

Agenda item 2.2

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Market and policy developments

CDM EB 124

Bonn, Germany, 19 to 21 March 2025



Purpose

- To provide the Board with the most recent information regarding market and policy developments.
- No specific decision-making expected.



Overview

- Update on active source of CER demand within compliance and voluntary markets:
 - Republic of Korea (offset in ETS)
 - Colombia (offset for carbon tax)
 - South Africa (offset for carbon tax)
 - Chile (offset for carbon tax)
 - Singapore (offset for carbon tax)
 - ICAO (offset for CORSIA)
 - Broader voluntary market



TRANSITION OF CDM ACTIVITIES



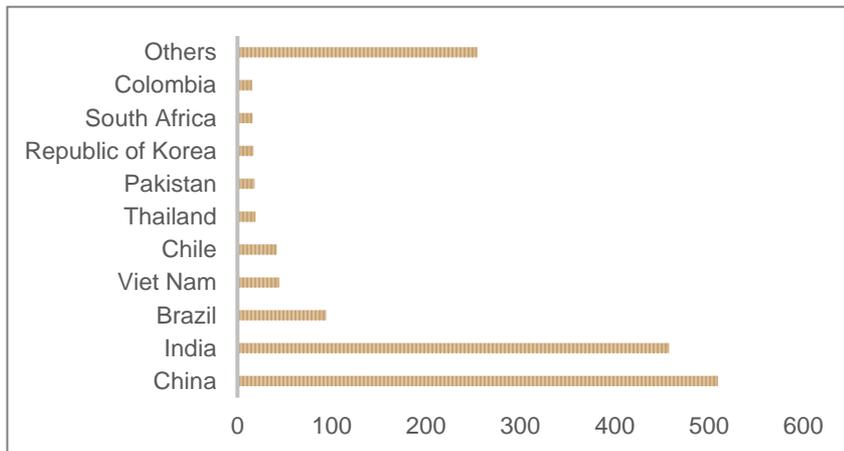
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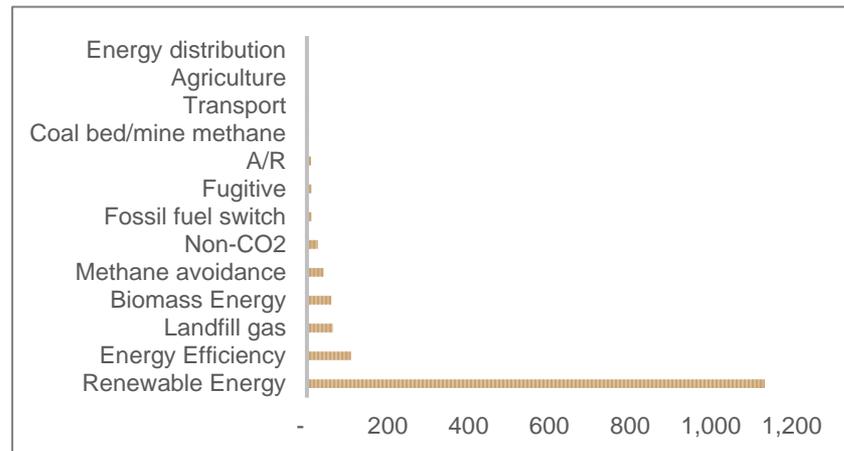
CDM activities to the Article 6.4 mechanism

- **15 Parties** have submitted the host Party participation requirements for the Article 6.4 mechanism (PACM) (LDCs and SIDS: 9 out of 15)
- **1,486 CDM activities**—1,368 Project Activities and 118 PoAs—have requested for transition to PACM
 - **33 CDM activities** have received their host Party's approval
- **1 CDM PoA was approved** as a PoA under **PACM** at SBM15

Number of Activities by Host Party



Number of Activities by Project Type



ISSUANCE OF CERS



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Issuance of CERs

- 19.6 million CERs were issued in 2024.
- 466 million CERs are in the pending accounts.

