chestnut

The Power of a Pause

What Microsoft's Voluntary Carbon Removal Purchase Pause Means for the Market — and Why It's a Call to Action for Other Buyers

A Chestnut Carbon Whitepaper | April 2026

Executive Summary

The carbon markets have been abuzz recently on speculation regarding a potential pause in Microsoft's carbon removal procurement, Microsoft has since publicly and unequivocally clarified that its carbon removal program remains firmly in place. Microsoft's Chief Sustainability Officer Melanie Nakagawa stated: "Our carbon removal program has not ended; we continue to both build on and support our existing portfolio of both nature based and technology based solutions." Nakagawa further emphasized that "at times we may adjust the pace or volume of our carbon removal procurement as we continue to refine our approach toward sustainability goals. Any adjustments we make are part of our disciplined approach — not a change in ambition."[1]

The impact on the market on the news of a pause and subsequent clarification by Microsoft is noteworthy given the Company's outsized role in the carbon dioxide removal (CDR) market. Microsoft has served as the carbon removal market's anchor buyer, accounting for approximately 80–90% of global CDR offtake in recent periods. According to independent market tracker CDR.fyi, Microsoft represented roughly 90% of global carbon removal purchases in 2025 and has contracted more than 45 million tonnes of CO_2 removal in that year alone — far exceeding any other buyer. By comparison, the Frontier buyer coalition, the next largest purchaser, has contracted approximately 1.8 million tonnes to date[2].

While Microsoft has played an outsized and market defining role -acting as an anchor buyer that accelerated standards, diligence, and long term contracting — it has not been the only source of demand. Over the past several years, the voluntary carbon market has seen meaningful and growing participation from a broadening set of buyers, including financial institutions, global consulting firms, airlines, consumer product companies, other large technology companies, and large industrial emitters navigating their own decarbonization and risk management strategies.

This momentum matters. It reflects a market that is no longer purely experimental, but one that is increasingly being adopted across sectors with diverse balance sheets, risk tolerances, and compliance considerations. Microsoft's leadership catalyzed this shift — but it did not occur in isolation.

This whitepaper argues that while the immediate reaction to a pause by the market's largest buyer is naturally alarming, the pause can ultimately prove to be constructive: it creates space for other buyers to step forward, mature their procurement sophistication, and deepen overall market demand. Objectively, the voluntary carbon market (VCM) — especially the removals segment has been too concentrated. Microsoft's leadership proved what rigorous diligence, transparent criteria, and long-term contracting could look like; it also helped catalyze the surrounding ecosystem of service providers and standards that now benefit all participants.

1. https://www.spglobal.com/energy/en/news-research/latest-news/energy-transition/041426-cdr-buying-not-ended-removals-one-piece-of-decarbonization-microsoft
2. Sources: CDR.fyi; Heatmap News (Apr. 10, 2026); ESG Today (Apr. 13, 2026).

We all knew this day would come — we just didn't know when. A market cannot mature if it relies indefinitely on what has practically been a single demand engine. The next phase requires broader buyer participation, simplified procurement pathways, and quality-aligned regulation and integrity claims.

The pause will likely accelerate consolidation across the developer and intermediary landscape. While consolidation may be painful in the near term, it should ultimately strengthen the market — driving greater consistency, higher quality standards, and improved deliverability. Over time, this shift will favor developers that are sophisticated, well capitalized, and capable of standing behind their products, while giving their customers greater confidence in managing reputational risk and scaling procurement with trusted counterparties.

Perhaps most importantly, this pause creates a defining moment for the broader buyer community. It's fair to say that Microsoft has done more than any organization to blaze the trail for high quality carbon removal — setting standards, underwriting early risk, and demonstrating what disciplined procurement can look like at scale. The question now is not whether the market should continue, but who will step in. Carrying the torch should be shared. This is the opportunity for the next generation of buyers to lead — building on the foundation Microsoft helped establish and carry the market forward into its next phase of maturity.

