Responsible AI Infrastructure Should Include Carbon Removal

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4 Key considerations for credible procurement

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Executive summary

The physical infrastructure boom behind the rapid increase in demand for AI deployment is generating environmental liabilities. As data center campuses across the world move from the development stages to generating new capacity, growth in greenhouse gas emissions from these combined activities is unavoidable.

Fortunately, responsible growth frameworks are emerging. Today's responsible AI growth discussions emphasize grid decarbonization, efficiency improvements, water use, and mitigation of hyper-local community impacts. These are absolutely essential priorities and should remain the foundation of any responsible infrastructure strategy. However, even under ambitious decarbonization pathways, total emissions are likely to not only persist, but also increase.

As a result, a broader question emerges: ***how will the AI ecosystem address emissions that cannot be fully avoided?*** Carbon dioxide removal (CDR) is one mechanism for managing these residual emissions, and is increasingly recognized as a complement to reduction-focused climate strategies as well as an essential part of a net zero state. Beyond climate impact, many CDR projects can also generate local economic, environmental, and community benefits.

The collective nature of this buildout – from hyperscalers to data center developers to hardware manufacturers offers unique opportunities for value chain partners to come together.

Through four practical procurement models, this paper outlines how CDR can be integrated into the AI infrastructure development journey, alongside resource efficiency, clean energy, and low-carbon materials to support a more comprehensive and collaborative responsible growth strategy.

Responsible AI Infrastructure development includes *four pillars*:

- Resource efficiency
- Clean energy
- Low-carbon materials
- Carbon-dioxide removal (CDR)

We propose *four models* to integrate CDR:

- Regional Impact Portfolios
- Ecosystem Co-Procurement
- Natural Gas Transition Guardrails
- Build-Stage Neutralization

Overview: four models to integrate CDR into responsible AI infrastructure

Regional Impact Portfolios

Source carbon removal projects located in proximity to a data center campus, prioritizing solutions that also deliver local economic, environmental or community benefits in line with regional priorities and as part of a wider community engagement strategy.

Primary use case: Hyperscalers, data center operators, and developers seeking a strong license to operate and community-positive engagement.

Ecosystem Co-Procurement

Developers, utilities, contractors, tenants, and other value chain partners aggregate demand for carbon removal, reducing procurement complexity while addressing shared emissions through a coordinated procurement mechanism.

Primary use case: Hyperscale or co-located campuses where emissions responsibility is distributed across multiple value chain partners and companies are looking to simplify purchasing and maximize impact.

Natural Gas Transition Guardrails

Where clean energy options have been exhausted and on-site natural gas is required, carbon capture and storage (CCS) and CDR can be deployed together to address both operational and residual emissions during a transitional period.

Primary use case: Data center campuses relying on natural gas as a bridging solution, with a commitment to CCS deployment, durable CDR procurement, and an eventual transition to low-carbon energy sources.

Build-Stage Neutralization

Address embodied emissions from construction, materials, site development and hardware before a campus becomes operational, establishing a lower-carbon baseline from day one.

Primary use case: Greenfield developers, infrastructure investors, and value chain participants looking to integrate carbon management early in the project lifecycle.

The environmental impacts of AI growth

The world's top data center companies are projected to spend $750B on capital expenditure globally in 2026, a nearly 70% increase over the prior year, locking in new generation capacity and financing to design, build, and provision campuses around the world.[1] As investment in AI infrastructure accelerates, so too does its environmental footprint. Three leading hyperscale developers reported combined greenhouse gas emissions growth of roughly 20 million tons of carbon dioxide equivalent (20Mt CO_2e) in their most recent reporting year, representing an increase of approximately 20%.[2]

The record-breaking speed of this buildout is already outpacing the clean energy infrastructure needed to support it, challenging goals set by private sector climate leaders and further distancing the rest from net zero trajectories. Against this backdrop, infrastructure management decisions made in the next 18 to 36 months will determine which companies will be best positioned to scale AI responsibly and strengthen their net-zero credentials.

In response to this urgency, companies in the ecosystem are starting to develop responsible growth frameworks and understandably focus on the most visible and immediate impacts of data center growth: electricity demand, grid constraints, water consumption, and effects on communities. These issues are critical to solve, but they represent only part of the environmental equation, and building the physical infrastructure for AI responsibly requires accounting for its full environmental footprint, beyond the visible impacts.