Aggregated holdings in the CDM registry as of 31 January 2025

Account Type	CER (including tCER and ICER)
Total units in the pending account and in holding accounts for CP1	138,549,815
Total units in the pending account and in holding accounts for CP2	327,781,431

Source) CDM Registry Issuance Report, Aggregated holdings in the CDM registry,
<https://cdm.unfccc.int/Registry/index.html>



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COMPLIANCE DEMAND CENTERS



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Korean Emission Trading Scheme



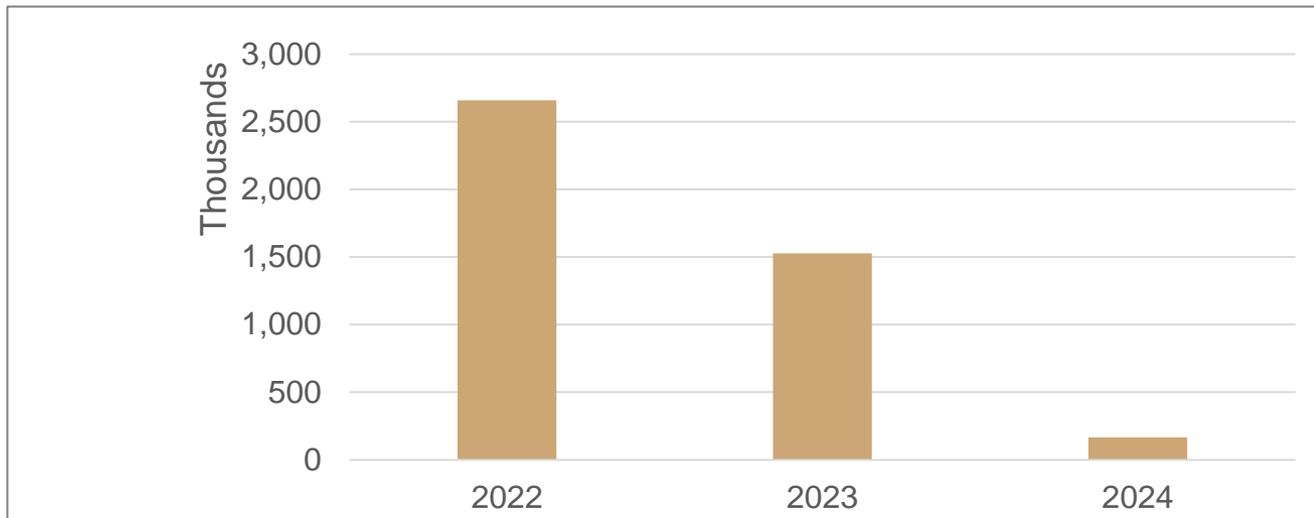
- **Covered emissions:** Current Phase 3 (2021-25) sets a total of 3,069.5 MtCO₂e over the 5-year compliance period (average annual caps of 614 MtCO₂e)
- **Offsets:** Offset limit is restricted to 5% of the submitted allowances, regardless of whether the credits are domestic or international
 - Based on this limit, the potential annual demand for offset credits is estimated to be 25-30 MtCO₂e
 - For domestic CDM activities, only those outside of the organizational boundary of entities under the K-ETS can be approved
 - For overseas CDM activities, only those directly implemented by Korean companies or entities are eligible
 - Once the PACM is fully operationalized, **only project activities under the PACM can be approved** (CDM activities must transition to PACM to remain eligible for approval)





- **CER cancellations:** In 2024, only 165,920 CERs were cancelled for K-ETS, a sharp decrease from 1.5 million in 2023 and 2.6 million in 2022.
- Due to a surplus of allowances, demand for offsets is expected to remain low throughout the Phase 3 (until 2025).

