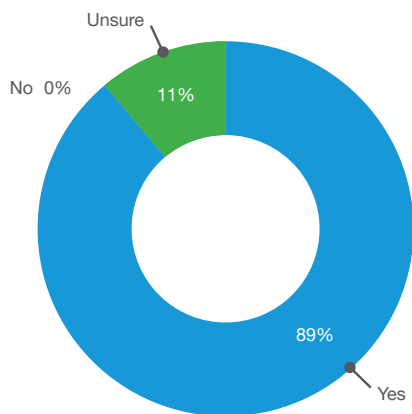


Earlier this year the European Parliament endorsed the creation of a CBAM. Formal proposals are set to be presented later this year. The CBAM is set to address concerns around carbon leakage and will ensure that European companies are able to retain competitiveness by putting a carbon price on imports of certain goods from outside the EU.

In this year's survey, 71% of respondents support the proposal to introduce the CBAM as an alternative to free allocation in some sectors at risk of carbon leakage. These sectors may include cement, iron, steel, fertilisers, and power. This is an increase from last year's survey, where 55% respondents agreed. All respondents expect the CBAM to be implemented, although their opinions differ as to when, with 71% of respondents believing that the CBAM will be implemented by 2025. Only 20% of respondents believe the CBAM will be implemented by 2023, the date by which the European Commission plans for the mechanism to be operational. The CBAM's implementation is likely to depend on the complexities associated with its compatibility with World Trade Organization (WTO) rules.

Cooperation between the UK ETS and EU ETS anticipated

Figure 6: In January 2020, a provisional link was established between the EU ETS and the Swiss ETS for allowance transfers. Do you think such a link is likely to be created in the future between the EU and the UK ETS?



The new standalone UK ETS came into force on 1 January 2021 and began trading in May 2021. Initial trades exceeded the price of EUAs, reaching over £50/tCO₂ (€58.26/tCO₂). The system represents an important part of the UK's climate policy as it prepares for the COP26 presidency later this year. International cooperation will be critical to success at the UN meeting in Glasgow, and the UK has indicated that it is open to linking its ETS with other international systems in the future. Respondents believe this is likely to occur, with the large majority (89%) expecting that a link between the UK ETS and the EU ETS will be created, with 75% of respondents believing it will be agreed by 2023.

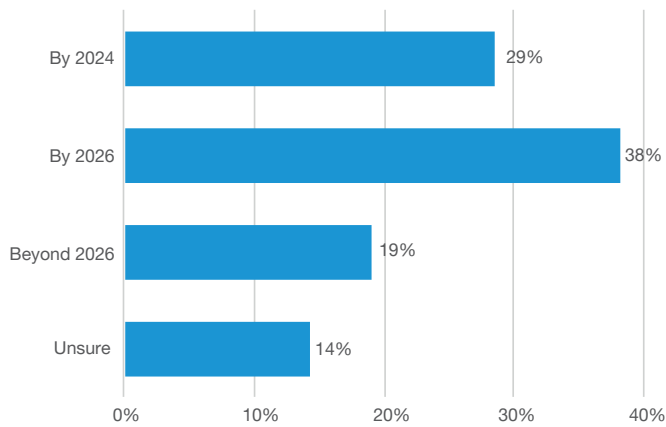
The UK ETS was launched with the same initial scope as the EU ETS, but the UK has autonomy to expand it across different sectors. Most respondents (62%) expect that it will be expanded to other sectors before 2030. Maritime, international aviation and road transport are expected to be covered by 26%, 22% and 19% of respondents, respectively.



2. China and Asia-Pacific

China

Figure 7: By when do you expect all Chinese regional ETS pilots to be integrated into the newly launched national ETS?



China formally launches the world's largest ETS

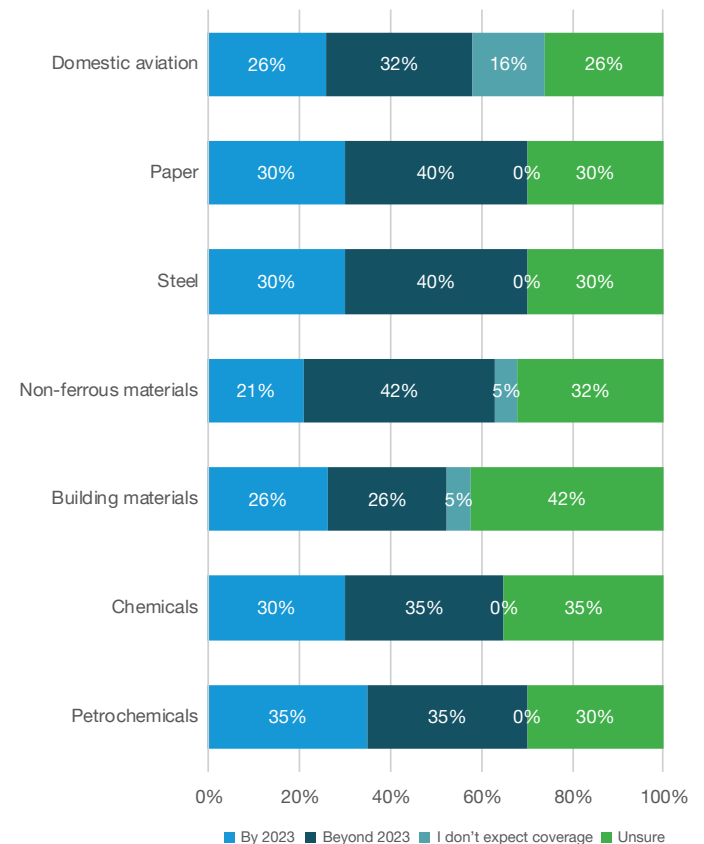
In September 2020, the Chinese government made the landmark commitment to achieve carbon neutrality by 2060, with emissions expected to peak before 2030. The Chinese national ETS, launched in February 2021, represents a critical pillar of China's climate policy to deliver on this commitment and is now the world's largest ETS, covering approximately 40% of national carbon emissions.

The existing Chinese regional ETS pilots will continue to operate in parallel, but they are expected to be integrated into the national ETS over time. Respondents were divided on the timing of this: 29% expect it by 2024, while a further 38% expect it by 2026. The biggest challenges associated with the continued implementation of the Chinese ETS are expected to be around finalising power market reform, establishing monitoring, reporting and verification (MRV) systems, and agreeing an approach to allocation.

