March 2026

CARBON INSIGHTS

Monthly Edition

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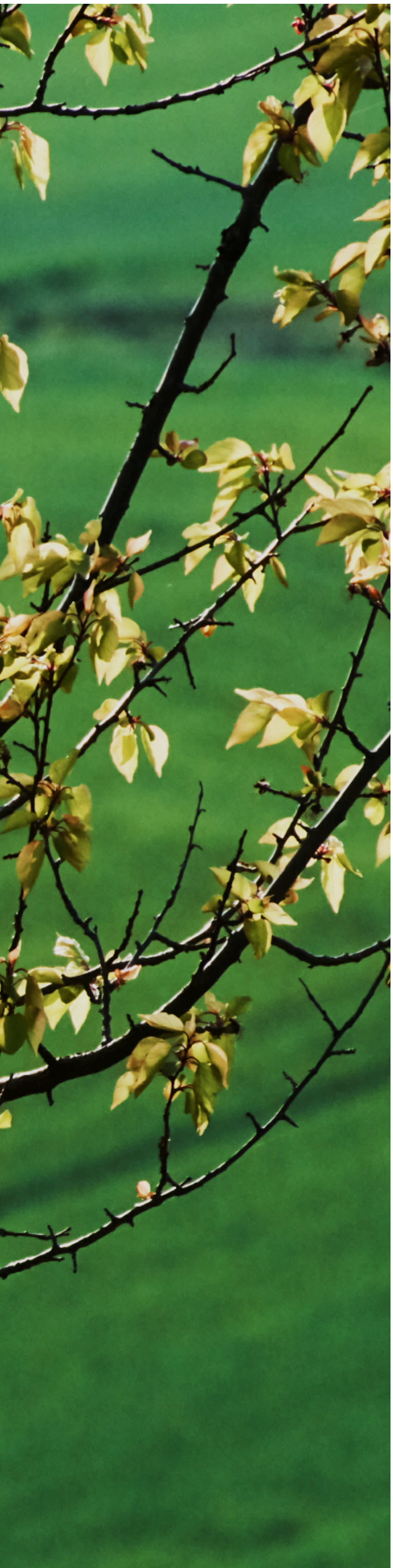


INSIDE this issue

EXECUTIVE SUMMARY

Retirements reached 14.1 $MtCO_2e$ against 18.4 $MtCO_2e$ of new issuance in March 2026, a 77% retirement-to-issuance ratio and a sharp reversal from February's 168%, though February was heavily distorted by Eni's exceptional 8 million credit retirement. Year-on-year, retirements grew 28% from 11.1 $MtCO_2e$ in March 2025, while issuances edged down from 19.7 $MtCO_2e$, pointing to sustained demand growth. Corporate buying was led by GRAB Group at 511,364 credits, GASAG AG at 483,086, an unidentified buyer retiring 422,395 credits from an ARR project in Uruguay, Acea Energia at 367,648, Apple Inc. at 319,785, and Lenovo at 308,179.

Switzerland's Federal Office of Environment authorised four new ITMO activities in two weeks through KliK's portfolio, bringing its total to 14, while Ghana disclosed it has authorised 47.1% of its conditional mitigation outcomes for international transfer through 2030. CORSIA recorded its first large-scale retirement as JAL retired a combined 215,000 EEUs, with Shell acting on its behalf for 180,000 of those credits. HFC destruction gained momentum across the VCM, with Isometric launching a formal protocol consultation and the Open Carbon Protocol approving its first HFC destruction project, backed by a $100 million corporate initiative. Spot EEU prices fell to $13.45/$tCO_2e$, reflecting continued pressure from expanding supply.

LAST MONTH IN CARBON MARKETS

ARTICLE 6.2

Last edition we noted Article 6 infrastructure was advancing on multiple fronts, with Peru registering its first project and Morocco launching a 500 MW solar programme with Switzerland. In March, Switzerland's KliK Foundation accelerated further, with the Swiss Federal Office of Environment authorising four new projects in two weeks across Ghana, Malawi and Peru, bringing its total portfolio to 14 authorised activities.

SWITZERLAND ADDS THREE NEW AUTHORISATIONS IN GHANA IN TWO WEEKS

Between March 12th and March 18th, the Swiss Federal Office of Environment (FOEN) and the Ghanaian government authorised three separate projects in Ghana, taking the country's total to seven of KliK's 14 activities. The first, announced March 12th, covers a large-scale biogas programme deploying anaerobic digesters at 20,000 farms across Ghana. Developed using technology from Israel-headquartered HomeBiogas, the digesters convert cow manure into clean cooking gas and biofertiliser, replacing biomass fuels such as firewood and charcoal. The project delivers co-benefits including financial savings on fuel and fertiliser, improved soil health, reduced indoor air pollution, and local job creation. KliK announced its intention to back the programme in September 2024, making this the 11th activity in its portfolio. Authorisation by both governments confirms that Ghana will apply a corresponding adjustment to its national emissions inventory, ensuring that the emission reductions transferred to Switzerland cannot be counted twice: once toward Ghana's own climate targets and again toward Switzerland's. The volume of ITMOs to be generated over the 2025–2030 crediting period and the price paid by KliK were not disclosed.

The following day, FOEN and Ghana authorised a second activity: a solar rooftop programme that will deliver 135 megawatts of peak generating capacity by 2028, with the potential to generate 2,000 tCO_2e of emission reductions per MWp. Individual systems are below 1 MW and can be complemented by battery storage. The programme is being developed by Canada-based climate finance specialist Econoler and Switzerland-headquartered solar company MPower Ventures. It is the 12th activity in KliK's portfolio and the sixth hosted in Ghana. The ITMOs will not be shared with Ghana.

On March 18th, a third Ghana activity received dual authorisation from FOEN and the Ghanaian government: the Ghana Green Cooling Programme (GGCP), a subsidy scheme targeting 100,000 green air conditioners using R290 refrigerant gas, which carries an ultra-low global warming potential compared with conventional HFCs such as R-410A or R-32. The split air conditioning sector already accounts for approximately 8% of Ghana's national greenhouse gas emissions, estimated at around 4 million tCO_2e. End consumers are expected to save around 40% on electricity costs relative to a standard HFC unit. The programme is overseen by GIZ, Germany's international development agency. Switzerland will not share the ITMOs with either Ghana or Germany. This is the 13th activity in KliK's portfolio and the seventh hosted in Ghana.

GHANA HAS AUTHORISED 47% OF ITS CONDITIONAL ARTICLE 6 MITIGATION OUTCOMES FOR INTERNATIONAL TRANSFER

On March 23rd, Ghana's Environmental Protection Agency published a progress scorecard disclosing that the country has authorised 11.3 million tCO_2e of ITMOs, equivalent to 47.1% of Ghana's available conditional mitigation outcomes for international transfer through 2030. Ghana's updated NDC, submitted in November 2021, sets a conditional emissions reduction target of up to 64 $MtCO_2e$ by 2030 relative to a business-as-usual scenario, contingent on international financial support, with ITMOs authorised exclusively from this conditional portion. The authorisations cover 11 projects across sectors including compost, biomass stoves, electric cooking, rice methane reduction and electric bikes. Ghana's Carbon Market Office confirmed it will feed progress into the country's biennial transparency report for 2026 and plans to publish performance and compliance scores for validation and verification bodies, develop an investor guide for Ghana's carbon market, and conduct an ex-ante assessment of the socio-economic impacts of its project pipeline. A further study on the effects of political, investment and implementation risks on Ghana's ITMO delivery schedule is also planned.

MALAWI BECOMES THE 14TH MITIGATION ACTIVITY IN KLIK FOUNDATION'S PORTFOLIO

Switzerland's KliK Foundation announced on March 23rd that a dairy biogas programme in Malawi has received dual authorisation from FOEN and the Malawian government, becoming the 14th mitigation activity in KliK's portfolio and its first in Malawi. The programme will distribute 10,000 household-scale biodigesters to smallholder dairy farmers, converting cow manure into clean biogas and nutrient-rich organic fertiliser, reducing methane emissions and allowing a shift away from firewood and charcoal. Switzerland and Malawi signed a memorandum of understanding in November 2022 on Article 6.2 cooperation. The programme is being developed by a consortium comprising Switzerland-based ACT Group, Mexican biodigester supplier Sistema.bio, and Malawian biogas firm EcoGen. Distribution has already begun and is expected to conclude within the next few years. Mitigation outcomes will be measured, reported and verified annually. KliK declined to disclose the volume of ITMOs expected, how they will be shared, or the price paid. The announcement follows Sistema.bio raising $53 million to scale its biodigester rollout through a new carbon finance vehicle.