At Climeworks, we believe this responsible approach should be grounded on four complementary pillars: **resource efficiency, clean energy, low-carbon materials, and carbon dioxide removal (CDR)**. The first three help reduce emissions and resource demands at the source, while CDR addresses the emissions that remain. Together, these pillars provide a more complete set of accountability areas for managing not just the local, but also the global impacts of AI infrastructure growth. Yet, despite residual emissions becoming a larger share of the challenge, carbon removal remains the least mature pillar with only a handful of infrastructure players treating it as a necessary part of a broader environmental strategy, leaving a significant gap.

Through this paper we aim to open the dialogue around how AI infrastructure companies and investors can consider carbon removal as part of a portfolio approach, and one that will be most effective when pursued proactively and in parallel with other sustainability measures. We outline four models for integrating durable CDR procurement into across the digital infrastructure development lifecycle. These models include: the identification of high-impact hyper-local projects to support regional communities, neutralizing embodied emissions at the build-stage, collaborating across the value chain, and embedding guardrails for a natural gas transition when clean energy cannot be implemented. This framework is designed to meet infrastructure developers, hyperscalers, and ecosystem partners throughout the technical stack.

A note on framing: This paper focuses specifically on voluntary carbon removal as a complement to decarbonization for responsible AI growth. We align with Science Based Targets initiative's (SBTi) Corporate Net Zero Standard 2.0 guidance and the Greenhouse Gas (GHG) Procool's treatment of CDR, by focusing on removal with rigorous measurement, reporting and verification (MRV) standards. The primary goal is to ensure that the "net new" emissions that are being produced are addressed with integrity, while building the procurement capabilities and market infrastructure needed to manage them systematically over time.

1. Bloom Lloyd Arnold, "AI Data Center Build Advances at Full Speed: Five Things to Know," BloombergNEF, March 24, 2026, BloombergNEF. 2. Aisha Down and Dan Milmo, "Datacentres Drive Up Big Tech's Carbon Emissions to a Third of Those of France," The Guardian, July 11, 2026, The Guardian.

An invisible layer in AI infrastructure

AI infrastructure development is moving at unprecedented speed, with sites spanning both rural and urban areas around the world. Unlike water and energy, which are local, tangible and subject to community scrutiny, greenhouse gas emissions drive a global and less visible problem.

However, AI-driven emissions growth is increasingly beginning to surface in corporate greenhouse gas inventories, with hyperscalers directly citing AI growth as the driver for the rise in their emissions. Microsoft's 2026 Environmental Sustainability Report notes a 25% year over year increase in total emissions, driven by datacenter infrastructure expansion, as well as an increase in the proportion of Scope 2 emissions from 2% to 13% of the company's overall footprint.[3] The dominant narratives around AI infrastructure emissions growth still focus on electricity consumption (Scope 2), where market-based mechanisms like renewable energy certificates (RECs), power purchase agreements (PPAs) and 24/7 carbon-free energy matching mechanisms have had a tremendous impact in accelerating clean energy development and remain important tools for decarbonization.

On the operational side, the accelerated buildout timelines for data centers have driven a spike in new natural gas capacity often positioned as a bridging solution for developers who are under pressure to build quickly. Natural gas microgrids and on-site generators produce direct Scope 1 emissions that cannot be addressed with market-based products such as RECs. (RECs themselves are also under greater scrutiny as the Greenhouse Gas Protocol considers moving towards 24/7 carbon-free requirements, which reduces the coverage they provided for residual grid emissions).[4]

While the scale of natural gas impacts is material, **a significant proportion of the AI infrastructure carbon footprint also sits in the physical materials required to build at this scale**. A large hyperscale campus requires millions of tons of steel and concrete, which are some of the most carbon-intensive materials in industrial production. Low-carbon alternatives are starting to emerge as tools: Stegra's low-carbon steel and Sublime Systems' low-carbon cement are examples, and sustainable design specifications are starting to be incorporated into development requirements. These solutions will be vital, but don't address the carbon already committed in projects underway today.