1. Microsoft's Five-Year Role: How One Buyer Shaped an Entire Category

Over the last five years, the voluntary carbon market has been forced to confront a core truth: quality is hard, and scale is harder. Microsoft became the market's most consequential actor by doing three things exceptionally well:

1.1 Setting clear quality criteria and "procurement infrastructure"

Microsoft published detailed guidance for its carbon removal program[3], including preferences across durability classes (low/medium/high durability), an emphasis on net negativity on a lifecycle basis, verification expectations, and safeguards around social and environmental integrity. This did more than inform Microsoft's procurement — it created a de facto reference point for many developers and buyers trying to interpret what "high quality" should mean in practice.

1.2 Using long-term contracting to unlock project finance

Microsoft's market-making impact was amplified by its willingness to sign long-dated, large-volume agreements — often ten years or more in durable CDR — providing the forward revenue visibility needed for developers to finance project development and fund ongoing operations. As Microsoft leadership has described, forward offtake can allow suppliers to raise financing, hire, and build — and Microsoft explicitly hoped other companies would move faster because of the diligence Microsoft performed.

1.3 Building the service-provider ecosystem

Because Microsoft ran deep diligence processes and invested early across multiple pathways, the broader ecosystem — MRV providers, registries, lifecycle assessment capacity, contract structures, carbon financing, insurance concepts, and buyer advisory — grew up around the needs of a sophisticated buyer.

In short: Microsoft didn't just buy credits. It helped build market intelligence and a practical template for other buyers.

3. https://www.microsoft.com/en-us/corporate-responsibility/sustainability/carbon-removal-program

2. The Market Still Needed Greater Depth - and That's the Point

Even as the removals segment advanced, it remained thin — a market with rapidly growing supply ambition but insufficient breadth of demand to absorb it sustainably. A thin market creates familiar problems: high volatility, inconsistent standards, and an overreliance on bespoke transactions that are difficult for new entrants to understand or replicate.

A complex product needed simplification

Carbon credits are not commodities in the ordinary sense; they embed heterogeneous risks: durability, reversal, additionality, leakage, MRV uncertainty, and integrity claims. Microsoft's detailed procurement rules helped, but broad adoption requires simpler buyer on-ramps — standardized contracting terms, an objective understanding as to what constitutes a voluntary carbon credit (a known and understood set of criteria — a benchmark) and shared diligence standards.

Quality and integrity claims needed improvement

As scrutiny of corporate climate claims has intensified, buyers increasingly demand credits that can withstand reputational and scientific review. Microsoft's approach— high diligence, a bias toward removals, and attention to durability was effectively a "quality forcing function."

Evidence of broadening demand beyond a single dominant buyer

Even as Microsoft emerged as the dominant purchaser by volume, participation across the voluntary carbon market has steadily diversified. Financial institutions have entered the market to support financed emissions strategies and client decarbonization solutions. Consulting firms have acted both as buyers and as intermediaries, building internal expertise while facilitating procurement for clients. Other large technology companies have advanced their own removal programs and coalition based approaches, while industrial, consumer product and energy adjacent companies have increasingly viewed high quality removals as a component of long term transition planning.

While these buyers have not matched Microsoft's scale individually, collectively they represent real and durable momentum and, importantly, a more resilient demand foundation than a dominant buyer-led market alone. Microsoft's current pause should therefore be understood not as a demand vacuum, but as a rebalancing moment in a market that is already diversifying.

3. Behind the Scenes: Buyers Have Been Getting More Vocal and Engaged

Even before this pause, signs of demand broadening were emerging. For example, Symbiosis Coalition—launched by Google, Meta, Microsoft, and Salesforce was designed as an advance market commitment to contract up to 20 million tons of high-quality nature-based removals by 2030 and to set shared quality criteria and processes.

In parallel, Frontier has played a similar role on the durable removal side: pooling buyer demand, running centralized technical diligence, and converting commitments into executed engineered solution offtake agreements. Frontier's activity has helped newer and smaller buyers participate in the market through a shared framework — learning by doing, but with institutional grade rigor rather than each buyer standing up bespoke processes from scratch.

Crucially, these coalitions are not just signaling intent; they are translating coordination into transactions. Both Symbiosis and Frontier have facilitated early deals, expanded their buyer bases, and created repeatable diligence and contracting infrastructure — lowering friction and accelerating market learning on both the buyer and supplier sides.