Opinions differ on China ETS expansion

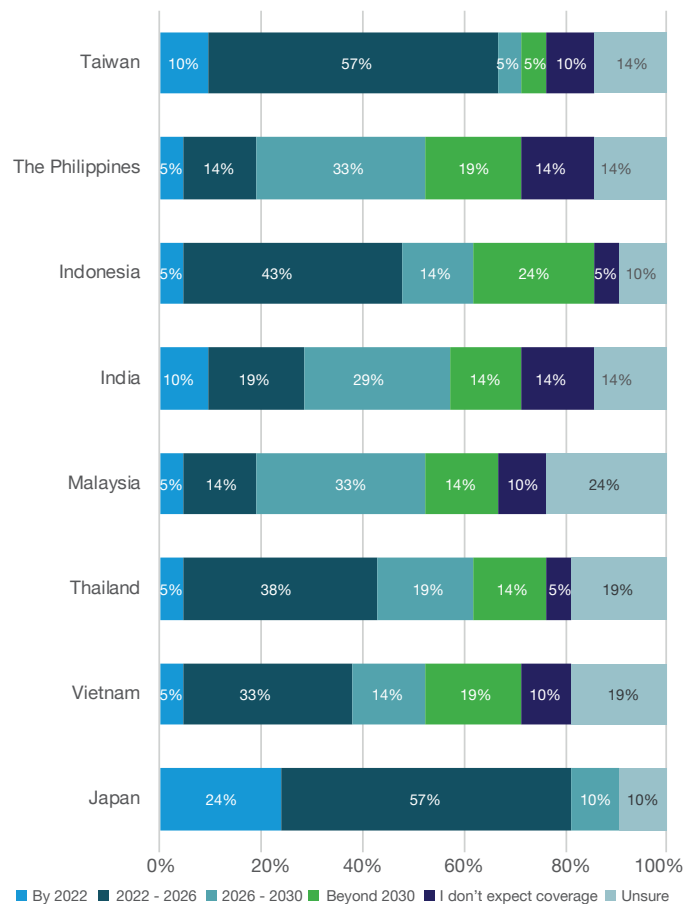
Although the national ETS currently only covers the power sector, additional sectors are expected to be added over time. Petrochemicals is seen as the next most likely industry to be covered (compared to steel in last year's survey), with 35% of respondents predicting its inclusion by 2023. This was closely followed by chemicals, steel and paper. For the second year in a row, participants had the least confidence that the aviation sector would be covered by the ETS at any point. This comes as China agreed not to take part in the pilot phase (2021-23) of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). There is limited consensus - implying a degree of uncertainty - as to when each industry is expected to be covered by the Chinese ETS.

Figure 8: The Chinese ETS is set to become operational in 2021. When do you expect the following industries to be covered by the Chinese ETS (if at all)?



Rest of Asia-Pacific

Figure 9: When do you expect the following countries and regions to implement a carbon market (covering at least the power sector)?



Implementation of a carbon price in Asian countries and regions

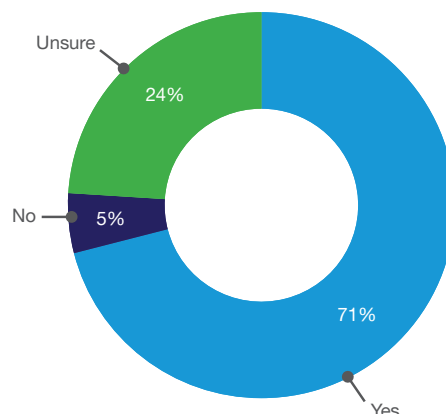
Most respondents do not expect new carbon pricing mechanisms to emerge elsewhere in Asia-Pacific by 2022. Japan is considered to be the most likely to implement such a mechanism by 2022, although only 24% of respondents thought this is realistic. This comes after Prime Minister Yoshihide Suga asked his Minister of the Environment and Minister of Economy, Trade, and Industry to consider carbon pricing proposals in 2021, as part of efforts to meet the country's 2050 net zero target.

A larger proportion of respondents expect that a carbon pricing mechanism will be introduced in Taiwan or Japan in the short- to medium-term, with 57% of respondents expecting such a mechanism will be introduced during the 2022-26 period. Indonesia (43%), Thailand (38%) and Vietnam (33%) are also considered likely to introduce a carbon price during the same period, by more than a third of respondents each.

Trading in Korean ETS expected to pick up

Phase 3 of the Korean ETS was launched in 2021, with a number of new reforms introduced. These included a stricter cap, updated allocation provisions, and the inclusion of financial intermediaries and other third parties in the exchange trading. In previous years, respondents have indicated that the use of international offset credits would be an effective measure to ease the liquidity issues the ETS has faced. This year, 57% of respondents are confident that the type of international credits eligible for compliance will be expanded. In addition, 71% of participants stated that the inclusion of third parties, such as financial investment companies and private investors, will enhance liquidity in Korea's ETS.

Figure 10: From 2021, third parties such as financial investment companies and private investors are allowed to participate in the Republic of Korea's carbon market. Do you think the involvement of third parties will enhance liquidity in Korea's ETS?



Strong support for a cap-and-trade system in Australia remains

Earlier this year, Australia formally updated its Nationally Determined Contribution (NDC) but maintained its original target to reduce GHG emissions to 26-28% below 2005 levels by 2030. Australia will only submit a new NDC, with a post-2030 target, in 2025. Consistent with last year's survey, the introduction of an explicit carbon price to the economy, via a cap-and-trade system, was considered to be the most effective policy option to reduce emissions in Australia, chosen by 43% of respondents. This was followed by increasing the renewable energy target (19%) and expanding the Safeguard Mechanism to cover Scope 2 or 3 emissions (14%). For the second year in a row, there was limited support from respondents for levying a carbon tax across the economy (10%).

3. The Americas

Latin America

Mexico and Colombia are expected to be the first to introduce an ETS in Latin America

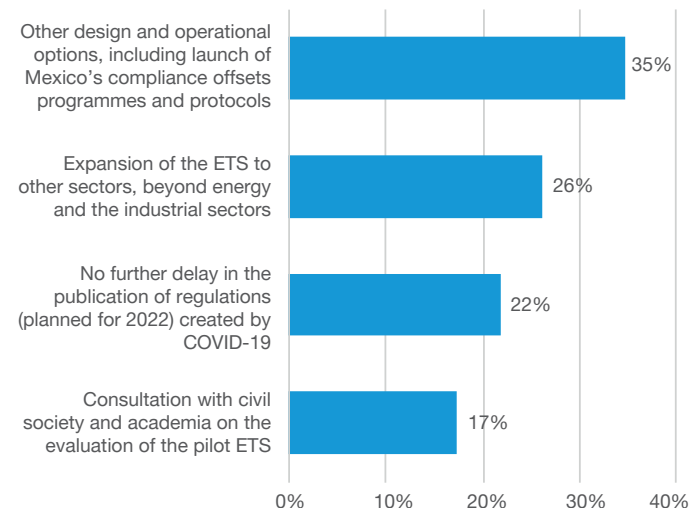
Figure 11: By when do you expect the following countries to launch an operational ETS?