Once construction is complete, the embodied emissions associated with hardware add the next layer of embodied emissions. Google's 2026 Environmental Report which covers its 2025 reporting year cites a 25% growth in its total ambition-based Scope 3 emissions from the previous year, "primarily due to technical infrastructure hardware manufacturing and their logistics as well as data center construction".[5]

In summary, the carbon debt from digital infrastructure growth stems from two distinct sources. First, embodied emissions are baked into the physical campus through construction and hardware procurement. Then, over the lifetime of the facility, operational emissions are generated, primarily when fossil fuel-based energy is involved. Carbon removal can serve as a backstop for both of these emissions sources. Beyond sequestering emissions, many CDR projects generate meaningful co-benefits in the form of jobs, agricultural improvement, water quality and biodiversity while helping manage long-term climate risk, and strengthening the credibility of corporate climate commitments.

3. Microsoft, 2026 Environmental Sustainability Report: Responsibly Building the AI Future (reporting on FY2025 performance), Microsoft, 2026, 2026 Environmental Sustainability Report PDF. 4. GHG Protocol, Upcoming Scope 2 Public Consultation: Overview of Revisions (2025); GHG Protocol, Upcoming Scope 2 Public Consultation: Hourly Matching and Deliverability (2025). 5. Google. Google Environmental Report 2026. Google, 2026. Google Environmental Report 2026 PDF.

Integrating CDR into infrastructure development

The current wave of infrastructure planning and development presents a narrow window of opportunity for industry leaders to proactively embed CDR into responsible AI growth. Unlike the three aforementioned pillars, which focus on avoiding or reducing emissions and environmental impact, durable CDR provides a mechanism to credibly address emissions that cannot yet be eliminated.

The following framework proposes four key models for integrating carbon removal procurement into key decision points of the AI development lifecycle:

Regional Impact Portfolios

Source carbon removal projects located in proximity to a data center campus, prioritizing solutions that also deliver local economic, environmental or community benefits in line with regional priorities and as part of a wider community engagement strategy. *Primary use case: Hyperscalers, data center operators, and developers seeking a strong license to operate and community-positive engagement.*

Ecosystem Co-Procurement

Developers, utilities, contractors, tenants, and other value chain partners aggregate demand for carbon removal, reducing procurement complexity while addressing shared emissions through a coordinated procurement mechanism.
Primary use case: Hyperscale or co-located campuses where emissions responsibility is distributed across multiple value chain partners and companies are looking to simplify purchasing and maximize impact.

Natural Gas Transition Guardrails

Where clean energy options have been exhausted and on-site natural gas is required, carbon capture and storage (CCS) and CDR can be deployed together to address both operational and residual emissions during a transitional period.
Primary use case: Data center campuses relying on natural gas as a bridging solution, with a commitment to CCS deployment, durable CDR procurement, and an eventual transition to low-carbon energy sources.

Build-Stage Neutralization

Address embodied emissions from construction, materials, site development and hardware before a campus becomes operational, establishing a lower-carbon baseline from day one. *Primary use case: Greenfield developers, infrastructure investors, and value chain participants looking to integrate carbon management early in the project lifecycle.*

The four models are not mutually exclusive and can be implemented independently or in combination. The most ambitious market players will likely leverage several of these models simultaneously, integrating carbon removal across multiple stages of infrastructure development.

Relative to total infrastructure spend and compute costs, CDR procurement costs are a modest cost premium. In leveraging these models as a starting point, procurement costs can be embedded into service agreements or as a dedicated line-item upfront, creating a pathway for value chain partners to establish a proportionate carbon position alongside infrastructure investments, and the ability to scale emissions management with technology growth.

Model A: Regional impact portfolios

Data center development is primarily a local challenge as much as a technical one, and communities are holding developers accountable for their impacts. Zoning disputes, permitting delays, and community opposition, driven by concerns about water consumption, grid load, noise, and land use, are among the tangible concerns. As local pushback has become one of the biggest drivers of data center delay, Data Center Watch estimated that in the span of two years (2024-2025), $64 billion in U.S. projects had already been blocked or slowed by community opposition.[6]

In this model, we propose carbon removal procurement as a complement to a wider community engagement strategy which can align with certain local priorities or regional needs. Infrastructure developers can engage with one or more projects to support relevant local or regional co-benefits such as:

- **Afforestation, Reforestation and Revegetation (ARR):** enhances biodiversity, improves soil health and strengthens the ecosystem's resilience while supporting local communities.
- **Biochar:** improves soil health, nutrient retention and water retention, reduces reliance on synthetic fertilizers, improves crop yields.
- **Enhanced Rock Weathering:** improves soil pH, increases soil water retention, enhances soil nutrient availability and fertility, improves crop yields.