This matters because the pause is arriving at a moment when (a) more buyers have clarity on what "good" looks like, (b) collective mechanisms exist to help buyers engage without overexposing themselves to execution risk, and (c) the market's institutional plumbing — standards, diligence, offtake structures, and shared learning is materially more mature than it was even a few years ago.

4. The Power of a Pause: Why This Can Strengthen the Market

Changes in buying habits from the market leader is, in the short term, a shock. But it also has productive second-order effects that can advance market maturity.

4.1 Space for other buyers to lead

Microsoft's dominance coexisted with growing participation from other buyer segments but nevertheless created a dynamic in which many companies remained observers rather than scaled participants. A pause changes incentives: it creates room — and frankly, pressure — for other buyers to step forward, set procurement mandates, and build internal capabilities.

Microsoft has already done the hard work of defining quality, proving delivery models, and educating the market. Now is the moment for others to pick up the torch, translate lessons learned into action, and help normalize participation across a broader set of industries and balance sheets.

4.2 A "catch-up" moment for sophistication

Microsoft's diligence has often been described as unusually deep and technically demanding, including early engagement with suppliers before registry issuance. Many buyers have been behind that curve. A pause can function as a forcing mechanism that encourages buyers to invest in their own procurement "muscle" — or to adopt shared diligence via coalitions and well-established intermediaries with transparent methods.

4.3 Consolidation as a Catalyst for Market Maturity

The carbon removals market is inherently capital sensitive and, to-date, has been heavily dependent on a small number of large offtake agreements. In this environment, any pause in incremental buying — particularly by a dominant purchaser — inevitably accelerates consolidation. Developers with weak unit economics, fragile or unproven MRV, uncertain long term rights (including feedstock or land tenure, where relevant), or business models reliant on short duration or opportunistic spot sales will find it increasingly difficult to secure financing.

While consolidation can be disruptive in the near term, it is also necessary for the market to mature. Early stage markets typically accommodate a wide range of participants (it's estimated that at present there are hundreds of carbon developers globally[4]), quality profiles, and operating models. As buyer sophistication increases and scrutiny around claims, delivery, and durability intensifies, that breadth naturally narrows. The result should be a more credible supply base characterized by fewer but stronger platforms.

As the voluntary carbon market consolidates, capital is likely to flow toward projects and platforms that offer the most attractive risk adjusted returns. While there will always be an important role for philanthropic and catalytic capital particularly in early-stage innovation or frontier geographies — scaling the market meaningfully will depend on the participation of institutional investor capital and large scale project financing and the accompanying ecosystem. The participation of development finance institutions, commercial banks, suitable insurance products and appetite, and equity investors is essential to driving the next phase of growth.

Consolidation is critical to this process. A tighter set of well capitalized, operationally capable developers that can consistently meet rigorous quality, durability, and transparency standards will be far more effective in attracting long term capital. The likely result is a healthier, more resilient market characterized by:

- **Higher and more consistent quality,** underpinned by durable project design, robust MRV systems, conservative accounting assumptions, and transparent governance—attributes increasingly required by both buyers and financiers.
- **Greater deliverability,** driven by realistic issuance timelines, disciplined development pipelines, and operational control over the underlying assets, reducing the gap between contracted volumes and actual credit issuance.
- **Scalable supply,** enabling buyers to move beyond one off or pilot purchases toward programmatic, multi year procurement strategies that align with net zero commitments and internal abatement pathways.
- **Lower cost at scale,** as mature developers move toward the front end of the cost curve through repeatability, balance sheet strength, standardized processes, and operational efficiency—benefits that compound as platforms scale.

4. https://www.carboncredits.com

In this environment, capital allocation becomes a signal of market confidence: investor and lender participation both reflect and reinforce quality. As a result, consolidation does not constrain growth — it enables it by aligning high integrity supply with the financial structures necessary to meet demand at scale.

From an investor perspective, consolidation should be viewed constructively. Clearer market leadership supports more efficient capital allocation, reduces underwriting uncertainty, and enables the development of standardized risk frameworks. As weaker or sub scale participants exit, capital can be concentrated in platforms capable of long term performance, governance, and transparency — traits increasingly required for durable returns in climate infrastructure and natural capital.