Most respondents (65%) expect that an ETS will emerge in Mexico and Colombia between 2022 and 2026. Peru (50%) and Chile (38%) are also considered likely candidates to develop a fully operational ETS within the same timeframe.

Brazil and Argentina are considered least likely to implement an ETS in the short-term (by 2022) to medium-term (2022-26). Confidence is the lowest for Brazil, with 19% of respondents not expecting Brazil to implement an ETS at all. In the absence of a mandatory carbon market, some of Brazil's largest companies have been participating in voluntary carbon markets to support the development of proposals for an ETS in the future. Nearly half of respondents (46%) agreed that other countries that are not ready to establish an ETS will follow this example and incentivise private sector engagement with voluntary carbon markets, with a further 23% disagreeing and 31% who are unsure.

Figure 12: Mexico has completed the first year of its pilot ETS in 2020. The ETS is scheduled to become fully operational by 2023. What do you believe to be the main condition for it successfully becoming operational within the stated time frame?



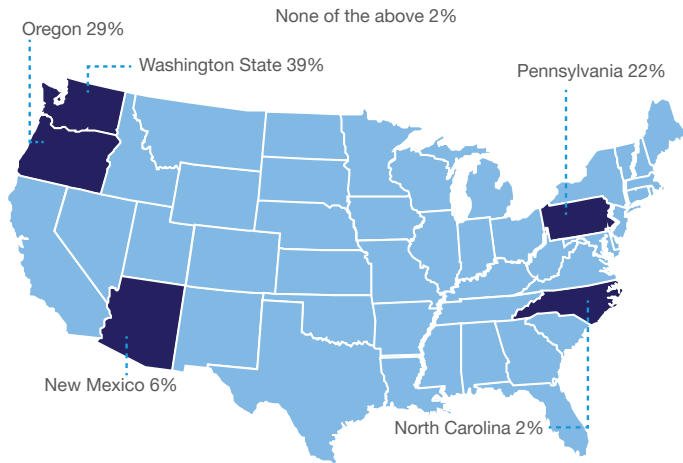
Mexico's pilot ETS, which was launched at the start of 2020, is set to become fully operational in 2023. In early 2021, the first allocation of allowances took place and initial compliance offset protocols are expected to be published this year. Design and operational options, including the launch of Mexico's compliance offset programmes and protocols (31%), and the expansion of the ETS to other sectors, beyond the energy and industry sectors (23%), were identified by respondents as the two most important issues for the Mexico ETS to successfully become operational by 2023.

The deadline for Colombia to complete its ETS rulemaking is July 2021, according to the Ministry of Environment and Sustainable Development. Although sentiment indicates that the country is likely to implement an operational ETS during the 2022-26 period, a number of challenges are expected. Respondents indicated that the most important conditions for a successful pilot ETS launch are consultations with civil society and academia on the evaluation of the rulemaking ETS (38%) and political stability and internal coordination (35%). In addition, 77% of respondents identified private sector support and engagement as being the main condition for the success of the country-wide "Colombia Carbono Neutral" programme, a strategy to fight against climate change and reach carbon neutrality by 2050.

North America

US regional cap-and-trade systems continue to prevail

Figure 13: Which US states are most likely to launch a new cap-and-trade system or link to existing systems (WCI and RGGI) over the next 2-3 years?

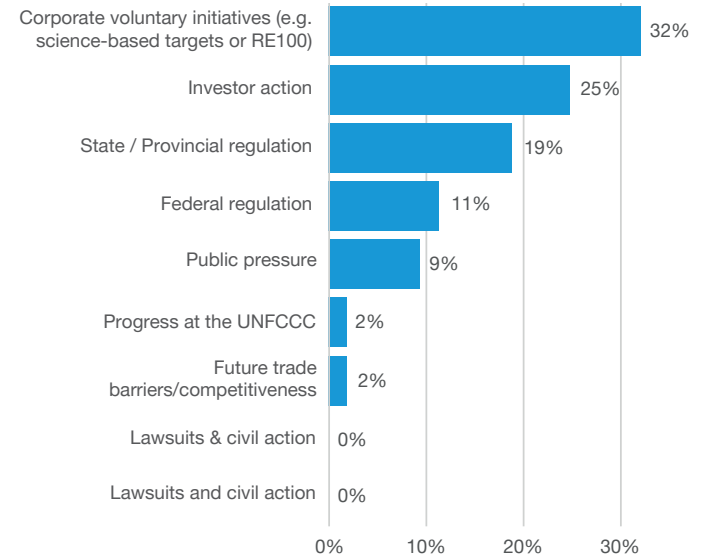


Washington State (39%) and Oregon (29%) were identified as the two states most likely to either launch a new cap-and-trade system or link with existing systems over the next two to three years – consistent with last year’s results. In 2020, the Oregon Governor issued an executive order mandating an emissions cap and reductions for large emitters and transportation fuels, in line with the state’s proposed reduction targets for 2035 and 2050, but with limited to no trading. Draft rules were released in May 2021, and the programme launch is set for January 2022. It is also worth noting that, after this survey closed, Washington State passed legislation to establish an economy-wide cap-and-invest system in 2023.

The most important policy challenges for California’s cap-and-trade programme were identified as concerns around new offset design constraints, requiring half of units surrendered to deliver Direct Environmental Benefits to the state (DEBs) (30%), and the post-2030 legislative extension of cap-and-trade (19%). However, the share of offset credits that can be used to meet compliance obligations will decrease to 4% for 2021-25, from 8% in 2020.

In December 2020, Massachusetts, Connecticut, Rhode Island and Washington DC announced they will join the Transport & Climate Initiative Programme (TCI-P), establishing a cap-and-trade system for road transport emissions. The first three-year compliance period of the TCI-P will start in 2023, and participating jurisdictions will have to start reporting their emissions in 2022. Proceeds from carbon allowance auctions are intended to be reinvested in clean transportation options and infrastructure. According to survey respondents, New York (27%) is most likely to join the programme by the end of 2021, followed by New Jersey (17%) and Maryland (15%).