Cancelled CERs for K-ETS



Source) CDM: VC Attestation





- **Linkage with the NDC:** No official announcement on whether CERs cancelled for K-ETS compliance purposes will be used to achieve its 2030 NDC target.
- **Demand for ITMOs:** ROK announced its intention to use **37.5MtCO₂e of ITMOs** to achieve the 2030 NDC target.
- **Phase 4 (2026-2030):** National Allocation Plan, including detailed rules on offsetting, will be announced by the end of June 2025

Source) 1st National Basic Plan on Carbon Neutral and Green Growth, Government of the Republic of Korea (April 2023)
<https://www.2050cnc.go.kr/base/board/read?boardManagementNo=60&boardNo=2343&searchCategory=100&page=1&searchType=title&searchWord=&menuLevel=2&menuNo=96>



Colombia Carbon Tax



- **Rate:** USD 4.99–6.2 per tCO₂e in 2024 for fossil fuels, levied at production/import

Year	2017	2018	2019	2020	2021	2022	2023	2024
Tax rate (COP/tCO ₂ e)	15,000	15,764	16,422	17,211	17,660	18,829	18,829-23,395	20,765-25,799
Tax rate (USD/tCO ₂ e)	3.60	3.79	3.94	4.14	4.24	4.52	4.52-5.62	4.99-6.20

Note: Exact rates specified per fuel type, capped at a maximum rate of USD 10/tCO₂e

- **Offsets:** Offsetting is limited to 50% of fuel sector emissions from 2023 onwards, down from 100% of emissions in 2022.
- **Offset eligibility:** Units generated in or after 2010 from CDM and other offset programmes from activities located within Colombia
 - Total of 32 CDM projects in Colombia (out of 236 carbon projects in the country)



Source) <https://www.qcintel.com/carbon/article/colombia-s-carbon-tax-rises-10-28-for-2024-21277.html>, https://ieta.b-cdn.net/wp-content/uploads/2024/02/Colombia-business-brief_Jan-23.pdf, <https://asocarbono.org/wp-content/uploads/2024/11/IMCC-Jul-Sep-2024-comprimido.pdf>

Note) COP: Colombian peso. The amount in USD depends on the exchange rate between the Colombian Peso and USD.

Colombia Carbon Tax



- Tax revenues and offset credits for compliance (as of 30 Sep. 2024)
 - The balance between taxed and non-taxed volumes relative to total demand stands at 56.8% and 43.2% in 2024, respectively
 - Carbon tax revenue amounts to USD 768.5 million, with an annual average of USD 96.5 million
 - The projected total demand amounts to 41 million tons of CO₂e.

Year	Months	Tax payment			No taxation (offset credits, MtCO ₂ e)	Total demand (MtCO ₂ e)	Tax payment/ Total demand (%)	No taxation/ Total demand (%)
		Tax paid (M USD)	Tax rate (USD/tCO ₂)	Total emissions (MtCO ₂ e)				
2017	6	114.5	3.6	31.8	7.7	39.5	80.49	19.51
2018	12	70.6	3.79	18.7	11.9	30.6	61.03	38.97
2019	12	108.3	3.94	27.5	14.9	42.4	64.77	35.23
2020	12	70.6	4.14	17.1	10.1	27.3	62.86	37.14
2021	12	80.3	4.24	18.9	23.4	42.4	44.70	55.30
2022	12	101.8	4.52	22.5	20.8	43.3	52.02	47.98
2023	12	138.2	4.52-5.62	29.5	14.3	43.8	66.33	33.67
2024	9	87.6	4.99-6.20	16.9	12.9	29.8	56.80	43.20
Total	87	772.7	N/A	180.2	116.1	296.2	60.82	39.18



Source) <https://www.qcintel.com/carbon/article/colombia-s-carbon-tax-rises-10-28-for-2024-21277.html>, https://ieta.b-cdn.net/wp-content/uploads/2024/02/Colombia-business-brief_Jan-23.pdf, <https://asocarbono.org/wp-content/uploads/2024/11/IMCC-Jul-Sep-2024-comprimido.pdf>

Note) The amount in USD depends on the exchange rate between the Colombian Peso and USD.



- **Impact on CDM:** To date just over 11 million CERs have been cancelled – around 1.97 million CERs from Colombia remain available.