A practical implementation approach:

1. Identify the primary community concerns associated with a proposed site (e.g. water, land use, agriculture, biodiversity, economic development) or more broadly in the community;
2. Evaluate whether any available CDR pathways address those priorities through measurable local co-benefits;
3. Engage local stakeholders early to determine whether these benefits are relevant and meaningful;
4. Establish transparent metrics and reporting processes for both carbon removal and community outcomes;
5. Ensure projects meet defined quality standards for MRV, additionality, and claims integrity.

Real-world examples of CBAs:

Data center developers are increasingly including environmental commitments in the permitting phase. Community Benefit Agreements (CBAs) are becoming a vehicle to bundle land preservation and water or emissions commitments alongside tax and jobs pledges.

A few recent examples include:

1. In Michigan, where Oracle and Related Digital's $7 billion data center development plan included 700 acres that will be preserved for farmland, wetland, and forest, as well as $14 million in community and fire-service funding.[7]
2. In Lancaster, Pennsylvania, where a 2025 CBA agreement with Charisa Parks Technology included water-use cap and emissions controls along with $10 million of contributions to the Lancaster Sustainable Development and Clean Energy Fund, which supports the city's Climate Action Plan.[8]

6. Data Center Watch, "$64 Billion of Data Center Projects Have Been Blocked or Delayed Amid Local Opposition," Data Center Watch, accessed July 13, 2026, Data Center Watch Report. 7. Office of Governor Gretchen Whitmer, "Gov. Whitmer on Stargate Announcement from OpenAI, Oracle, & Related Digital Creating Thousands of Jobs, Largest Investment in Michigan History," State of Michigan, October 30, 2025, Michigan Governor Press Release. 8. City of Lancaster, Pennsylvania, Community Benefits Agreement (November 2025), Lancaster CBA Draft PDF.

Model A: Regional impact portfolios

When employed in this manner, CDR procurement may help support a more credible and evidence-based community engagement strategy by linking climate commitments to verifiable local outcomes, while also sequestering carbon. The effectiveness of this model will depend on local context, stakeholder priorities, as well as project outcomes, and shouldn't be viewed as a guarantee of permitting success or community support. This model has not yet been widely tested in the market, and first movers will have the opportunity to establish this as best practice.

Implementation considerations:

- In some regions, data center campuses and durable carbon removal projects may benefit from geographic proximity. Opportunities could exist to share enabling infrastructure, collaborate around clean energy procurement, leverage emerging carbon transport and storage networks or support broader regional economic development goals. Opportunities to integrate and partner on these use-cases will depend on the location and should be assessed on a case-by-case basis.
- CDR projects may require their own community engagement and are not universally available at a hyper-local level.

Model B: Ecosystem co-procurement

Ecosystem co-procurement represents one of the most scalable pathways for embedding CDR into responsible AI infrastructure. By aggregating demand across the data center value chain, this model can accelerate CDR deployment while reducing procurement challenges and establishing a shared accountability framework for emissions that are inherently linked within the underlying physical infrastructure and operations.

Under this model, hyperscalers, chip manufacturers, data center developers, enterprise tenants and infrastructure partners across a particular data center campus participate in a shared procurement portfolio, creating both economies of scale and an industry-wide signal for high quality CDR. Carbon removal procurement costs can also be integrated into contract structures or service agreements between enterprise customers and hyperscale data center developers, layering on top of existing, commonly known PPA structures.

Key benefits of demand aggregation:

- **Lowers procurement costs** through aggregated purchasing power
- **Provides long-term offtake security** that helps CDR project developers finance and build new capacity
- **Establishes a shared accountability framework** for joint emissions across different value chain layers
- **Simplifies buying and procurement complexity** for the ecosystem participants

Recent developments in the SBTi's Corporate Net Zero Standard 2.0 and other frameworks such as the Center for Green Market Activation's AIM Platform Standard endorse the concept of co-procurement and co-claiming across value chains. While these standards continue to evolve, they provide an early foundation for collaborative carbon removal purchasing models.