For buyers, consolidation simplifies procurement. It reduces counterparty risk and enables deeper, longer term partnerships with developers that possess both technical sophistication and financial resilience to stand behind their credits for decades - not merely at issuance. This is increasingly important as carbon procurement intersects with corporate reputation management, balance sheet constraints, regulatory scrutiny, and investor expectations.

In this sense, consolidation should not be interpreted as market fragility, but as market evolution — a transition from experimentation toward institutional grade supply that aligns buyers, developers, and investors around a shared definition of quality, deliverability, and investability.

5. What Buyers Should Lean Into Now: Cost-Competitive, High-Quality Removals with Deliverability

The next phase of voluntary markets should emphasize what procurement teams ultimately need: high probability of real, measurable delivery at cost points that can scale.

5.1 The Case for High Quality Nature Based Removals (Done Right)

Nature based carbon removal solutions — particularly those rooted in forests and soil — have a long and well documented history as one of the planet's most effective mechanisms for removing and storing atmospheric carbon. For hundreds of millions of years, trees, plants, and soil have regulated the global carbon cycle, drawing carbon dioxide out of the atmosphere and locking it away in biomass and organic matter. These systems are biologically proven, energy efficient, and operational at scale today.

As a result, nature based removals offer something the carbon market urgently needs: the ability to deliver meaningful volumes of carbon removal in the near term. Well-designed afforestation, reforestation, and improved forest management projects can be deployed rapidly, expanded incrementally, and replicated across geographies — providing a realistic pathway to scale over the next decade, not just in the distant future.

Importantly, these solutions also sit at the front end of the cost curve. Compared to many engineered carbon removal technologies, which remain capital intensive and constrained by infrastructure, energy requirements, and long development timelines, high quality nature based projects can generate removals at materially lower cost per tonne. This cost advantage is critical for broadening buyer participation and normalizing carbon removal as a standard component of corporate climate strategies.

Biochar sits naturally alongside forest and land based removals as a complementary, nature derived solution. Produced by converting sustainably sourced biomass into a stable, carbon rich material through pyrolysis, biochar effectively accelerates and locks in a natural process that would otherwise occur slowly through decomposition. When properly produced and applied, biochar sequesters carbon for hundreds to thousands of years while delivering tangible co benefits such as improved soil health, increased agricultural productivity, and reduced nutrient runoff.

From a market perspective, biochar uniquely bridges the gap between biological and engineered solutions. It leverages natural inputs and cycles yet offers greater durability and measurability than many traditional land based approaches.

Biochar systems are also inherently modular and scalable — capable of being deployed across agricultural regions, forest product supply chains, and distributed biomass systems — making them well suited to near term growth without the long lead times associated with large scale industrial infrastructure.

That said, as with all nature based pathways, quality varies widely. Poorly designed projects — whether forestry or biochar — have historically undermined confidence in the voluntary market. The lesson from this history is not that these solutions are flawed, but that execution matters. High quality nature based removals require conservative baselines, secure feedstock or land tenure, long term stewardship commitments, rigorous monitoring, reporting, and verification, and the financial capacity to stand behind claims over decades.

When done right, nature based solutions — including forests, soil, and biochar offer a rare combination of attributes the market increasingly demands: biological credibility, scalability, cost competitiveness, and durability, often accompanied by meaningful environmental and social co benefits, which is taking more relevance given the data center boom. As buyer sophistication increases and the market consolidates, demand is shifting decisively toward nature based platforms that pair natural efficacy with institutional grade execution.

In this context, nature based carbon removal should not be viewed as transitional or secondary. Together with high integrity biochar applications and cost-effective engineered solutions, it represents a foundational pillar of a credible and scalable carbon removal market — capable of delivering real climate impact today while creating a bridge to longer dated, more capital intensive technologies over time.

5.2 Portfolio logic: Durability Spectrum + Quality Floor

Microsoft's own carbon removal program describes a portfolio across durability categories, with explicit preferences and requirements that aim to manage reversal risk and ensure monitoring and recourse. That framing is a useful blueprint for other buyers:

- **Set a high-quality floor** — scientific verification, lifecycle net negativity, safeguards.
- **Balance durability and near-term volume,** avoiding overconcentration in any single pathway.
- **Contract for delivery,** not just "good intentions," using milestone-linked structures and long-term purchase commitments where appropriate.