- **Trend observed:**

Year	Millions CERs cancelled
2018	3.6
2019	1.3
2020	0.5
2021	1.8
2022	2.4
2023	0.7
2024	0.9



South Africa Carbon Tax



- **Rate:** Since the introduction of the carbon tax in June 2019, the rate has been gradually increased, with sector-specific exemptions and rebates.
 - The rate is expected to increase to the equivalent of around USD 20/t by 2028 and USD 25/t by 2030.

Year	2019	2020	2021	2022	2023	2024	2025
Tax rate (South African Rand/tCO ₂ e)	120	127	134	144	159	190	236
Tax rate (USD/tCO ₂ e)	6.52	6.90	7.28	7.82	8.64	10.32	12.82

- **Offset:** Offsets are currently limited to 5 or 10%. Eligibility offsets include domestic CDM (+VCS and GS) and may potentially expand to include the PACM.
 - From 2026 (phase 2): maximum of 10% for process/fugitive emissions and 15% for combustion emissions



Note) The government announced possible inclusion of the Article 6(4) mechanism as a replacement of the CDM and eligible standard for the carbon offset mechanism under the carbon tax. Once the Article 6(4) mechanism standards and methodologies are approved and the mechanism registry is operationalised, it is proposed to include the mechanism as an eligible standard under the carbon offset scheme.

Source) <https://taxsummaries.pwc.com/south-africa/corporate/other-taxes/> / https://www.ieta.org/wp-content/uploads/2023/10/2023_IETA_BizBrief_South-Africa_V2.pdf, <https://www.treasury.gov.za/public%20comments/TaxationOfAlcoholicBeverages/Phase%20two%20of%20the%20carbon%20tax.pdf>

South Africa Carbon Tax



- **Impact on CDM:** To date, just over 8 million CERs have been cancelled.
- **Projection:** Since no CERs have been issued from the domestic CDM activities after 2023, demand for CERs is uncertain.
- **CDM activities requested for transition to the PACM:** 12 PAs and 6 PoAs, which are based in South Africa, have requested for transition to the PACM.

Source) <https://cdm.unfccc.int/Registry/index.html> / <https://taxsummaries.pwc.com/south-africa/corporate/other-taxes/>
https://www.ieta.org/wp-content/uploads/2023/10/2023_IETA_BizBrief_South-Africa_V2.pdf /
https://cdm.unfccc.int/Transition/finalized_gsc





- **Rate:** Carbon tax was introduced in 2017 at USD 5/t.
- **Offset:** CDM, Verra, Gold Standard (since the end of 2023) and Biocarbon (from 2024) have been recognized as eligible for carbon tax compliance, subject to the followings:
 - Carbon credits must be additional, measurable, verifiable and permanent, and they must be aligned with the country's NDC.
 - Carbon credits are from projects located in Chile that have been issued since 1 January 2020.
 - No more than three years difference between the year of tax emissions and the year carbon offset projects mitigate GHG.
- **Impact on CDM:** 5.39 million CERs from Chile remain available.
 - To date, no CERs have been cancelled for compliance with the Chilean carbon tax.

Source) https://ieta.b-cdn.net/wp-content/uploads/2024/02/Chile-business-brief_Feb-2024.pdf



Singapore Carbon Tax



- **Rate:** Singapore introduced a carbon tax in 2019 covered 80% of national emissions