PERU AND SWITZERLAND AUTHORISE THEIR FIRST ARTICLE 6.2 PROJECT

Peru and Switzerland officially authorised the first project under their bilateral Article 6.2 agreement on March 20th, with Peruvian Minister of Environment Nelly Paredes and Swiss Ambassador Paul Garnier jointly issuing letters of authorisation to French-Peruvian developer Microsol for its Tuki Wasi clean cookstoves programme. The project has the potential to issue 750,000 tCO_2e by 2030. The authorisation had been expected before COP30 in November 2025, but was delayed amid political instability in Peru. Chile issued the first Article 6.2 authorisation in South America in October 2025, under its own bilateral agreement with Switzerland. Peru has also signed a bilateral agreement with Singapore in April 2025 and opened a public call for projects in October, signalling the development of a broader ITMO pipeline beyond its Swiss partnership.

SENTINEL EARTH'S PERSPECTIVE

Switzerland's Article 6.2 cooperative approach pipeline is accelerating. Four new authorisations in March across Ghana, Malawi and Peru bring KliK's portfolio to 14 mitigation activities, against a mandate of roughly 20 million tonnes of international ITMOs by 2030 under the Swiss CO_2 Act. Ghana now accounts for half of that authorised pipeline, and its Carbon Market Office has disclosed that 47% of the country's conditional NDC transfer ceiling is already committed to cooperative approaches; a pace that will sharpen domestic debate around the balance between international transfers and NDC retention well before the 2026 biennial transparency report.

The sectoral and geographic footprint of Article 6.2 deal flow is widening materially. What began with clean cooking and e-mobility now spans household biogas, HFC-to-R290 refrigerant transition, and with Morocco's SR500 programme, commercial and industrial rooftop solar under the first programmatic aggregation framework of its kind in the MENA region. Each activity type introduces distinct MRV and baseline-setting requirements that will be tested through a full ITMO issuance cycle.

Switzerland remains the most operationally advanced acquiring country, but the buyer landscape is evolving. Japan has built the broadest bilateral network through its Joint Crediting Mechanism across 31 partner countries, though actual ITMO issuance volumes remain modest relative to the scale of its agreements. Singapore has concluded 28 bilateral agreements and is anchoring ITMO demand directly to its carbon tax, set to reach S$45/t$CO_2$e in 2026 on a trajectory toward S$50-80 by 2030.Sweden continues piloting acquisitions without yet committing credits toward its NDC, while South Korea is positioning to integrate ITMOs into its ETS as Korean Carbon Units.

With cumulative projected buyer demand estimated at 240-290 million tCO_2e through 2030, the question is no longer whether Article 6.2 works at a transactional level, it does, but whether the pace of authorisation and implementation across this widening field can match the ambition before the 2030 window narrows further.

CORSIA

Last edition, CORSIA supply had reached 32 million credits following Verra's tagging of the DelAgua cookstove projects and Guyana's corresponding adjustments for 9.1 million REDD+ credits. Airline purchasing remained cautious with the compliance deadline extending to early 2028. In March, the market recorded its first large-scale retirement, supply continued to expand, and prices fell sharply.

JAL COMPLETES FIRST LARGE-SCALE CORSIA RETIREMENT

Japan Airlines completed two separate CORSIA retirements on March 21st, marking the most significant compliance activity the scheme has seen to date. On the ART registry, JAL directly retired 35,000 Eligible Emissions Units with vintage 2021 sourced from Guyana's jurisdictional REDD+ project. On the same day, Shell retired 180,000 EEUs on JAL's behalf on Gold Standard, described by the registry as the first large-scale retirement under the scheme. Those 180,000 EEUs covered 130,000 with vintage 2021 from the Biomass Energy Conservation Programme in Malawi (GS11677), developed by Hestian Innovation and the first project to be tagged as CORSIA-eligible on Gold Standard, and 50,000 EEUs with vintage 2023 from the Efficient and Clean Cooking for Households project in Tanzania (GS11732). A smaller prior retirement of 592 EEUs from the same Tanzania project had been made by Canadian charter airline Skyservice Business Aviation.

Market sources had indicated for months that large Japanese carriers were among the few airlines buying credits in significant volumes, with most participating carriers tending to be smaller operators and regional airlines. Earlier in the week, one of the Guyana government's leads on carbon sales confirmed that 19 airlines have bought credits through the quarterly procurement events the country holds with commodities trader Mercuria and exchange firm Xpansiv, with at least 1 million of Guyana's REDD+ credits sold through CORSIA. One UK-based airline is reported to have bought several hundred thousand of these. Gold Standard noted that as of the transaction date, it had labelled nearly two million credits as eligible for Phase 1 use. JAL's own sustainability reporting indicates a 2025 emissions target of 9.21 million tCO_2e, a 10% reduction to around 8.3 million tCO_2e by 2030, and a net zero target by 2050 through sustainable aviation fuel and other measures.

VERRA TAGS 10TH CORSIA-ELIGIBLE PROJECT AS ICAO RECEIVES 26 APPLICATIONS FOR PHASE 2 SUPPLY

Verra tagged its 10th CORSIA-eligible project on March 20th, a Cambodia water purifier programme (VCS3052) managed by Hanoi-based Sustainability Investment Promotion and Development Joint Stock Company, adding 242,000 credits to eligible Phase 1 supply. It is the third project managed by the same company to receive CORSIA eligibility. The full list of tagged projects now spans Guyana's REDD+ credits via ART, two cookstove projects via Gold Standard, four DelAgua clean cooking projects in Rwanda, Sierra Leone and The Gambia via Verra, two water purifier and cookstove projects in Laos via Verra, and the new Cambodia project.

On March 30th, ICAO confirmed 26 applications to supply Phase 2 credits covering the 2027–2029 period, open for public comment until April 27. Russia's Voluntary GHG Reduction System applied despite having been on the margins of the global carbon market for over a decade. The Paris Agreement Crediting Mechanism also applied, confirming that Article 6.4 credits are seeking to compete directly for airline demand. Zimbabwe's Carbon Markets Authority applied in a direct attempt to bypass a Phase 1 logjam: its two million credits from a clean cookstoves programme (GS11551) have been held up by a material change dispute at ICAO's Technical Advisory Body over the country's use of a blockchain-based registry. By applying for Phase 2, ZICMA is seeking to supply credits without routing them through Gold Standard at all. Meanwhile, a late March IATA-convened meeting flagged that one of the two routes to CORSIA conformity, corresponding adjustments, is at major risk of failing due to lack of resourcing in host countries, while the insurance route is proving difficult or expensive to underwrite across certain project types and jurisdictions. "The next six months will make or break CORSIA," one market participant told Quantum. Spot EEU prices fell to $13.45/tCO_2e$ by March 20th, down $0.80 in two days, with DEC26 futures assessed at $13.20/tCO_2e$ as of April 9th.

SENTINEL EARTH'S PERSPECTIVE

CORSIA's first large-scale compliance retirements in March confirm that the scheme is beginning to generate real transactional activity, but the picture they reveal is one of extreme concentration.

Japanese carriers account for the most visible purchasing to date, while most of the industry continues to defer procurement ahead of the January 2028 compliance deadline. With IATA projecting Phase 1 demand in the range of 146 to 236 million EEUs and eligible supply now past 32 million credits, the market is pricing near-term surplus and distant obligation simultaneously.

On the supply side, the insurance route has proven critical in unlocking volumes that the corresponding adjustment pathway alone could not deliver. Approved insurers such as Oka and CFC are now embedded in Gold Standard's CORSIA infrastructure, covering the political risk that host countries fail to apply corresponding adjustments after issuing Letters of Authorisation. This mechanism enabled projects like DelAgua's cookstove portfolio and the Malawi biomass programme to reach CORSIA eligibility where sovereign readiness would otherwise have stalled the process. Yet insurance is not a universal solution: coverage remains difficult or expensive to underwrite across certain project types and jurisdictions, and the IATA-convened discussions in late March flagged that neither the corresponding adjustment nor the insurance pathway is operating at the scale required for Phase 2 volumes.

VCM

In February, the CCP label expanded beyond cookstoves into forestry and agriculture for the first time, and the first credits were issued under the UN's Article 6.4 mechanism. In March, attention in the VCM shifted toward a different category of emissions entirely: the destruction of hydrofluorocarbons and ozone-depleting substances, with multiple registries moving simultaneously to establish credible methodologies.

ISOMETRIC BUILD REGISTRY INFRASTRUCTURE FOR HFC DESTRUCTION

On March 13th, UK-based carbon standard Isometric listed its first developer under a new super pollutants pathway: US and Indonesia-based Recoolit, which works with heating, ventilation and air-conditioning technicians in Indonesia to capture and destroy HFC refrigerants from residential and commercial cooling systems before atmospheric release. HFCs and ozone-depleting substances are synthetic greenhouse gases used primarily as refrigerants, carrying a global warming potential hundreds to thousands of times greater than CO_2 over a 100-year period. Recoolit's approach is distinct from HFC credits generated in the carbon market over the past 20 years, which largely rely on avoided emissions rather than destruction, and its credits are estimated to cost upwards of \$30/tCO_2e. Google signed forward offtake agreements and partnerships with Recoolit in 2025, with support expected to scale the developer's operations by up to ten times and potentially expand beyond Indonesia.