Figure 14: Which do you believe to be the most important options in driving private sector action on carbon in the US and Canada?

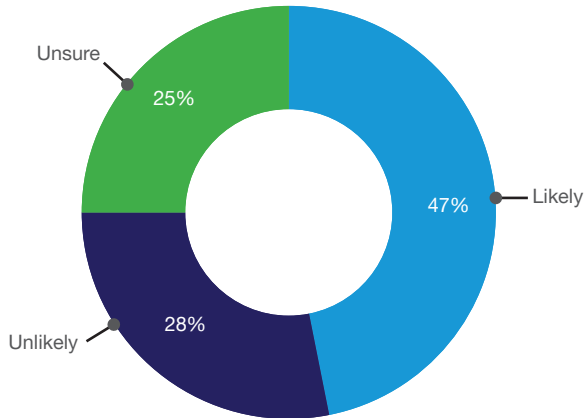


Under former President Trump, state regulation was identified as the most important factor driving private sector climate action in North America. However, the rapid shift in climate policy following President Biden’s inauguration has brought a corresponding change in sentiment. Respondents identified corporate voluntary initiatives (e.g. Science Based Targets initiative) (31%) and investor action (24%) as being the most important factors driving private sector climate action across both the US and Canada.

“Inaction is not an option any longer. Hopefully, with the US back at the table, a compromise can be achieved.”

President Biden likely to establish a border carbon adjustment

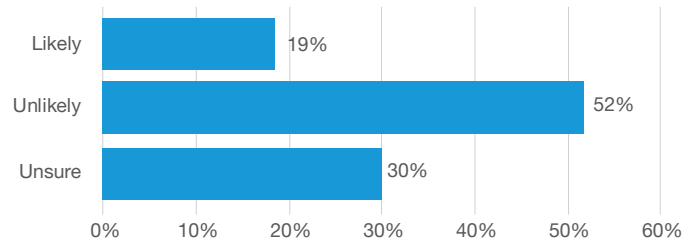
Figure 15: How likely do you think it is that President Biden will implement a carbon pricing scheme in the US?



President Joe Biden used his first day in office to rejoin the Paris Agreement, setting the scene for a change in climate policy for the incoming administration. He used the Leaders Summit on Climate in April 2021 as an opportunity to ask countries to enhance the ambition of their NDCs, and upped America's 2030 reduction target to 50-52% below 2005 levels. According to nearly half (47%) of survey respondents, President Biden is likely to introduce a carbon price in the US. Among these respondents, 46% expect a federal ETS rather than a carbon tax (31%) or state-controlled plans (23%). However, the political challenges associated with introducing a federal system are likely to make this challenging to realise.

The US has also recently announced that it is exploring options for a border carbon adjustment (BCA) tax, and 67% of survey respondents believe President Biden will implement such a mechanism to help cut GHG emissions.

Figure 16: Canada's updated Nationally Determined Contribution (NDC) will be 32-40% below 2005 levels by 2030. How likely is it that Canada will be able to meet this target without using international imports of transfers?

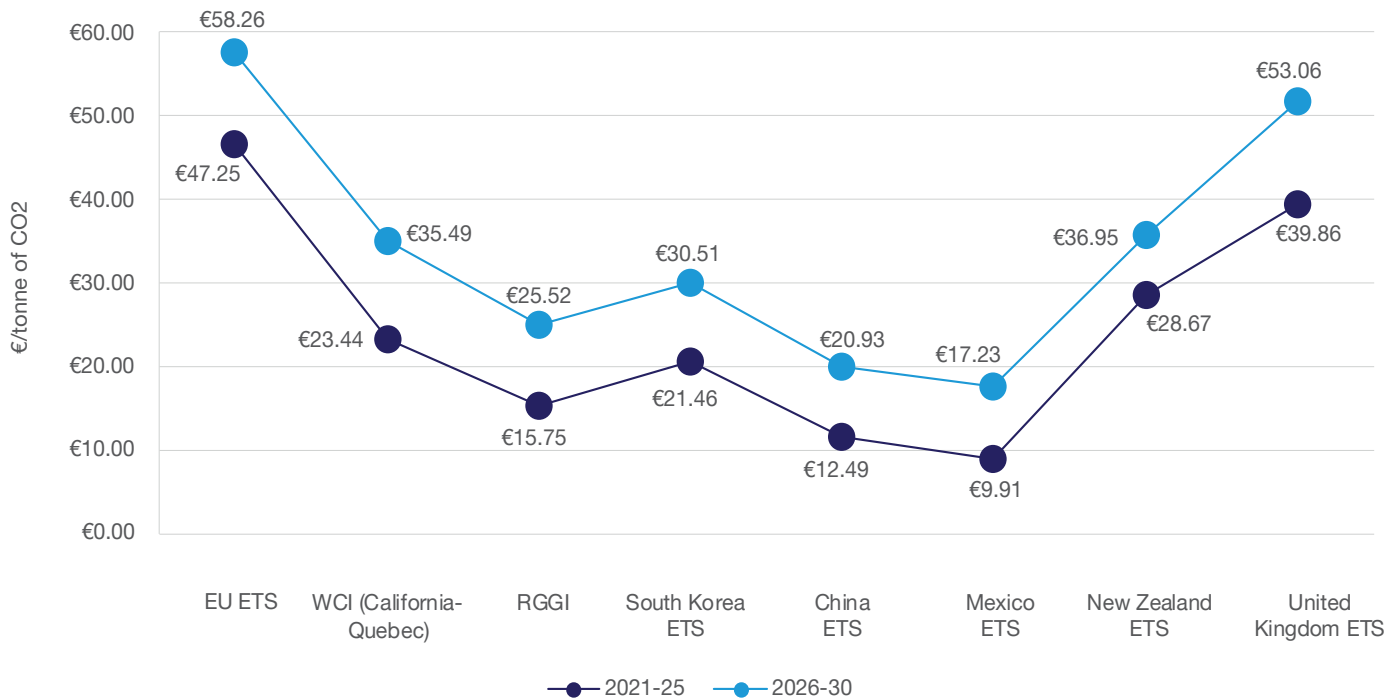


At the April 2021 Leaders Summit on Climate, Canadian Prime Minister Justin Trudeau pledged to reduce Canada's GHG emissions by 40-45% below 2005 levels by 2030, an increase from the previous target of 30% against the same timeline. It is also higher than the expected range of 32-40% emission reductions that was used in this year's survey. However, most survey respondents (52%) think Canada will require international markets to meet its updated 2030 NDC target. Of those, half anticipate that Canada will formally allow international credits by 2025.