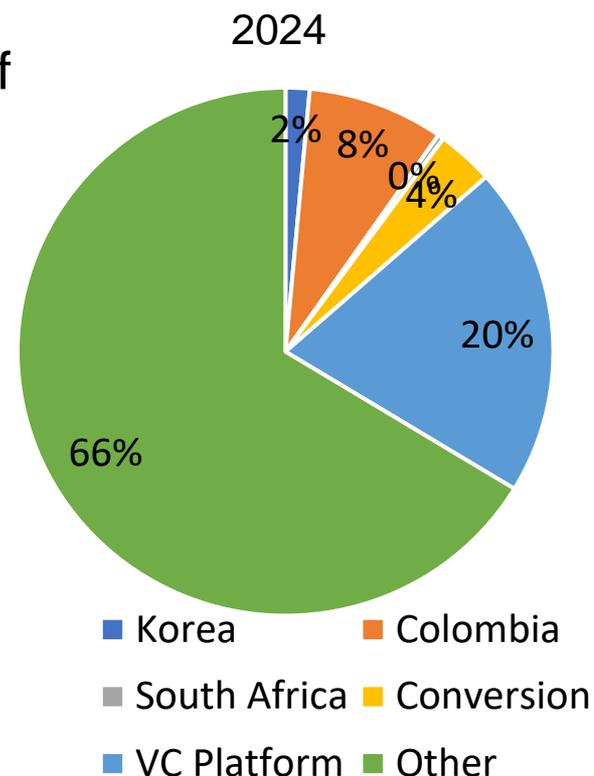
Year	2019-2023	2024-2025	2026-2027	by 2030
Tax rate (SGD/tCO ₂ e)	5	25	45	50-80 (planned)
Tax rate (USD/tCO ₂ e)	3.72	18.60	33.48	37.20-59.52

- **Offset:** From 1 Jan. 2024, the use of International Carbon Credits (ICCs) is allowed to offset up to 5% of taxable emissions
 - ICCs must represent emission reductions or removals occurring between 1 Jan. 2021 and 31 Dec. 2030
 - 7 principles for eligibility: No double counting, Additional, Real, Quantified and verified, Permanent, No net harm, No leakage
 - CERs are not eligible based on the date of occurrence criterion; projects/PoAs transitioning to PACM may be recognized if they meet the eligibility criteria.



Voluntary Cancellations – CDM Registry & Platform

- In 2024, 11 million CERs were cancelled (63% of 2023 level).
- Highlights include:
 - Domestic compliance use is only at 47% of 2023 levels, decreased primarily due to a surplus of allowances in South Korea and limited domestic activities in South Africa.
 - Korea: 11% of the 2023 level
 - Colombia: 125% of the 2023 level
 - South Africa: 23% of the 2023 level
 - Cancellation from VC platform decreased from 2023, at 65%.
 - Cancellation for conversion to other standards is at 66% of 2023 levels.



CORSIA



- No final offsetting requirements have been accrued for CORSIA’s pilot phase (2021 –2023).
- Potential demand for carbon credits from CORSIA would vary depending on traffic and emission reductions from CORSIA Eligible Fuels (CEF) scenarios.

Forecasted demand for offsets up in CORSIA Phases (Mt)

	First Phase (2024-2026)		Second Phase (2027-2035)	
	Low CEF scenario	CAAF/3 scenario	Low CEF scenario	CAAF/3 scenario
High traffic	110	105	1330	995
Mid traffic	97	92	1203	838
Low traffic	73	68	837	502

- Low CEF scenario: based on the LTAG-TG IS1 biomass-based fuels (only)
- CAAF/3 scenario: reaching CAEP Initial Assessments in Support of the 2025 CORSIA Periodic Review - 3 - 5% emissions reductions from SAF and LCAF in 2030 assuming an exponential growth rate from 2024- 2030 with a trend extrapolation post 2030.

■ CORSIA eligible standards for credits (as of Nov 2024)

Standards	Pilot phase (2021-2023)	First phase (2024-2026)	Second phase (2027-2029)
American Carbon Registry (ACR)	2016-2023 units	2021-2026 units	Starting in 2025, TAB will make recommendations to Council on eligibility beyond the CORSIA First Phase.
Architecture for REDD+ Transactions (ART)	2016-2023 units	2021-2026 units	
BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)	2016-2020 units	Conditionally eligible	
Cercarbono		Conditionally eligible	
China Certified Emission Reduction (CCER)	2016-2020 units		
Clean Development Mechanism (CDM)	2016-2020 units		
Climate Action Reserve (CAR)	2016-2023 units	2021-2026 units	
Forest Carbon Partnership Facility (FCPF)	2016-2020 units	Conditionally eligible	
Global Carbon Council (GCC)	2016-2020 units	2021-2026 units	
The Gold Standard (GS)	2016-2023 units	2021-2026 units	
Isometric		Conditionally eligible	
Joint Crediting Mechanism (JCM) between Japan and Mongolia	Conditionally eligible		
SOCIALCARBON	2016-2020 units		
Thailand Voluntary Emission Reduction (T-VER) Programme		Conditionally eligible	
Verified Carbon Standard (VCS)	2016-2023 units	2021-2026 units	