On March 20th, Isometric followed the listing with a 30-day public consultation on a formal HFC and ODS Recovery and Destruction protocol, open until April 19. The protocol is Isometric's second covering super pollutants, following its Landfill Methane Flaring and Utilization Protocol, whose consultation closed the previous week. To ensure genuine emissions reductions, the protocol requires every container of recovered refrigerant gas to be individually weighed on a calibrated scale and sampled for compositional analysis, with the most conservative GWP-weighted result used for crediting, chain-of-custody tracking from point of origin through destruction, country eligibility lists updated annually as national phase-down schedules progress, and facilities to meet a 99.99% destruction removal efficiency with co-pollutant emissions monitored throughout. Recoolit provided extensive feedback during the protocol's development. Separately, the Open Carbon Protocol approved its first HFC destruction project in the same week: the Tradewater US HFC1 Project, covering HFC destruction from household appliances in the United States.

The three developments in March came shortly after a group of corporates including Amazon, Autodesk, Figma, Google, JPMorganChase, Salesforce and Workday launched a \$100 million initiative in early March aimed at accelerating super pollutant emissions reductions.

Cascade Climate, a philanthropy-backed non-profit with close links to tech firms, has also signalled plans to develop methodologies and frameworks for refrigerants, with a focus on lifecycle refrigerant management in Southeast Asia where emissions are growing.

MICROSOFT PAUSES CARBON REMOVAL PURCHASES, SENDING SHOCKWAVES THROUGH CDR MARKET

Microsoft communicated to carbon removal suppliers in the week of April 11th that it is pausing new credit purchases, a move with significant implications for a market it has largely driven on its own. According to CDR.fyi, Microsoft represented approximately 90% of the global carbon dioxide removal market in 2025, having signed agreements to remove a record 45 million tCO_2e that year, double the volume contracted in 2024 and nine times its 2023 figure. The company has not confirmed the duration of the pause or provided reasons for the decision. A Microsoft spokesperson stated that the company continually reviews its carbon removal portfolio alongside market conditions on its path to becoming carbon negative. Existing multi-year agreements are expected to remain intact, with several large-scale deals already announced in 2026 including a 15-year BECCS agreement in Canada signed the week prior to the announcement.

The pause comes as Microsoft's own emissions have moved in the opposite direction from its climate targets, with data centre expansion driving a 23.4% increase in carbon footprint in 2024, a similar trajectory expected for 2025. CDR costs, ranging from a blended $50 to $500 per tonne across nature-based and engineered approaches, alongside a difficult US policy environment following cuts to direct air capture funding, are cited as contributing factors. Industry participants noted that while Microsoft's existing commitments will continue to channel capital to CDR developers over the coming years, the near-term signal to investors and policymakers is a significant one for a market that has relied heavily on a single buyer to establish credibility and scale.

SENTINEL EARTH'S PERSPECTIVE

Refrigerant gases are among the most potent greenhouse gases in existence. A single tonne of HFC-23, widely used as an industrial refrigerant, carries a global warming potential 11,700 times that of CO_2 over a 100-year period. Other common HFCs used in residential and commercial cooling sit in the range of 700 to 4,000 times CO_2. Collectively, scientists estimate that aggressive reductions in these super pollutants could avoid more than 0.5°C of warming by 2050. Yet the carbon market's history with fluorinated gases is deeply scarred. Under the CDM, HFC-23 destruction projects in China and India became the single largest category of credits issued, accounting for over half of all CERs by 2010. The economics were perverse: manufacturers earned up to 75 times the actual cost of destroying HFC-23, creating incentives to increase production of both HFC-23 and its parent gas HCFC-22 solely to generate credits. The scandal culminated in the EU banning HFC-23 offsets from the ETS in 2013, and the episode remains one of the most damaging credibility failures in carbon market history. It is against this backdrop that the current wave of HFC methodology development must be understood, because the registries now entering this space are building protocols explicitly designed to avoid the structural flaws that discredited the category a decade ago.

The difference is architectural. Where CDM HFC credits relied on avoided emissions from industrial byproduct streams with manipulable production volumes, the new protocols from Isometric and the Open Carbon Protocol centre on physical recovery and destruction of refrigerants already deployed in cooling systems, with full chain-of-custody tracking from point of collection through verified destruction at 99.99% removal efficiency. This targets the vast existing refrigerant bank in service across developing countries, where neither the Montreal Protocol nor the Kigali Amendment mandates end-of-life destruction and where enforcement of venting bans remains weak. The demand signal arriving alongside is substantial: the $100 million Superpollutant Action Initiative launched in March by Amazon, Google, JPMorganChase, Salesforce, Workday, Autodesk and Figma through the Beyond Alliance represents the most coordinated corporate commitment to non-CO_2 mitigation the voluntary market has seen. Google has already gone further with forward offtake support for Recoolit's Indonesia-based HFC destruction model.

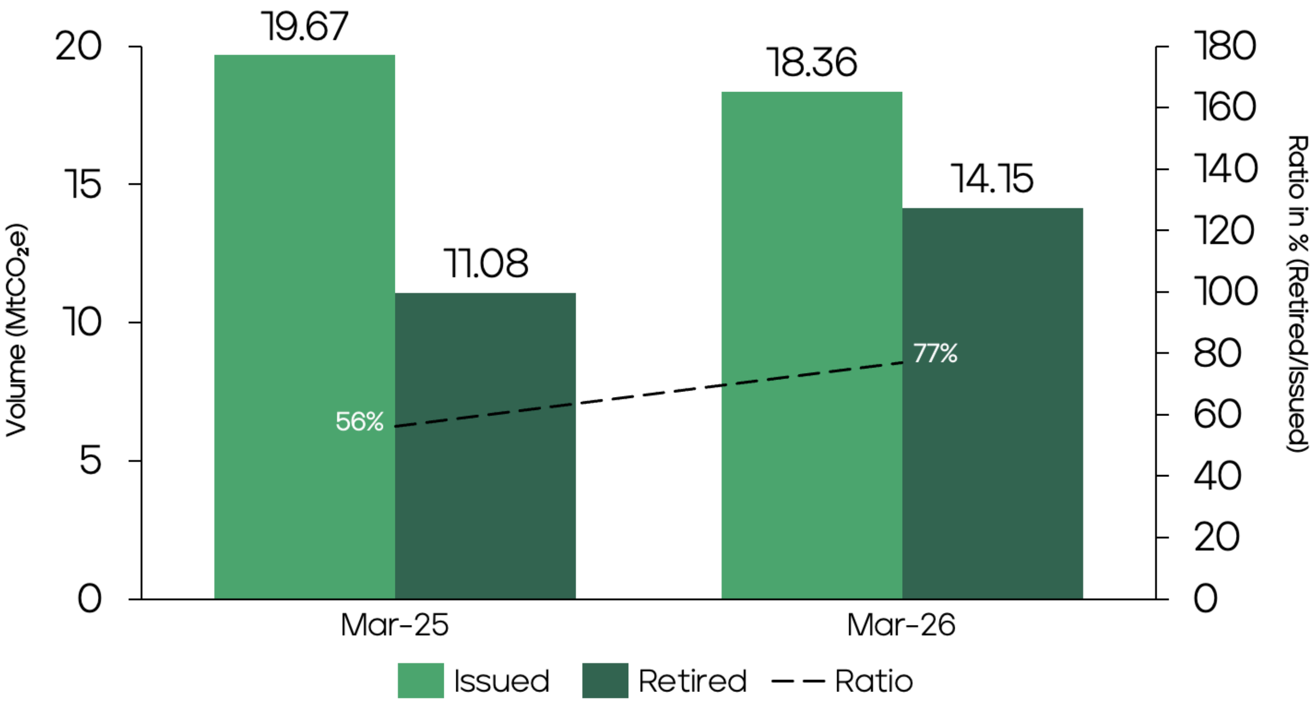
SUPPLY, DEMAND, AND PRICING

Issuance & Retirement In The VCM

In March 2026, aggregate activity across the four major voluntary carbon registries reflected a market in which new supply outpaced retirement demand. Total issuances reached 18.4 $MtCO_2e$ over the month, while retirements amounted to 14.1 $MtCO_2e$, yielding a retirement-to-issuance ratio of approximately 77% and a net surplus of roughly 4.2 $MtCO_2e$.

Year-on-year, issuances edged down from 19.7 $MtCO_2e$ in March 2025 to 18.4 $MtCO_2e$, while retirement volumes grew by 28%, rising from 11.1 $MtCO_2e$ to 14.1 $MtCO_2e$, a trend that underscores the sustained expansion of demand relative to the prior year.