Beyond carbon removal, precedent for this type of construct also exists in other markets. Sustainable Aviation Fuel (SAF) certificates allow value chain partners to co-procure SAF, resulting in neutralizations across both Scope 1 and Scope 3 inventories.

Implementation considerations:

- **Develop a transparent allocation framework** to define how credits are allocated across participants in the value chain and how retired credits are tracked.
- **Anchor buyers can play an outsized role** by establishing quality criteria and project-level standards, shaping a market signal that benefits the broader ecosystem.
- **Regional or local CDR portfolios can also be integrated into co-procurement structures**, layering community co-benefits onto the shared accountability framework.
- **Prioritize high-durability carbon removal projects** with verified, registry-tracked MRV. See Section 4 for more details.

Model C: Natural Gas Transition Guardrails

While industry standards for responsible AI infrastructure are being discussed, **the unconstrained growth of data center investment has centered on speed to firm power access**, resulting in a 30% increase in investment in global fossil fuel generation assets.[9] Furthermore, as grid interconnection queues in the US extend beyond five years in key markets[10], developers are turning to behind-the-meter natural gas microgrids to maintain construction timelines. These short-term time-to-market-based decisions have long-term emissions consequences that require clear accountability measures from the start.

BloombergNEF currently tracks 99 proposed natural gas-fired power plants planned across the U.S. to directly serve data centers, which together could emit as much as 318 million tons of greenhouse gases annually.[11] Even under a generous assumption that all of these facilities are deployed and are eventually paired with CCS operating at the upper end of its typical 85%-95% capture range,[12] the residual emissions requiring CDR would still be in the range of 16 to 47 million tons per year. Durable CDR provides a mechanism to address those residual emissions and close the gap toward full emissions neutralization.

As mentioned in the introduction, Climeworks strongly supports the prioritization of low carbon energy generation (such as renewables plus storage, and geothermal) in responsible AI infrastructure design. Not only is speed-to-market for some of these pathways faster than traditional natural gas combined-cycle gas turbine (CCGT) build-out, in certain jurisdictions they are also more economical.[13] In this case, the role of CDR is that which is discussed in models A, B, and D.

Implementation considerations:

Model C should be considered only where low carbon energy cannot be implemented.

New fossil fuel projects are increasingly being proposed and implemented every quarter as a bridging solution for data centers, ranging from traditional CCGT plants to jet-engine turbines and gas engines.[14] While not recommended, as these projects are actively being pursued, we propose the following guardrails to minimize the climate impact of this methodology:

- On-site gas generation through permitted facilities
- CCS infrastructure installed and operational prior to the commencement of the facility's commercial operations
- Durable CDR procurement to neutralize residual emissions and close the gap on CCS capture rates
- Clearly defined timeline for phase-out of fossil generation within (for example, 10 years), incl. a project design document for on-site low-carbon energy generation (or alternative acceptable pathway) and subsequent decline in durable CDR procurement
- Project selection criteria should focus on high-durability CDR with verified, registry-tracked MRV. See Section 4 for more details.

Although flexibility in electricity consumption is a critical component of responsible AI infrastructure planning, this framework establishes clear parameters and accountability for developers who select a temporary reliance on natural gas, further ensuring the transition to clean energy and complete neutralization of gas-related emissions through the stacking of CCS and CDR.

9. Naveena Sadasivam and Jake Bittle, "Data Centers Are Scrambling to Power the AI Boom With Natural Gas," Grist, February 10, 2026, Article. 10. Lawrence Berkeley National Laboratory, Electricity Markets & Policy Group, Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection (2026 Edition), accessed July 13, 2026. Available at: https://emp.lbl.gov/queues. 11. Day, Matt, and Mark Chediak. "Data Center Gas Plants to Boost U.S. Power Emissions by 20%." Bloomberg News, August 18, 2026. Article. 12. IEAGHG, Towards Zero Emissions CCS from Power Stations Using Higher Capture Rates or Biomass, Technical Report 2019-02 (March 2019). Report. 13. International Energy Agency (IEA), Energy and AI (Paris: International Energy Agency, April 2025), PDF report. 14. Sadasivam and Bittle, "Data Centers Are Scrambling to Power the AI Boom with Natural Gas."