VOLUNTARY CARBON MARKET

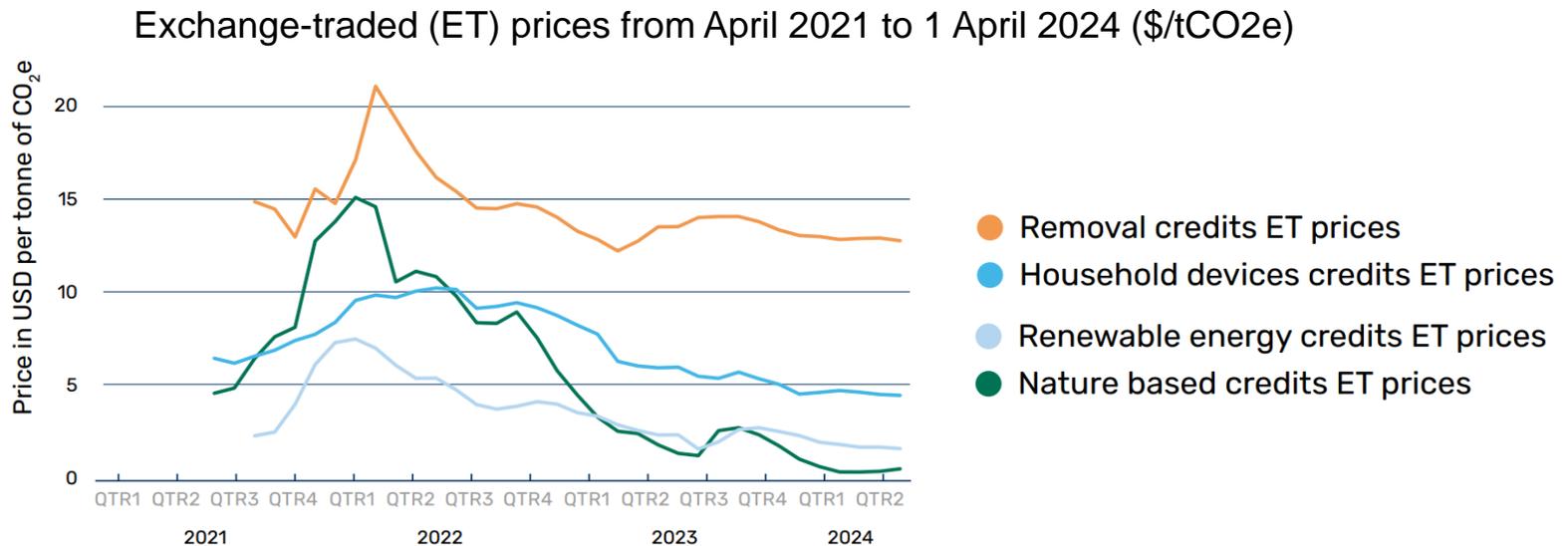


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Price of carbon credits

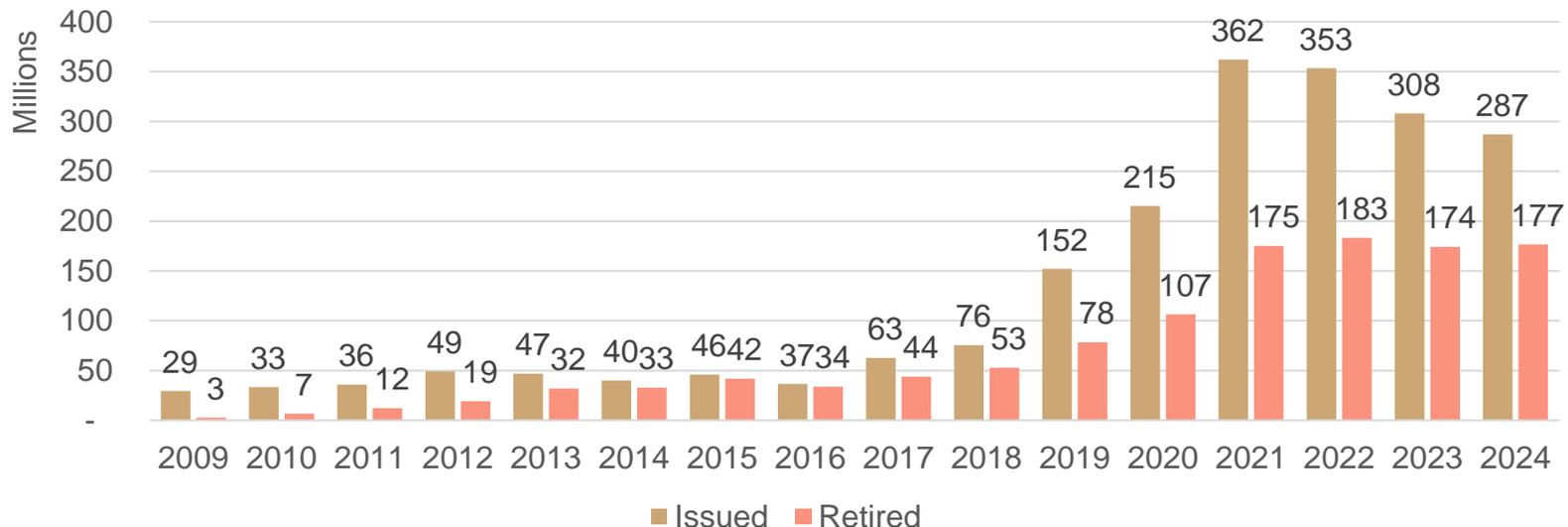
- The different activity types exhibit varying prices.
- Higher prices for removals (e.g. nature-based or technological-based removals).
- Price premium for projects with co-benefits (e.g. household devices, incl. cookstoves and clean water access).
- Lower prices for those already in common practice (e.g. renewables)
- REDD activities faced price decline most likely due to assertions of over-crediting



Issuance and retirement of carbon credits

- The volume of issued credits has declined since 2021, possibly due to continued concerns about integrity, regulatory uncertainty, and ongoing revisions of methodologies. However, the retired volume has remained stable over the years, indicating a sustained demand for credits.

Issued and retired volume of carbon credits (MtCO₂e)



Note: Data from 10 registries: ACR, ART, BioCarbon, CAR, Cercarbono, Climate Forward, GCC, GS, Plan Vivo and VCS.



- **ICVCM assessments are two-step approaches: Carbon Crediting Programs** deemed to be Core Carbon Principles (CCP)-eligible are able to issue CCP-approved carbon credits from **CCP-approved Categories of carbon credits (methodologies)**.

CCP-Eligible programmes

- ACR
- Architecture for REDD+ Transaction TREES (ART)
- Climate Action Reserve (CAR)
- Gold Standard
- Isometric
- Verified Carbon Standard

CCP-Approved Categories of carbon credits

- Afforestation, Reforestation and Revegetation*
- Biodigesters (household) *
- Efficient Cookstoves*
- Landfill Gas Capture and Utilization
- Leak Detection/Repair in Gas Systems
- Ozone Depleting Substances*
- REDD+ (jurisdictional)*
- REDD+ (project)*

Rejected Categories of carbon credits

- Grid-Connected Renewable Energy*
- Mini-Grids*
- Renewable Energy (Offgrid)
- SF6 Avoidance



Note) All outcomes are as of 7 March 2025. An asterisk (*) indicates that some methodologies under this category are still in progress or rejected.

Source) ICVCM assessment status, <https://icvcm.org/assessment-status/>

Recommendations

The Board may wish to:

- ✓ Take note of the information provided