MONTHLY ISSUANCE AND RETIREMENT DYNAMICS (YEAR-ON-YEAR COMPARISON)

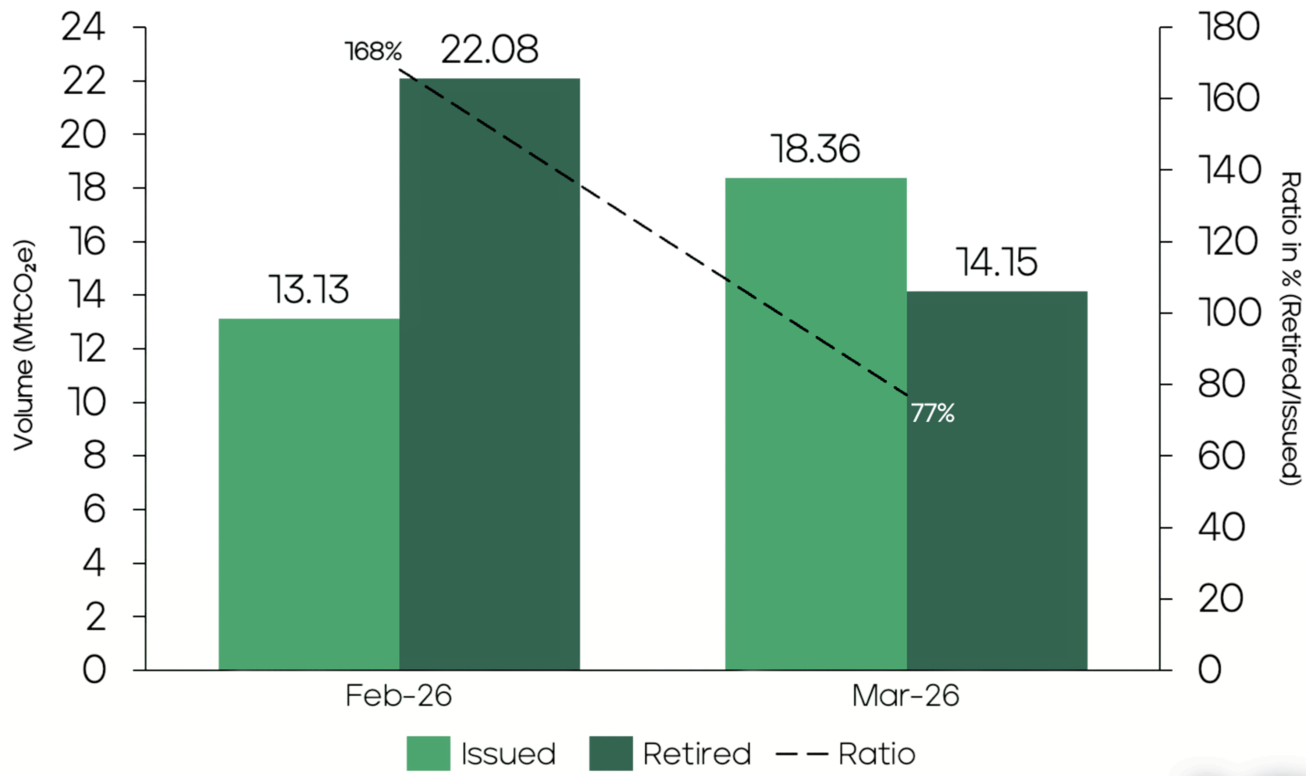


Source: ACR, CAR, Gold Standard (GS), and Verra

This chart presents a year-on-year comparison of issuance and retirement volumes for March 2025 and March 2026 (left axis, $MtCO_2e$), alongside the corresponding retirement-to-issuance ratio (right axis, %). The dashed line denotes the ratio computed as total retirements divided by total issuances for each respective period.

The month-on-month comparison reveals a sharp reversal, with the retirement-to-issuance ratio falling from 168% in February to 77% in March. This moderation should nonetheless be interpreted in context, as the prior month was largely shaped by Eni's exceptional retirement of over 8 million credits, which contributed significantly to the elevated February total.

MONTHLY ISSUANCE AND RETIREMENT DYNAMICS (MONTH-ON-MONTH COMPARISON)



Source: ACR, CAR, Gold Standard (GS), and Verra

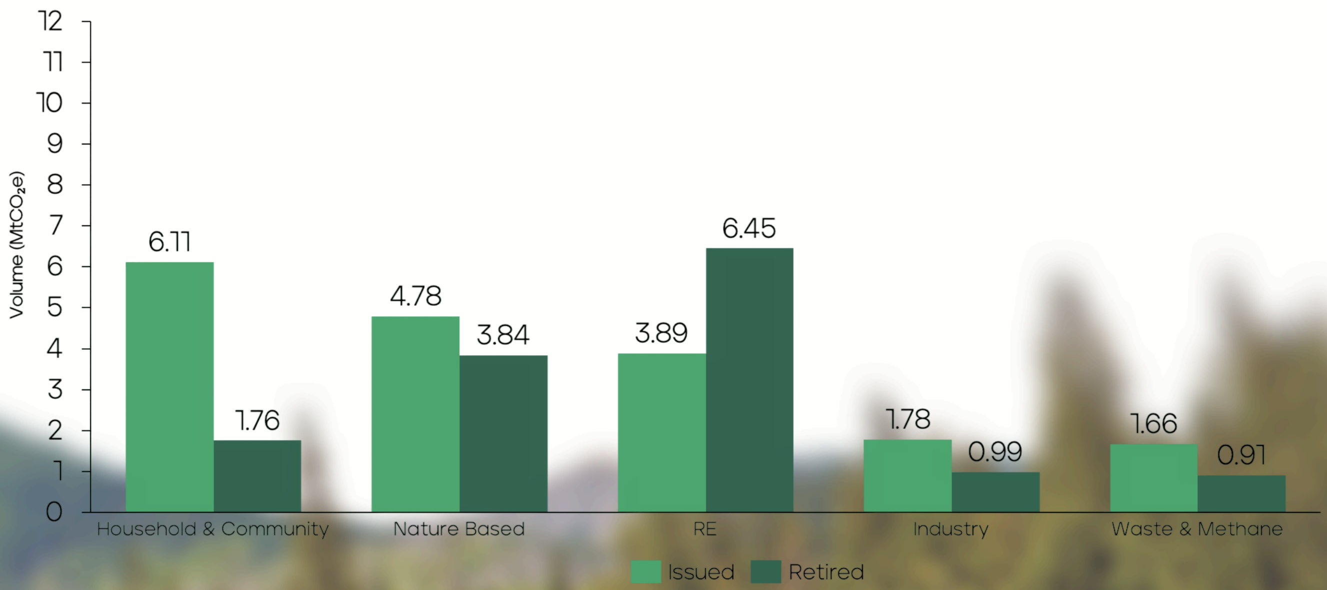
This chart presents a month-on-month comparison of issuance and retirement volumes for February and March 2026 (left axis, $MtCO_2e$), alongside the corresponding retirement-to-issuance ratio (right axis, %). The dashed line denotes the ratio computed as total retirements divided by total issuances for each respective month.

Issuance & Retirement Dynamics By Project Category

The category breakdown for March reveals a market in which issuances broadly outpaced retirements across most project types, with Renewable Energy as the notable exception. Household & Community projects led total issuances at 6.1 $MtCO_2e$ against only 1.8 $MtCO_2e$ retired, pointing to continued inventory accumulation in the segment. Nature-Based Solutions recorded a more balanced dynamic, with 4.9 $MtCO_2e$ issued against 3.8 $MtCO_2e$ retired.

Renewable Energy was the only category where retirement demand materially exceeded supply, with 6.4 $MtCO_2e$ retired against 3.9 $MtCO_2e$ issued, suggesting buyers are actively drawing on existing inventories in this segment. Industry and Waste & Methane both remained in modest issuance surplus, with limited retirement activity recorded across either category.

ISSUED AND RETIRED VOLUMES BY PROJECT MACRO CATEGORY

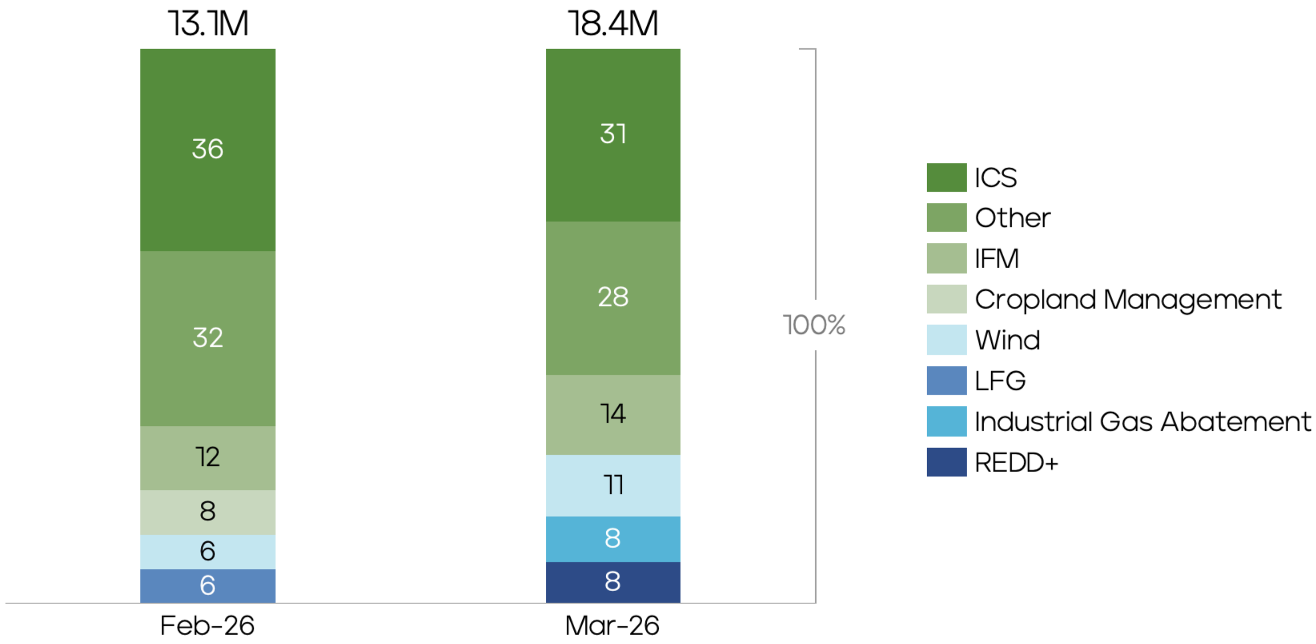


Source: ACR, CAR, Gold Standard (GS), and Verra

This chart presents aggregated issuance and retirement volumes by project macro-category across the four largest voluntary carbon registries over the reference month.