Canada's climate strategy is built on a federal carbon pricing backstop system that provides flexibility and "equivalency" options to sub-nationals: if provinces and territories fail to implement an "equivalent" or more stringent carbon pricing system, the federal backstop carbon pricing mechanism is imposed. Since the system launch in 2019, the federal price has increased by CA\$10/tCO₂ annually to CA\$40/tCO₂ in 2021. The Canadian federal government has recently proposed that, starting in 2023, the federal backstop carbon price will increase by CA\$15/tCO₂ annually to CA\$170/tCO₂ by 2030. In the wake of the March 2021 Canadian Supreme Court ruling, determining that the federal carbon pricing legislation is constitutional, 60% of respondents expect that either the majority or all future provincial ETS systems will achieve equivalency with the federal carbon pricing benchmark by 2030. The uncertainty around provincially administered offset systems and their equivalency with the federal backstop is considered the biggest challenge to the implementation of Canada's federal offsets system (35%), along with uncertain market dynamics for the protocol development and adoption (33%).

4. Price trajectories

Figure 17: What do you expect the average carbon price to be for each of the following ETSs in the periods 2021-2025 and 2026-2030?



Note: To calculate the expected average carbon price, where respondents selected the “Over €35” category this was assumed to be €50, and “Over €50” was assumed to be €65. This is based on the current price of ETS systems (e.g. EU ETS) price exceeding the expectations of respondents.

Each year, projected carbon prices are included in the survey in order to compare the market sentiments for prices year-on-year. Respondents selected price ranges which were then converted into weighted averages. It is important to note that the prices of some systems have increased significantly in the period since the survey was conducted and closed.

In last year’s survey, respondents anticipated prices to decrease for all ETSs, with a 80% drop for the EU ETS from 2019 expectations. By comparison, in this year’s survey, expected prices have increased across the board, with the EU ETS expected price having increased by 133%. In the 2020 survey, respondents stated that they thought ETS prices would remain suppressed by COVID-19 for the next one or two years. However, prices have remained resilient and the EU ETS has reached new heights, breaking the €55/tCO₂ barrier for the first time in its history in May 2021. Now, 74% of respondents believe that the recovery from the pandemic will strengthen the global state of carbon markets.

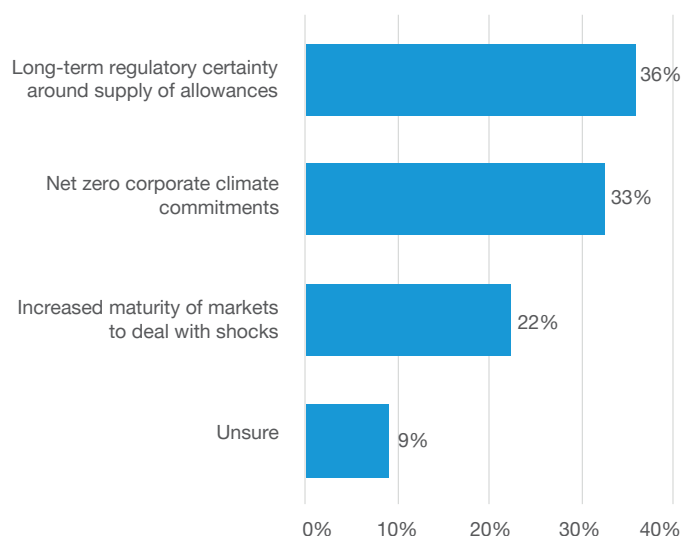
This positive sentiment around pricing has been reflected in survey responses, with the EU ETS retaining the highest expected average carbon price of any ETS for both periods of 2021-25 and 2026-30, at €47.25/tCO₂ and €58.26/tCO₂, respectively. There is also rebounding confidence in the New Zealand ETS, following reforms last year that included the introduction of a cap and auctioning of emission units. Prices are expected to reach €28.67/tCO₂ (NZ\$48.07) between 2021-25. The UK ETS was included in the survey for the first time, with the overwhelming majority of respondents expecting it to exceed €35/tCO₂ (£30.25) between 2021-25 and €50/tCO₂ (£43.22) between 2026-30, the highest price ranges that could be selected.

Participants anticipate that the average global carbon price needed by 2030 to put the world on track to meet the long-term goals of the Paris Agreement is €63.20/tCO₂, a significant increase from last year’s result of €55.97/tCO₂. Similarly, the mean global carbon price needed by 2050 to meet the long-term goals of the Paris Agreement has increased to €108.72/tCO₂, a jump from last year’s result of €96.84/tCO₂.

However, opinions were divided as to what will be the price of carbon credits generated under Article 6 of the Paris Agreement. By 2025, the majority believe they will cost somewhere between €6 and €20. Although there is more confidence that the price will increase by 2030, with the most commonly selected answer of €21-25 (22%). By comparison, respondents expect the price of carbon credits transacted in voluntary markets to be lower. One third of respondents believe that carbon credits in voluntary markets will cost between €6-10 by 2025, indicating there could be a price premium for carbon credits with corresponding adjustments transacted under Article 6.

83% of respondents use an internal or shadow carbon price in their investment decisions. Most companies are using a price within the €40-60 range, an increase from last year's result of €20-39, reflecting the growing awareness of the importance of reducing GHG emissions and aligning to increasing levels of government ambition.

Figure 18: Why do you think that compliance market carbon prices have remained resilient to the impacts of COVID-19 over the past 12 months?



“Emissions trading is an important tool to get finance to the right place. But, ultimately, we need the policies and investments to create real change.”

Figure 19: Carbon price (€/tCO₂) needed to meet the long-term goals of the Paris Agreement across successive surveys

By 2030, what global carbon price do you believe is needed to meet the 2°C goal?

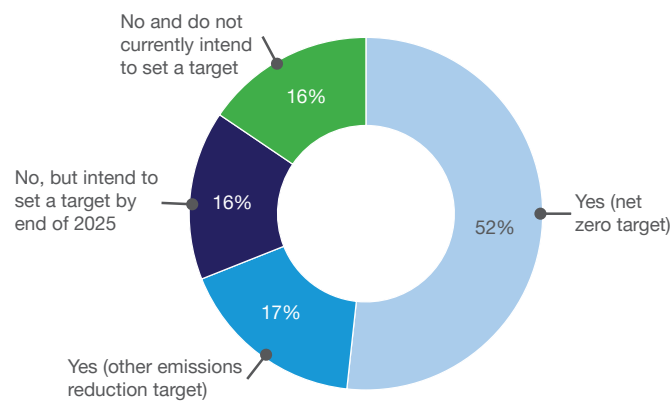
Year	Median	Mean	Min	Max
2021	€50.00	€63.20	€10.00	€180.00
2020	€50.00	€55.97	€12.00	€180.00
2019	€50.00	€56.37	€20.00	€150.00

By 2050, what global carbon price do you believe is needed to meet the 2°C goal?