6. A Call to Action for Buyers: “Now Is Your Time”

This moment represents more than a temporary shift in purchasing activity — it is a leadership transition for the voluntary carbon market. Microsoft has demonstrated what conviction, rigor, and long term thinking can accomplish. The path has been cleared; the standards have been set. What remains is for others to decide whether they will follow or whether they will lead.

Microsoft’s pause is not a signal that carbon removal is unnecessary; if anything, it highlights the operational tension large companies face as emissions trajectories shift (including from data center growth and AI energy demand). The solution is not a retreat; it is broader participation, better procurement, and improved integrity.

What “taking the torch” looks like

1. **Commit to multi-year budgets** for removals procurement rather than ad hoc spot buying.

2. **Join or replicate diligence coalitions** (e.g., Symbiosis- or Frontier-like frameworks) to reduce transaction costs, increase buyer confidence, and harmonize quality expectations.

3. **Prioritize deliverability:** credits with realistic pathways to issuance and delivery, backed by robust MRV and conservative accounting.

4. **Support market infrastructure:** MRV, registries, insurance, and project financing - so that quality is verifiable and claims can withstand scrutiny.

7. Designing for the “High-Quality, High-Scrutiny” Market

In a post pause environment, the market is likely to favor fewer speculative plays and place greater value on durable, financeable platforms that are designed for long term integrity rather than short term monetization.

7.1 Built for quality, not quick flips

Microsoft’s market influence elevated the importance of long-term thinking: durability, monitoring, recourse, conservative baselines, and transparent diligence. Emphasis on contract structuring oriented around longevity and duration (rather than spot sales) aligns with that “survive scrutiny” standard that discerning buyers have come to expect.

7.2 Capital intensity can be a feature, not a bug

A pause-induced shakeout is likely to punish thinly capitalized developers reliant on quick spot revenue, especially if buyers pull back to reassess quality and integrity claims risks. By contrast, platforms designed around control (e.g., land ownership or equivalent long-term rights, or well proven technology in the case of engineered solutions), conservative project design, and structured offtake can be better positioned to navigate volatility — particularly if consolidation drives higher market share toward credible, scaled operators.

7.3 Positioned for a Consolidating Market

As the market consolidates, the distinguishing characteristics of long term winners become clearer. Buyers will increasingly prioritize developers that combine asset control, balance sheet strength, technical rigor, and scale — not just compelling narratives or first of kind projects.

In a post pause environment, developers must be able to credibly demonstrate:

- The ability to stand behind their credits over multi decade time horizons
- Operational control sufficient to ensure delivery and permanence
- A pathway to repeatable, scalable deployment
- And a cost structure that supports high quality removals at scale

In the case of Chestnut, our nature-based solutions business model incorporates an afforestation platform that is underpinned by direct land ownership conservative project structuring and a diversified Improved Forest Management (IFM) platform that delivers high quality removal only credits sourced from third party family forests across the United States. Together, these pathways are designed to meet the differing durability, scale, and risk management needs of our customers while maintaining a consistently high integrity bar.

Conclusion: Gratitude, Realism, and Momentum

We should explicitly thank Microsoft. By acting earlier, deeper, and more transparently than its peers, Microsoft helped educate the broader market, built confidence in what "high-quality removals procurement" can look like, and provided the demand signal that allowed many suppliers and service providers to develop. Microsoft's leadership over the past five years fundamentally shaped the voluntary carbon removal market. It set standards, absorbed early risk, and showed what serious, high integrity participation could look like.

But no market reaches maturity on the efforts of a single dominant buyer alone, especially not in a category as complex and capital-intensive as carbon removal. Encouragingly, the market entered this pause with a broader and more sophisticated buyer base than at any point in its history — one that is poised to convert momentum into leadership.

The market's knee-jerk reaction to a pause is negative. Yet the power of this pause is that it has created necessary conditions for the next stage of maturity — broader demand, simplified procurement, stronger integrity, and a healthier supply base. The power of this pause is not a retreat — it is transition. From a single torchbearer to many.

This is a call to action for buyers: now is your time. The market is ready for you to lead.