

ESG Country Updates

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Singapore

- Hyundai Motor Group signed three MoUs with Singapore institutions at the opening of Hyundai Motor Group Innovation Centre Singapore (HMGICS), which is a vehicle assembly and research facility in Jurong Innovation District. It is also collaborating with Nanyang Technological University and the Agency for Science, Technology and Research (A*Star) to create a Corporate Lab to accelerate innovations in and the adoption of new technologies. It will also work with the Singapore Business Federation and Singapore Manufacturing Federation to enable SMEs to co-develop advanced manufacturing solutions, as well as PTC Logistics to establish a renewable hydrogen energy ecosystem in Singapore. These developments and partnerships can support Singapore in achieving its hydrogen targets and decarbonise its transport sector.

China

- China will be launching pilot projects to increase domestic production and consumption of biodiesel, which is a low-carbon alternative to petroleum diesel made from feedstocks such as palm oil and used cooking oil. Due to the lack of policy support in China relative to the European Union and United States, consumption of biodiesel has been low. Only the local government of Shanghai has offered subsidies for biodiesel production in China. Greater policy support and blending mandates can spur domestic production and consumption of biodiesel in China.

Malaysia

- Petronas agreed to develop a carbon capture and storage (CCS) project with Japanese companies. They plan to start the front-end engineering design in 2024 with a goal to inject and store CO₂ from Japan and Malaysia in depleted oil and gas fields off the Malaysian coast. At least 2 million metric tons of CO₂ per year is planned to be injected in the beginning, which may rise to 5 million tons annually by the end of this decade and to over 10 million tons in early 2030s.
- Malaysia's first carbon-neutral innovation park will be completed by 2035, part of the Malaysian Research Accelerator for Technology and Innovation (MRANTI) park in Kuala Lumpur. New Green Building Index certified buildings will be developed at the park while existing buildings will be refurbished to be carbon-neutral.
- The state of Sarawak is leading Malaysia's push towards a low-carbon economy by tapping on its abundance of hydropower to produce green hydrogen, with the aim of becoming a major exporter of green energy. Sarawak has signed agreements with Japanese and South Korean companies to develop two hydrogen production projects, with a combined capacity of more than 200,000 tonnes annually, expected to

be operational in 2027. Sarawak has spent about US\$1 billion on investments in hydrogen development thus far, with hopes that it is a catalyst to generate income for the state and create high-paying jobs for locals.

Indonesia

- Indonesia launched its investment plan to mobilise US\$20 billion in financing and called for immediate fund disbursement, under the Just Energy Transition Partnership (JETP) to accelerate its power sector decarbonisation. The investment plan, called the Comprehensive Investment and Policy Plan (CIPP), was officially announced following a public consultation period. The CIPP indicated that investments worth US\$97.3 billion were needed to achieve the targets, of which \$66.9 billion for 400 projects need to start by 2030 at the latest.
- Indonesia launched the construction of the country's first carbon capture, utilisation and storage (CCUS) project in West Papua province operated by BP, which has the potential to store up to 1.8 gigatonnes of carbon dioxide. Energy ministry data shows there are currently 15 carbon, capture and storage (CCS) and CCUS projects in various stages of preparation in the country with a combined investment of nearly US\$8 billion, including BP's project.

Rest of the world

- The US will lay out an international strategy for commercialising nuclear fusion power at COP28, which is expected to provide an affordable source of carbon-free electricity if deployed successfully. However, others argue that nuclear fusion is too expensive and will take too long to develop as a decarbonisation lever in the foreseeable future. Recent investments in many parts of the clean energy sector, including nuclear fusion, has slowed down this year due to economic uncertainty and inflation.
- Canada will be financing investment tax credits (ITCs) for carbon capture and storage (CCS) and net-zero energy technologies, to attract more green investments into the country. ITCs for clean hydrogen and clean technology manufacturing will be launched after the spring budget, and those for clean electricity will be launched at the end of next year. This marks an important step in advancing the low-carbon economy for climate action.
- Brazil plans to propose a mega fund at COP28 to conserve tropical forests in 80 countries. The proposal is not finalised and Brazil is seeking support and suggestions from other rainforest nations. Brazil will also launch plans at COP28 for an Arc of Restoration to counter deforestation that is advancing deeper into the Amazon.

Special Coverage: Article 6.4 recommendations to be put forward at COP28

- COP28 will offer an important opportunity for countries to agree on processes under Article 6.2 on the international trade of carbon credits, and the methodologies and criteria for eligible carbon credit types to be traded between countries, through the United Nations under Article 6.4.
- Singapore has been fostering international partnerships with other countries in the global carbon market under Article 6.2 of the Paris Agreement, and has concluded negotiations with Ghana and Vietnam on Implementation Agreements for Article 6 compliant carbon credit cooperation. If these agreements come into force, carbon tax-liable companies can source for carbon credits generated under these agreements to offset up to 5% of their taxable emissions. Singapore has also signed MoUs with other countries and are working towards implementation agreements, such as Cambodia, Indonesia and Papua New Guinea.
- The UN supervisory body for Article 6.4 has agreed on a framework on project methodologies and carbon removals, and will present its recommendations at COP28 for adoption by the parties to the Paris Agreement.
- If a text is agreed upon by countries at COP28, the UN can proceed to register projects under Article 6.4 in 2024. The chair of the supervisory body believes that the mechanism can build a solid foundation for its operationalisation in 2024, which can provide new structure to the global carbon market and allow market participants to have greater confidence in the credibility of carbon credits as a decarbonisation lever.

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Carbon Markets Analysis

Global Carbon Market Prices

ETS Markets	Price	Weekly Change	Week High	Week Low
EU (EUR/ton)	76.60	0.1%	76.61	75.19
China (CNY/ton)	71.84	-0.9%	72.52	71.67

Voluntary Carbon Markets	Price	Weekly Change	Week High	Week Low
Nature-based	0.93	-22.5%	1.20	0.93
CORSIA	0.77	-9.4%	0.85	0.58

Market	Description	Trend
EU ETS	The EU ETS prices saw a marginal weekly increase of 0.1%, with weather forecasts continuing to send a bearish signal to carbon due to above normal seasonal temperatures and increased wind electricity production.	 <p>EU ETS</p> <p>EUR/t</p> <p>Apr/23 May/23 Jun/23 Jul/23 Aug/23 Sep/23 Oct/23 Nov/23</p>
China ETS	The China ETS saw that trading volume fell after the primary compliance deadline passed, while allowance prices remained stable. As major Chinese emitters have fulfilled their obligations, trading volume is expected to remain low for next week.	 <p>China ETS</p> <p>CNY/t</p> <p>Mar/23 Apr/23 May/23 Jun/23 Jul/23 Aug/23 Sep/23 Oct/23</p>

Market	Description	Trend
Voluntary Carbon Markets (VCM)	<p>Lack of activity continued in the VCM as market participants await COP28 outcomes relating to carbon credits.</p> <p>Verra launched a new REDD+ methodology on 27 Nov. Under the new methodology, Verra aims to ensure consistency and have greater quality control.</p> <p>Verra also aims to provide a path to Core Carbon Principles (CCP) labelling under the Integrity Council for Voluntary Carbon Markets (ICVCM) for historically verified emission reductions and issued VCS carbon credits, when the VCS program is assessed by the ICVCM as CCP-Eligible.</p>	<p style="text-align: center;">Nature-based credits</p>  <p style="text-align: center;">CORSIA credits</p> 

Source: Refinitiv Eikon, Carbon Pulse, Platts Dimensions Pro, Verra

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