Year	Median	Mean	Min	Max
2021	€100.00	€108.72	€10.00	€459.00
2020	€80.00	€96.84	€30.00	€250.00

5. International: voluntary carbon markets and COP26

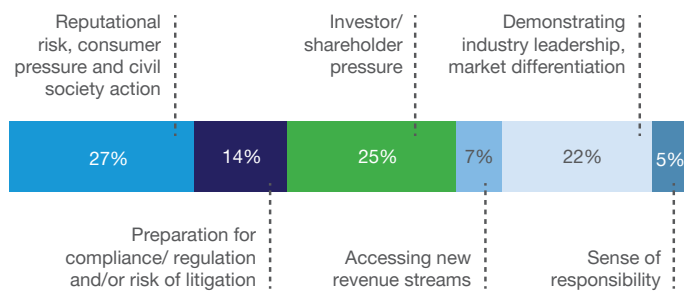
Figure 20: Does your company have a long-term emissions reduction target?



Corporate net zero commitments are often coupled with short-term goals

Over the past year, an increasing number of companies and countries have set net zero targets. More than 20% of the world's 2,000 largest public companies have a net zero commitment and over two-thirds of global gross domestic product (GDP) is covered by jurisdictions with net zero targets. Unsurprisingly, the majority of respondents (62%) have long-term GHG emissions reduction targets, with three-quarters of these being net zero commitments.

Figure 21: What are the most important drivers of voluntary corporate action on climate change?



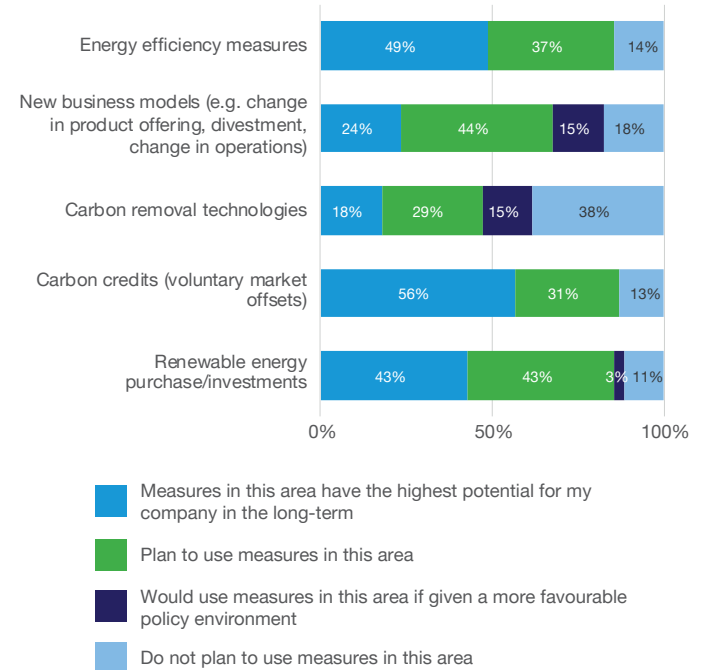
“ In the transition phase towards net zero, supporting offsetting will help drive emission reductions outside companies’ value chains and the greater economy.

Some commentators are concerned about the credibility of net zero targets. Critics have stated that they are often overly reliant on carbon offsets and removals, and do not prioritise emission reductions in the short- and medium-term. As a response, leading companies wishing to demonstrate the credibility of their net zero targets are supporting their long-term net zero goals with interim targets and plans that demonstrate carbon reduction aligned to a 1.5°C pathway.

Among survey respondents with a long-term net zero target, 80% also have a short-term neutrality goal. Furthermore, the majority of participants also prefer claims around carbon neutrality and offsetting (78%), over alternative contribution claims (13%). Two-thirds stated that it is essential that organisations can continue to make claims of carbon neutrality post-2021, with several stressing its importance in the transition to net zero, especially for the hard-to-abate sectors.

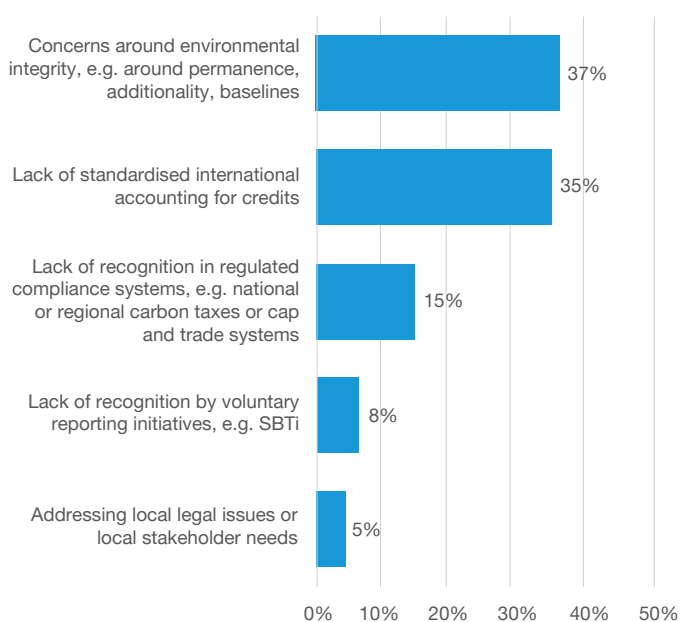
Businesses consider a range of solutions to deliver on their net zero strategies

Figure 22: Which of the following measures do you intend to use to achieve your emissions goal?



As businesses develop their plans to deliver on their net zero goals, carbon credits and energy efficiency measures are considered to have the highest potential to help to achieve their long-term emissions target. When asked which measures respondents plan to use, new business models (e.g. change in product offering, divestment, change in operations) (44%) and renewable energy purchase/investments (43%) were the most selected measures.