From February to March, ICS retains its leading position at 5.7M credits, while the "Other" category holds second place at 5.1M credits. IFM strengthens its contribution, rising from 1.5M to 2.7M credits, and Wind records the sharpest gain, more than doubling from 827k to 2.0M credits. Two new contributors emerge among the leaders, with Industrial Gas Abatement at 1.5M credits and REDD+ at 1.4M credits, while Cropland Management and LFG, which combined for 1.9M credits in February, drop out of the top contributors entirely.

ISSUED VOLUMES BY PROJECT TECHNOLOGY (SHARE COMPARISON)



Source: ACR, CAR, Gold Standard (GS), and Verra

This chart presents the distribution of issued carbon credits by project technology across two consecutive months, with each stacked bar representing the percentage share of total monthly issuances by technology.

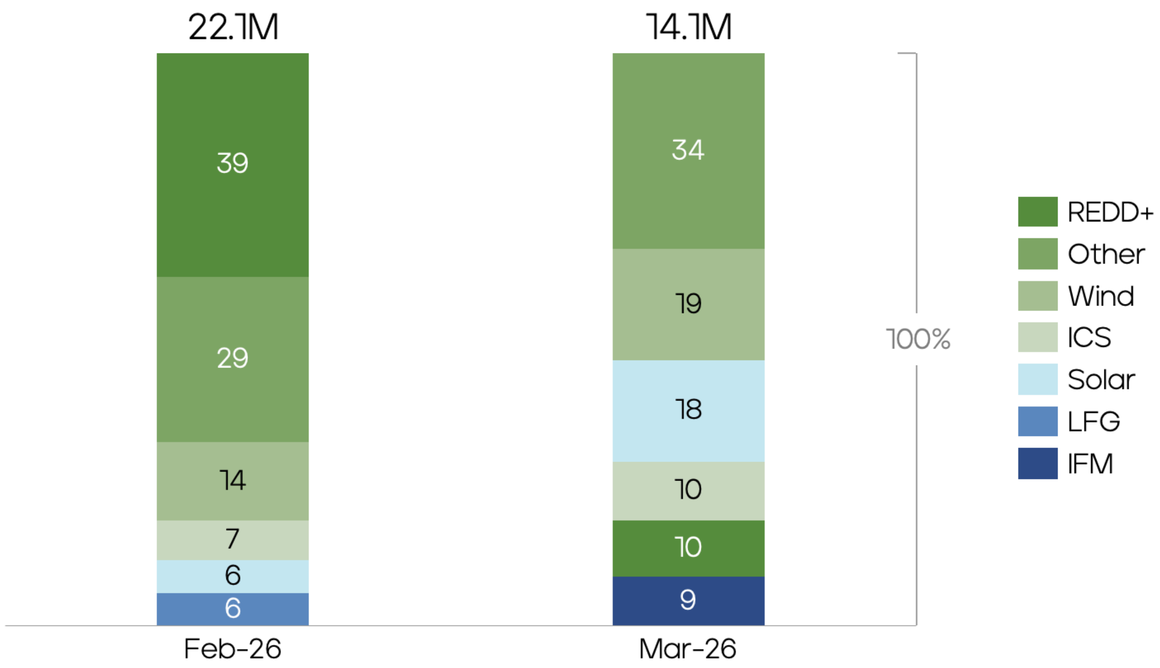
- **"Other"** aggregates all project categories whose issuance volumes fall below those of the five leading technologies displayed in the chart.

- **Industrial Gas Abatement** refers to projects that capture, reduce, or destroy high-global warming potential greenhouse gases generated by industrial processes to prevent their release into the atmosphere.

On the retirement side, total volumes contracted from 22.1M to 14.1M credits between February and March, with the composition of demand rotating significantly across project types. REDD+ recorded the sharpest decline, falling from 8.6M to 1.4M credits, a movement largely attributable to the absence of a buyer of comparable scale to the prior month. Wind held broadly steady at 2.7M credits, while ICS remained stable at 1.4M credits.

Solar was the standout gainer, nearly doubling from 1.3M to 2.5M credits, reflecting growing corporate appetite for renewable energy credits. IFM entered the ranks of leading contributors at 1.2M credits, while LFG, which accounted for 1.2M credits in February, dropped out of the top categories entirely.

RETIRED VOLUMES BY PROJECT TECHNOLOGY (SHARE COMPARISON)



Source: ACR, CAR, Gold Standard (GS), and Verra

This chart presents the distribution of retired carbon credits by project technology across two consecutive months, with each stacked bar representing the percentage share of total monthly retirements by technology.

- **"Other"** aggregates all project categories whose retirement volumes fall below those of the five leading technologies displayed in the chart.

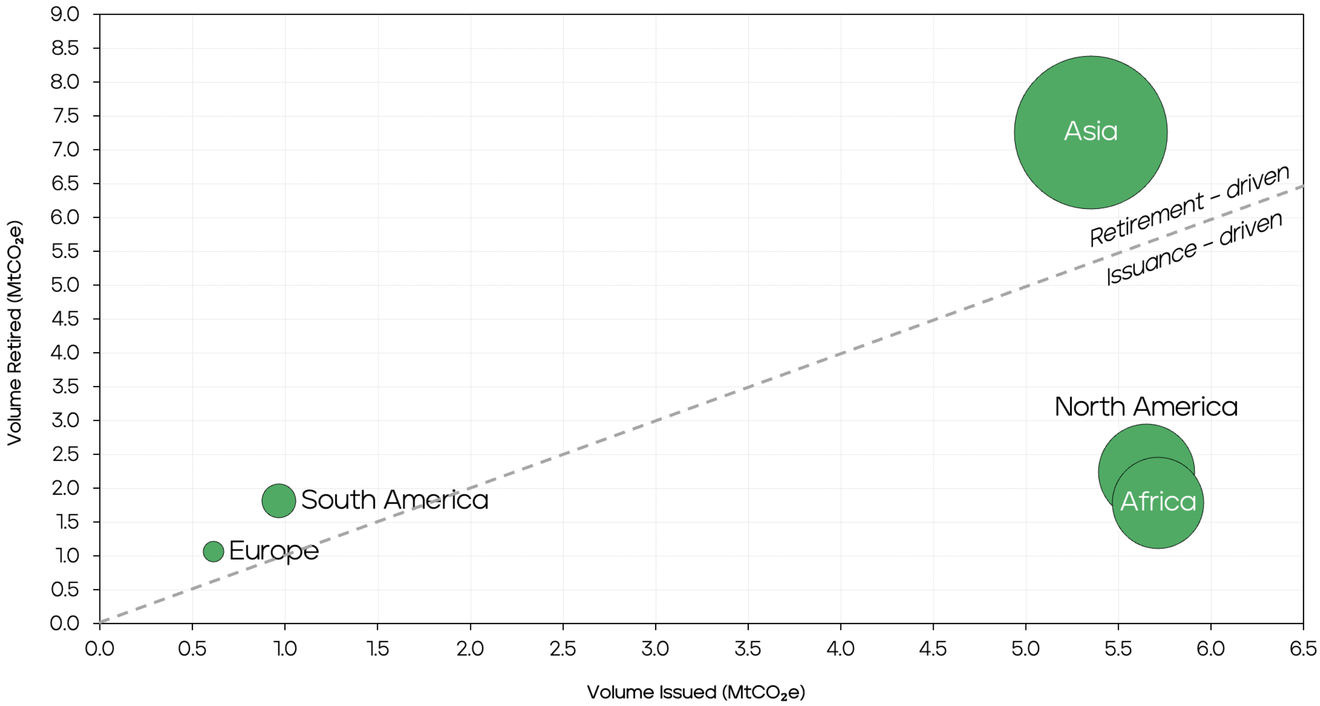
Supply-Demand Dynamics Across Regions

The regional breakdown for March reveals a clear divergence between consumption and supply centres. Asia remains the dominant retirement-driven region, with 7.2M credits retired against 5.3M issued, making it the largest net consumer of carbon credits over the month. This is in part a reflection of the geographic concentration of renewable energy projects in the region, which saw particularly strong retirement activity in March. South America and Europe also posted net retirement positions, albeit at significantly smaller scale.