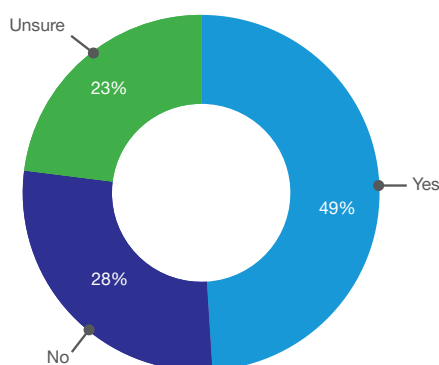
Figure 23: What do you consider to be the main barriers to investment in Natural Climate Solutions (NCS) at scale?



Challenges expected for voluntary markets over the next 12 months

Among carbon removal technologies, NCS (including forests, soil and wetland projects) was the most selected option (34%), closely followed by reforestation/afforestation schemes (33%). Only 9% of respondents indicated that they are exploring the use of Direct Air Capture systems, reflecting the lack of maturity of the technology. However, there remain several barriers that prevent the scaling up of NCS. Consistent with last year's results, respondents stated that concerns around environmental integrity and the lack of standardised international accounting for credits flowing from these projects are currently the main barriers to investment.

Figure 24 Can the voluntary market supply enough carbon credits to match the growth in demand from corporates?

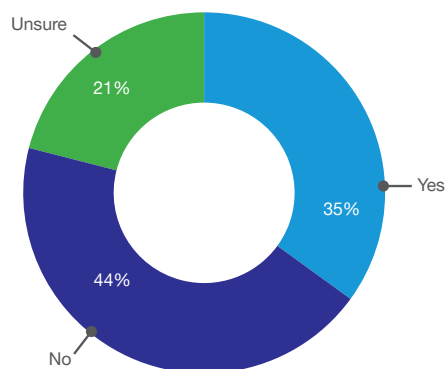


Despite the abundance of corporate net zero commitments over the past year, only 49% of respondents are optimistic that the voluntary market can supply enough carbon credits to match the growth in demand (by comparison to 60% last year), with a further 28% disagreeing and 23% who are unsure.

The biggest challenges facing voluntary markets over the next 12 months are around global policy uncertainties (28%) and alignment with Article 6 (27%). Two-thirds of respondents expect to see market partitioning between carbon credits (avoided emissions and emissions reduction) and carbon removals in the voluntary market over the next five to 10 years, reflecting the need for carbon removals to support businesses to reach their net zero goals.

Efforts to avoid double-counting of emissions reductions within voluntary markets remains a source of debate. In the context of Article 6, corresponding adjustments are designed to ensure that where a mitigation outcome is transferred, it is "un-counted" by the party that agreed to transfer it. However, the need for corresponding adjustments for carbon credits transacted in the voluntary market is still being discussed. Corresponding adjustments were not included in the scope of the Taskforce on Scaling Voluntary Carbon Markets (TSVCM) blueprint, and respondents were split over whether they are needed in voluntary carbon markets. 44% of respondents stated that they are not necessary, 35% disagreed, with a further 21% who are unsure.

Figure 25: Do you think corresponding adjustments are needed for carbon credits transacted in the voluntary carbon market?



“ Article 6 is crucial. Without Article 6, there will be very little international cooperation.”

Questions around Article 6 and COP26

Figure 26: To what extent do you believe a global carbon market under Article 6 is essential for achieving the goals of the Paris Agreement?

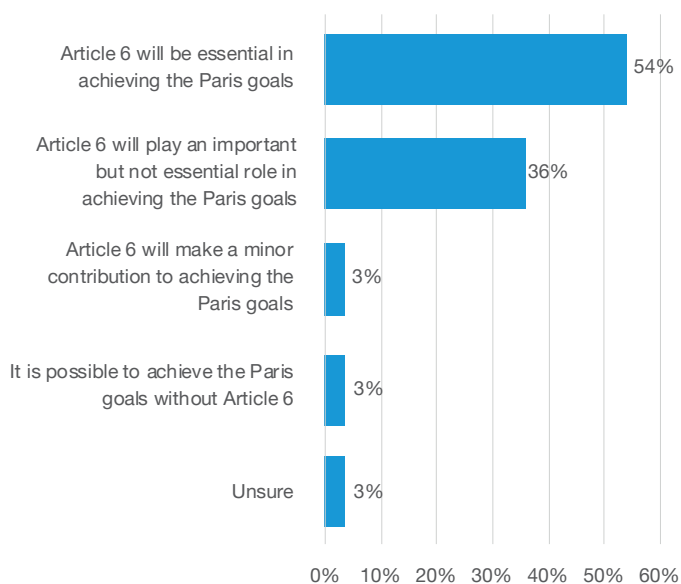


Figure 27: Do you think Parties will reach an agreement on Article 6 at COP26?

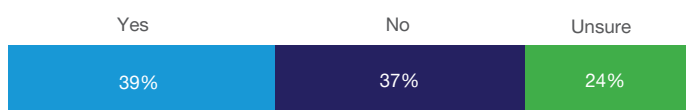
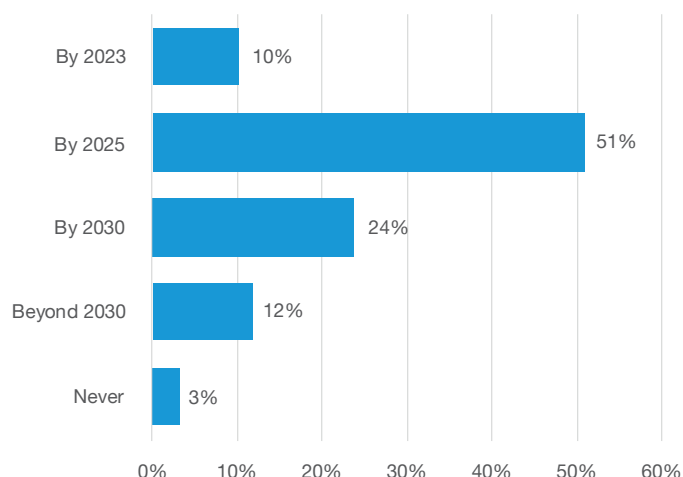
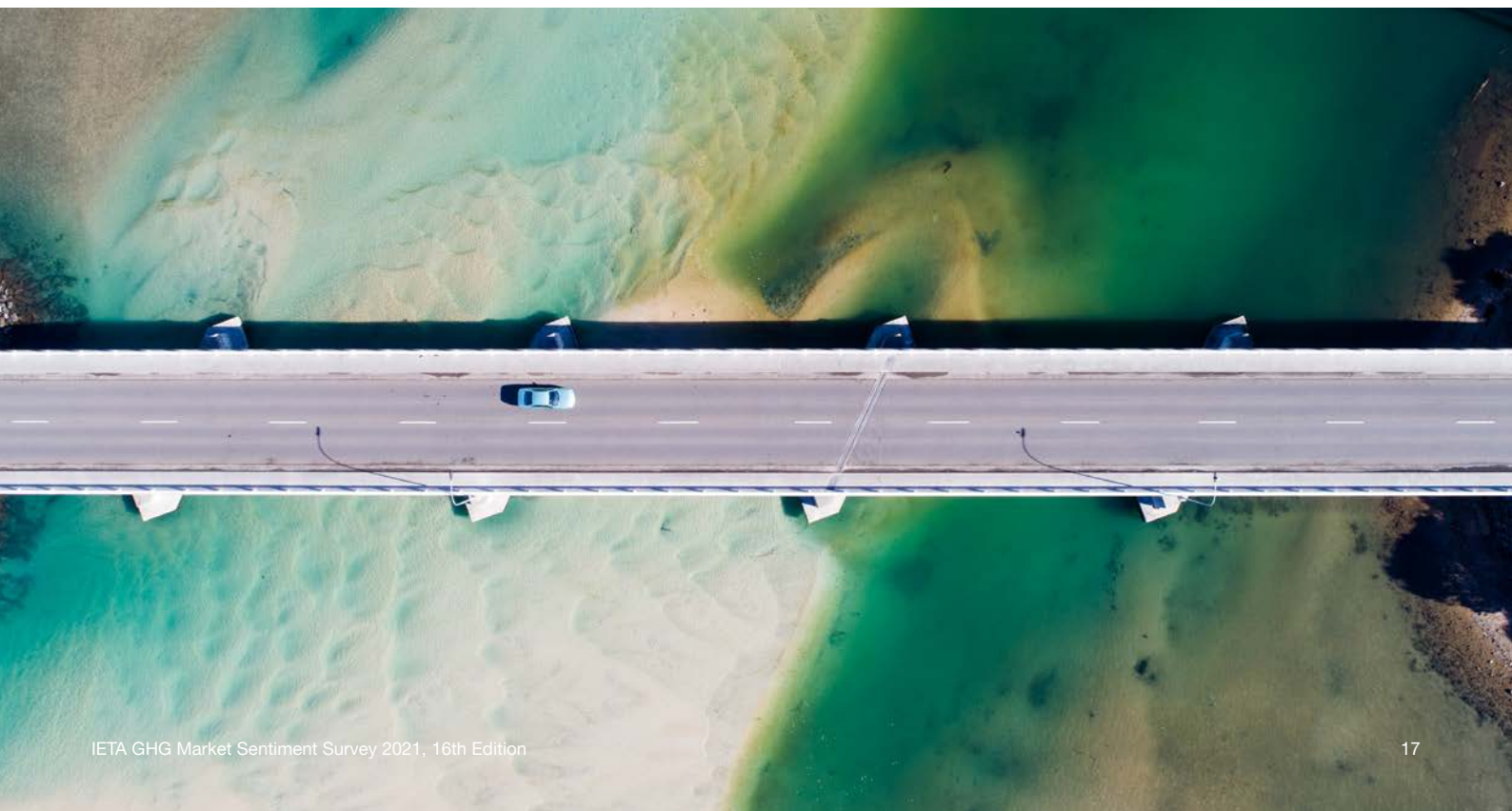


Figure 28: When do you anticipate that Article 6 carbon credits (with corresponding adjustments) will be available on the market?



Later this year, the postponed COP26 is planned to be held in Glasgow, where it is hoped that the final parts of the Paris Rulebook will be agreed. So far, 57 countries have submitted updated NDCs. However, among these, nine have submitted new NDCs without increasing their level of ambition, including Australia, Brazil, Mexico and Russia.

Talks over the implementation of Article 6 failed at COP24 in Katowice and at COP25 in Madrid, and respondents are divided over whether Parties will actually reach an agreement at COP26. However, the overwhelming majority of respondents (89%) believe that Article 6 is essential or will play an important role in achieving the goals of the Paris Agreement. 39% of respondents believe that Parties will reach an agreement on Article 6, whereas 37% of respondents do not think an agreement will be reached, with a further 24% unsure.



Survey methodology

The survey was conducted by PwC UK using an online survey tool. The questionnaire was developed jointly by PwC and IETA. An email was sent out to all IETA members to invite them to participate. The survey consisted of 55 questions, but participants were given some freedom to choose sections and subject matter that they felt most confident answering. The questions were predominantly multiple choice with the option of providing comments and alternative answers. The survey opened on 19 April 2021 and closed on 5 May 2021. Reminders were sent out by email between these dates to increase the response rate. As in last year's edition, unattributed quotes given by survey respondents were presented alongside the survey results, thereby giving all IETA members the opportunity to contribute in greater detail.

It is important to make a few observations regarding the interpretation of data and the comparability of results between IETA GHG Market Sentiment Surveys conducted in different years. Firstly, the sample size may differ between results. Secondly, since the first edition of

the survey in 2005, different groups have been asked to participate. In the first four editions, only IETA members were asked to reply, by sending in one response per organisation. The mailing list was enlarged for the fifth and sixth editions of the survey, to include a wider range of GHG market participants and observers. The seventh survey, in 2012, was based on semi-structured interviews with key IETA members. In 2013, the original approach of surveying IETA members only was readopted. Since 2014, the survey has allowed multiple responses per IETA member company to gain a broader survey of sentiment among market participants.

It should also be noted that several questions in the survey gave participants the option of selecting multiple answers. Hence, not all percentages displayed throughout the report add up to 100%. Moreover, where participants were asked to rank choices, weightings were applied accordingly. Finally, due to rounding, the percentages displayed in graphs may sometimes show slight discrepancies with the text descriptions or appear to not add up 100%.

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IETA: Advancing market solutions for climate change

The International Emissions Trading Association (IETA) is a non-profit business organisation created in June 1999 to serve businesses engaged in the new field of carbon markets. Our objective is to build international policy and market frameworks for reducing greenhouse gases at low cost. Our vision is a single global carbon price produced by markets of high environmental integrity. We pursue this vision with an eye to pragmatism, political reality and sound economics. With deep relationships in key policy centres and commercial arenas, IETA is the collective voice for the full range of businesses involved in carbon markets – all around the world. Our membership includes leading international companies from across the carbon trading cycle.

Further information is available at www.ieta.org