North America and Africa present the opposite picture, with issuances materially outpacing retirements at 5.6M against 2.2M and 5.7M against 1.8M respectively, confirming both as net supply regions.

REGIONAL ISSUANCE VS. RETIREMENT BALANCE

This bubble chart compares issuance (x-axis) and retirement (y-axis) volumes by region, with bubble size reflecting the scale of overall activity. The dashed diagonal line distinguishes retirement-driven regions, positioned above, from issuance-driven regions, positioned below.



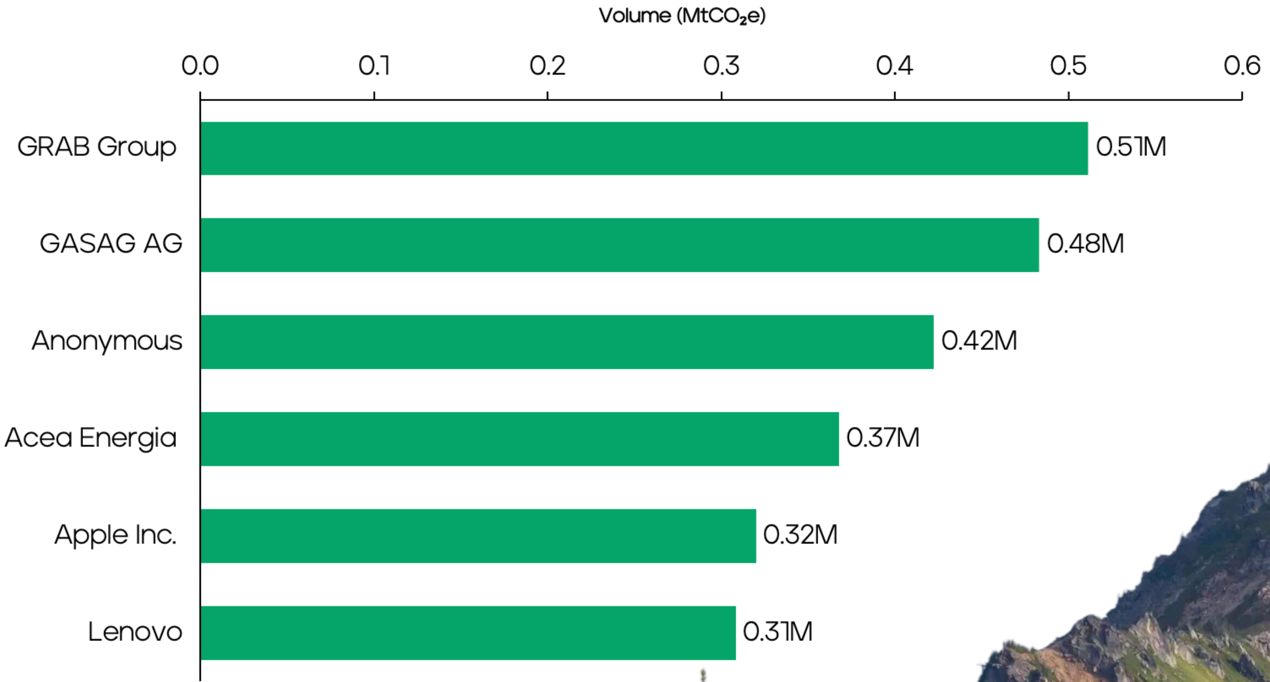
Source: ACR, CAR, Gold Standard (GS), and Verra

Top Issuances & Retirements

Corporate retirements in March were led by GRAB Group, the largest identified buyer with 511,364 credits retired, drawing from a diverse portfolio spanning REDD+, CO_2 mineralization and energy efficiency projects across multiple registries. GASAG AG follows with 483,086 credits, sourced exclusively from renewable energy projects with a strong geographic concentration in India.

The largest single-project retirement of the month came from an unidentified buyer, who retired 422,395 credits through an afforestation and reforestation (ARR) project in Uruguay. Other notable buyers include Acea Energia (367,648 credits), Apple Inc. (319,785 credits) and Lenovo (308,179 credits).

This chart presents the largest carbon credit retirement volumes recorded during the reporting period, ranked by entity on the basis of total retired volumes ($MtCO_2e$).



Source: ACR, CAR, Gold Standard, and Verra

GRAB Group						
PROJECT	VOLUME	ID	TECH	VINTAGE	COUNTRY	REGISTRY
Reduced Emissions from Deforestation and Degradation in Keo Seima Wildlife Sanctuary	511,364	VCS1650	REDD+	2019, 2020, 2021	Cambodia	Verra
Grouped Projects for Improved Cookstove for Climate and Community Action		VCS2548	ICS	2022	Viet Nam	Verra
Kuamut Rainforest Conservation Project		VCS2609	IFM	2017, 2022	Malaysia	Verra
Grouped Projects for Vietnam Energy Efficiency Program		VCS3244	Efficient LED	2022-2023	Vietnam	Verra
CO2 Utilization in Concrete - Removals & Reductions - CarbonCure - Asia #1		VCS4019	CO2 Mineralization in Concrete	2022-2023	Singapore	Verra
Production and Dissemination of Ceramic Water Purifiers by Hydrologic in the Kingdom of Cambodia		GS1020	Water Purifiers	2023-2024	Cambodia	Gold Standard
A-Gas Singapore 1		ACR1150	ODSD	2025	France	ACR

Source: ACR, Gold Standard and Verra

GASAG AG

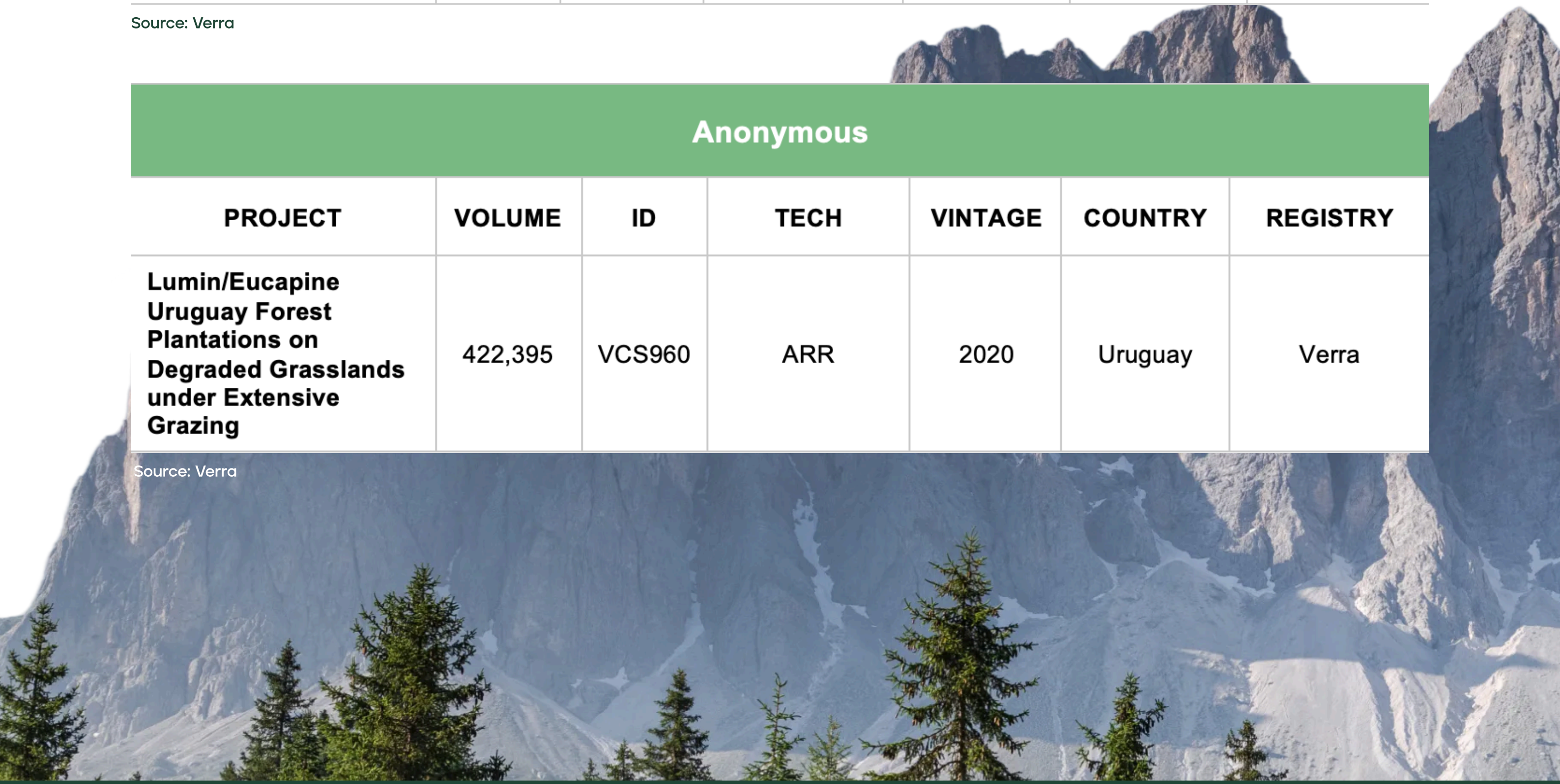
PROJECT	VOLUME	ID	TECH	VINTAGE	COUNTRY	REGISTRY
86 MW Hydro Project in Himachal Pradesh	483,086	VCS93	Hydro	2015	India	Verra
82 MW Lau Renun Hydro Power Plant, North Sumatra		VCS488	Hydro	2018, 2019, 2020	Indonesia	Verra
Solar Power Project by Mytrah Energy India Private Limited		VCS1784	Solar	2019, 2020	India	Verra
Ghani Solar Renewable Power Project by Greenko Group		VCS1792	Solar	2018, 2019, 2020	India	Verra
Bundled Wind Power Project by Sembcorp Green Infra Limited in India		VCS1856	Wind	2023	India	Verra
Thepharak Wind in Thailand		VCS2002	Wind	2019, 2022	Thailand	Verra
250 MW Solar Power Plant in Pavagada Solar Park in Karnataka		GS7534	Solar	2023	India	Gold Standard
Clean Electricity Generation by Solar Power Project in Rajasthan		GS7760	Solar	2024	India	Gold Standard
400 MW Solar Power Project at Bhadla Rajasthan		GS7071	Solar	2020	India	Gold Standard
MRMPL Wind Power Project		GS7615	Wind	2020	India	Gold Standard

Source: Verra

Anonymous

PROJECT	VOLUME	ID	TECH	VINTAGE	COUNTRY	REGISTRY
Lumin/Eucapine Uruguay Forest Plantations on Degraded Grasslands under Extensive Grazing	422,395	VCS960	ARR	2020	Uruguay	Verra

Source: Verra



Acea Energia

PROJECT	VOLUME	ID	TECH	VINTAGE	COUNTRY	REGISTRY
108 MW Fatanpur Wind Power Project in Madhya Pradesh	367,648	VCS1746	Wind	2019, 2020, 2021	India	Verra
Rimba Raya Biodiversity Reserve Project		VCS674	REDD+	2012, 2017, 2018	Indonesia	Verra

Source: Verra

Apple Inc.

PROJECT	VOLUME	ID	TECH	VINTAGE	COUNTRY	REGISTRY
Finite Carbon - Windrock Land Company IFM	319,785	ACR701	IFM	2022	USA	ACR

Source: ACR

Lenovo

PROJECT	VOLUME	ID	TECH	VINTAGE	COUNTRY	REGISTRY
Phlogiston Phase I	308,179	CAR1480	Industrial Gas Abatement	2023, 2024	USA	CAR
300 MW Solar PV Plant at Bhadla Rajasthan		GS7726	Solar	2021, 2023	India	Gold Standard
Saint Nikola Wind Farm		VCS1258	Wind	2021	Bulgaria	Verra

Source: CAR, Gold Standard, and Verra

On the issuance side, the DelAgua Clean Cooking Grouped Project in Rwanda (VCS 4150) recorded the largest single issuance at 1,493,400 credits, followed by Phlogiston Phase I (CAR1480) with 1,160,638 credits under the industrial gas abatement category in the USA.

The Makira Forest Protected Area in Madagascar (VCS 1215) contributed 1,142,060 credits through REDD+, while the Grouped Projects for Cambodia Improved Cookstove (VCS 2925) issued 1,095,438 credits. The top five was rounded out by the DelAgua Clean Cooking Grouped Project in Sierra Leone (VCS 3837) with 959,354 credits.

Improved cookstove (ICS) projects dominated the top five, accounting for three of the five largest issuances across Rwanda, Cambodia and Sierra Leone, reflecting continued strong supply from this project type.

PROJECT	ID	VOLUME	TECH	COUNTRY	REGISTRY
DelAgua Clean Cooking Grouped Project in Rwanda	**VCS4150**	1,493,400	ICS	Rwanda	Verra
Phlogiston Phase I	**CAR1480**	1,160,638	Industrial Gas Abatement	USA	CAR
The Makira Forest Protected Area in Madagascar	**VCS1215**	1,142,060	REDD+	Madagascar	Verra
Grouped Projects for Cambodia Improved Cookstove	**VCS2925**	1,095,438	ICS	Cambodia	Verra
DelAgua Clean Cooking Grouped Project in Sierra Leone	**VCS3837**	959,354	ICS	Sierra Leone	Verra

Source: CAR and Verra

PARTICIPATION FROM ADDITIONAL BUYERS

Thirteen new buyers entered the voluntary carbon market during the month of March. Among them, United Auto Battery Co., Ltd stands out with the largest retirement volume at 119,434 credits, a notable entry from China's fast-growing battery sector, which has until now remained largely absent from the voluntary market. Also worth noting is the simultaneous appearance of both Arm Holdings plc and Japan Advanced Semiconductor Manufacturing, Inc., marking an unusual convergence of two major semiconductor players on the voluntary market, and a development that may signal a broader shift in climate commitment appetite within the sector.

PROJECT ACTIVITY OVER THE PAST MONTH

Ninety new projects were registered across the major registries in March. Among them, the Gewan District Cooling Plant in Qatar (VCS 5903) marks a milestone as the first project ever registered on the Verra registry from Qatar, delivering centralised, energy-efficient cooling to residential and commercial buildings on Gewan Island through a district cooling system, directly displacing conventional air conditioning.

The month also saw the registration of 17 new improved forest management (IFM) projects in Mexico, representing a significant expansion of nature-based supply from the region, alongside three new electric vehicle projects across Mexico, Indonesia and Pakistan.

COMPANY UPDATE

WHO WE ARE

Sentinel Earth guides organisations through carbon markets with deep expertise in emissions accounting, environmental markets, and climate finance. We provide emission calculation and reporting, carbon offsetting through voluntary credits and environmental attribute certificates, and access to a curated portfolio of high-quality environmental assets.

We develop and finance our own climate projects worldwide, deploying capital and expertise where impact is needed most. By combining technical innovation with local partnerships, we deliver measurable climate benefits alongside meaningful social co-benefits.

PROJECT HIGHLIGHTS

SEEDS OF RECOVERY, Ukraine:

A regenerative agriculture project developed under Verra's VM0042 methodology in collaboration with Kernel, Ukraine's largest agricultural company. The project supports farmers in adopting practices like cover cropping, conservation tillage, and optimised nitrogen management to sequester carbon in the country's rich Chernozem soils. The project has been submitted to Verra and is now under validation.

AZURE ROAD, China:

A scope 3 insetting project supporting the electrification of heavy-duty freight logistics across Inner Mongolia, Hebei, Sichuan, and Yunnan, registered with 123Carbon. The intervention supports a fleet of battery-swapping e-trucks and the construction of a new solar-powered charging and swapping station. Most recently, we finalised the first draft LCA calculation, which is now under review by our Validation and Verification Body (VVB), Normec Verifavia.

DARK EARTH, Singapore:

Singapore's first biochar carbon removal project, registered with Puro.earth. The project converts organic waste into stable biochar through controlled pyrolysis, locking carbon away for centuries while improving soil health. Most recently, the project received the National Environment Agency's (NEA) permit to start trial production in January 2026, and we've submitted the first set of documents under Puro Biochar Methodology v2025 for preliminary assessment. We expect approval by Q1 2026, after which we'll be able to share more project details for commercial offtake. CORC issuance is targeted for Q2 2026.

FÖHN, Morocco:

Our FÖHN project, a recovery and destruction activity targeting F-gases in Morocco, is now listed on the KliK Foundation's international project page. FÖHN is the first activity of its kind in Morocco and focuses on end-of-life refrigerant management, a segment with high global warming potential and clear abatement pathways. The project is developed and implemented by Sentinel Earth AG under Article 6.2 cooperation between Morocco and Switzerland.

GLOSSARY

Key terms referenced in this edition

Afforestation, Reforestation and Revegetation (ARR):
A carbon project category covering the establishment of forests on land that was previously unforested or degraded, generating carbon credits through the sequestration of CO_2 as trees grow.

Article 6.2:
The provision of the Paris Agreement that establishes a framework for country-to-country carbon trading through bilateral agreements, enabling one country to transfer emission reductions to another as Internationally Transferred Mitigation Outcomes.

Biodigester:
A sealed system that converts organic waste such as animal manure into biogas for cooking or heating and nutrient-rich biofertiliser through anaerobic digestion, reducing methane emissions from traditional waste treatment.

Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA):
The United Nations' International Civil Aviation Organization scheme requiring airlines to offset growth in CO_2 emissions above 2019 levels through the purchase and retirement of eligible carbon credits known as Eligible Emissions Units.

Corresponding Adjustment (CA):
An accounting mechanism required under the Paris Agreement whereby a host country adjusts its national emissions inventory to reflect ITMOs transferred abroad, preventing the same emission reduction from being counted by two countries simultaneously.

Eligible Emissions Units (EEUs):
Carbon credits that have been approved and tagged by ICAO as meeting the quality and eligibility requirements for use under CORSIA Phase 1 or Phase 2 compliance.

Global Warming Potential (GWP):
A measure of how much heat a greenhouse gas traps in the atmosphere over a given time period relative to carbon dioxide, used to standardise emissions comparisons across different gases.

Hydrofluorocarbons (HFCs):
Synthetic greenhouse gases used primarily as refrigerants in cooling and air conditioning systems, with a global warming potential hundreds to thousands of times greater than CO_2 over a 100-year period.

Improved Cookstoves (ICS):
A carbon project category involving the distribution of fuel-efficient cooking devices that reduce biomass consumption and associated greenhouse gas emissions compared to traditional open-fire cooking methods.

Improved Forest Management (IFM):
A carbon project category that generates credits by changing forest management practices to increase carbon stocks above a baseline, typically on privately or publicly managed forestlands.

Internationally Transferred Mitigation Outcomes (ITMOs):
Emission reductions generated in one country and transferred to another under Article 6.2 of the Paris Agreement, used by the receiving country toward its Nationally Determined Contribution.

Letter of Authorisation (LoA):
A formal document issued by a host country government confirming that a carbon project is authorised to generate ITMOs for transfer under Article 6, representing a key step in the bilateral approval process.

Ozone-Depleting Substances (ODS):
Chemicals that destroy the stratospheric ozone layer, many of which also carry high global warming potential, and which are subject to phase-down under the Montreal Protocol.

Paris Agreement Crediting Mechanism (PACM):
The centralised carbon crediting mechanism established under Article 6.4 of the Paris Agreement, supervised by the Article 6.4 Supervisory Body and designed to replace the Clean Development Mechanism.

REDD+ (Reducing Emissions from Deforestation and Forest Degradation):
A framework under the UNFCCC that provides financial incentives to developing countries for reducing emissions from deforestation and forest degradation, and for conserving and sustainably managing forests.

Retirement-to-Issuance Ratio:
A metric used in voluntary carbon markets to compare the volume of carbon credits permanently retired in a given period against the volume newly issued, used as an indicator of whether demand is absorbing new supply.

REFERENCES - GLOSSARY

Article 6.2 UNFCCC:
https://unfccc.int/process-and-meetings/the-paris-agreement/article-6

UNFCCC Guidance on Corresponding Adjustments UNFCCC:
https://unfccc.int/process-and-meetings/the-paris-agreement/cooperative-implementation

CORSIA Overview ICAO:
https://www.icao.int/environmental-protection/CORSIA/Pages/default.aspx

CORSIA Eligible Emissions Units ICAO:
https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx

Article 6.4 Mechanism (PACM) UNFCCC:
https://unfccc.int/process-and-meetings/the-paris-agreement/the-article-64-mechanism

IPCC Sixth Assessment Report IPCC:
https://www.ipcc.ch/assessment-report/ar6/

VCS Standard Verra:
https://verra.org/programs/verified-carbon-standard/

Improved Forest Management Methodology Verra:
https://verra.org/methodologies/

Gold Standard Methodology for Improved Cookstoves Gold Standard:
https://www.goldstandard.org/our-work/innovations-consultations

REDD+ Framework UNFCCC:
https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd

Montreal Protocol on ODS UNEP:
https://www.unep.org/ozonaction/who-we-are/about-montreal-protocol

Nationally Determined Contributions UNFCCC:
https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs

REFERENCES - NEWS

Article 6.2

- **Ghana Biogas Programme Receives Authorisation to Yield ITMOs Quantum Commodity Intelligence | 12 March 2026.** https://www.qcintel.com/carbon/article/ghana-biogas-programme-receives-authorisation-to-yield-itmos-60561.html

- **Second Swiss-Ghana ITMO Project Gets Authorisation This Week Quantum Commodity Intelligence | 13 March 2026.** https://www.qcintel.com/carbon/article/second-swiss-ghana-itmo-project-gets-authorisation-this-week-60688.html

- **Green Air Conditioners in Ghana to Generate ITMOs for Swiss Quantum Commodity Intelligence | 18 March 2026.** https://www.qcintel.com/carbon/article/green-air-conditioners-in-ghana-to-generate-itmos-for-swiss-61048.html

- **Peru, Switzerland Authorise First Article 6.2 Project Quantum Commodity Intelligence | 20 March 2026.** https://www.qcintel.com/carbon/article/peru-switzerland-authorise-first-article-6-2-project-61154.html

- **Biogas Programme in Malawi to Generate ITMOs for Switzerland Quantum Commodity Intelligence | 23 March 2026.** https://www.qcintel.com/carbon/article/biogas-programme-in-malawi-to-generate-itmos-for-switzerland-61299.html

- **Ghana Authorises 47% of 2030 Art. 6 Credit Pool So Far: EPA Quantum Commodity Intelligence | 23 March 2026.** https://www.qcintel.com/carbon/article/ghana-authorises-47-of-2030-art-6-credit-pool-so-far-epa-61324.html

- **Sustainable Cooling Authorised: Ghana Green Cooling Programme KliK Foundation | March 2026.** https://www.klik.ch/en/news/news-article/sustainable-cooling-ghana-green-cooling-programme-authorised/

- **Tuki Wasi — Microsol ITMO Project Microsol.** https://microsol-int.com/en/itmus/

- **KliK Foundation International Portfolio KliK Foundation.** https://www.klik.ch/en/international/

CORSIA

- **Japan's JAL Retires CORSIA REDD+ Credits in Landmark Move Quantum Commodity Intelligence | 20 March 2026.** https://www.qcintel.com/carbon/article/japan-s-jal-retires-corsia-redd-credits-in-landmark-move-61227.html

- **Verra Tags One More CORSIA Carbon Project, Boosting Supply Quantum Commodity Intelligence | 20 March 2026.** https://www.qcintel.com/carbon/article/verra-tags-one-more-corsia-carbon-project-boosting-supply-61167.html

- **VCM: Rush to Monetise Credits, Iran War Weighs on CORSIA Prices Quantum Commodity Intelligence | 20 March 2026.** https://www.qcintel.com/carbon/article/vcm-rush-to-monetise-credits-iran-war-weighs-on-corsia-prices-61242.html

- **Shell Retires 180,000 t CORSIA Credits on Behalf of Japan's JAL Quantum Commodity Intelligence | 24 March 2026.** https://www.qcintel.com/carbon/article/shell-retires-180-000-t-corsia-credits-on-behalf-of-japan-s-jal-61443.html

- **Exclusive: Zimbabwe Applies to Supply CORSIA Directly Amid Logjam Quantum Commodity Intelligence | 17 March 2026.** https://www.qcintel.com/carbon/article/exclusive-zimbabwe-applies-to-supply-corsia-directly-amid-logjam-60834.html

- **ICAO Confirms 26 Applications to Supply CORSIA Phase 2 Quantum Commodity Intelligence | 30 March 2026.** https://www.qcintel.com/carbon/article/icao-confirms-26-applications-to-supply-corsia-phase-2-61810.html

- **First Large-Scale CORSIA Retirement of Gold Standard Carbon Credits by a Commercial Airline Gold Standard | March 2026.** https://www.goldstandard.org/news/first-large-scale-corsia-retirement-of-gold-standard-carbon-credits-by-a-commercial-airline

- **JAL Becomes the First Commercial Airline to Retire Large-Scale Gold Standard CORSIA Credits GreenAir News | March 2026.** https://www.greenairnews.com/?p=8795

VCM

- **Isometric Lists First Developer Under Super Pollutants Pathway Quantum Commodity Intelligence | 13 March 2026.** https://www.qcintel.com/carbon/article/isometric-lists-first-developer-under-super-pollutants-pathway-60685.html

- **VCM Project: US-Based OCP Approves First HFC Destruction Project Quantum Commodity Intelligence | 17 March 2026.** https://www.qcintel.com/carbon/article/vcm-project-us-based-ocp-approves-first-hfc-destruction-project-60912.html

- **Isometric Consults on HFC, Ozone-Depleting Substances Protocol Quantum Commodity Intelligence | 20 March 2026.** https://www.qcintel.com/carbon/article/isometric-consults-on-hfc-ozone-depleting-substances-protocol-61204.html

- **Microsoft Pauses All Carbon Removal Purchases Carbon Herald | 11 April 2026.** https://carbonherald.com/microsoft-pauses-all-carbon-removal-purchases/

- **Microsoft Pauses Carbon Removal Purchases: Reports ESG Today | 13 April 2026.** https://www.esgtoday.com/microsoft-pauses-carbon-removal-purchases-reports/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