Model D: Build-Stage Neutralization

A considerable share of the climate impact associated with physical AI infrastructure can be determined before a facility becomes operational. Embodied emissions from construction, electrical equipment, HVAC systems and AI hardware are established during the design and construction phase, as key investment decisions are made.

In this model, developers commit to addressing those embodied emissions through durable CDR procurement. CDR can be factored in during the development process as a planned project cost alongside construction and other capital expenditure line-items, allowing emissions management to be integrated from the start.

Embodied carbon in AI infrastructure is driven not only by concrete and steel use, but also by the deployment of carbon-intensive computing hardware. Since hardware-related embodied emissions can be determined upfront, they can be quantified and addressed during the build-stage rather than after a site goes live.

Key benefits for data center developers

- Enables developers to bundle this into their campus products and offer neutralized sites or compute tiers.
- Supports growing investor, lender and customer ESG requirements around emissions transparency.
- Strengthens engagement with municipalities seeking environmental accountability as part of the permitting process.
- Establishes a clear carbon baseline for operational emissions tracking going forward.

Implementation considerations

- Lifecycle assessment data such as whole building lifecycle assessment for embodied carbon should be available to estimate embodied carbon impacts.
- Carbon assessment tools that can be used to generate project-specific CDR budgets before ground is broken (e.g. Autodesk Forma Carbon Insights), enabling procurement to run in parallel with construction planning without impacting build timelines
- Organizations can also establish an initial embodied carbon baseline using a combination of project-specific data, supplier information, industry benchmarks, and engineering estimates, refining assumptions as better data becomes available throughout the development process.
- Claims should be supported by transparent disclosure of assumptions, methodologies, data sources, and assessment boundaries.

By incorporating carbon removal into the development process, developers can address embodied emissions closer to when they are created, establish a stronger foundation for long-term carbon management, and bring new infrastructure online with a more comprehensive approach to managing the associated environmental footprint.

To quantify:

A single NVIDIA HGX B200 GPU baseboard accounts for 2,274 kg CO2e not including its operational use and end-of-life treatment.[15] When multiplied across the thousands or tens of thousands integrated into a campus at a hyperscale level, these emissions quickly become material.

15. NVIDIA Corporation. *HGX B200 Product Carbon Footprint (PCF) Summary*. July 2025. Available at: https://images.nvidia.com/aem-dam/Solutions/documents/HGX-B200-PCF-Summary.pdf

Comparing the four models

	A. Regional impact portfolios	B. Ecosystem co-procurement	C. Natural gas transition guardrails	D. Build-stage neutralization
Primary drivers	Community trust and local reinvestment	Market leadership & cost efficiency	Operational resilience & accountability	Risk mitigation and baseline integrity
When to engage	Site selection through operations	Ongoing / multi-year	When carbon-free energy sources have been exhausted	During pre-construction or design phases
Suggested anchor party	Data center developer	Hyperscaler	Energy developer	Developer or CapEx owner
Suggested CDR pathway	Nature-based & durable with co-benefits	High-durability portfolio	High-durability portfolio or co-located	High-durability portfolio or co-located
Emissions in focus	Scope 1, 3 (operational & embodied)	Scope 3 (shared emissions)	Scope 1 (operational)	Scope 3 (embodied)
Execution complexity[16]	Medium	High	Low	Medium
Greenwashing risk if poorly implemented[17]	High	Medium	High	Low

16. **Low**: CDR procurement or integration depends on one or few parties; **Medium**: CDR procurement or integration depends on collaboration across multiple parties; project availability may be limited; **High**: CDR procurement or integration depends on collaboration across numerous parties; project availability may be limited

17. **Low**: Directly addresses a measurable emissions source and claims are relatively straightforward to substantiate; **Medium**: Climate impact can be highly credible, but risk arises from double counting, co-claiming confusion, and unclear allocation of shared emissions; **High**: Model A - potential to overstate local benefits. Model C - Most exposed to risk of enabling continued fossil use where a defined transition pathway to clean energy must be included.

Considerations for quality, policy & accounting

Not all carbon removal projects are created equal. The quality behind a carbon removal purchase determines both its climate impact and the credibility of any claim associated with it.

At a minimum, projects selected should meet recognized quality thresholds. The Integrity Council for the Voluntary Carbon Market's (ICVCM) Core Carbon Principles (CCP) has clear guidelines available to help ensure that credits are backed by robust accounting, monitoring, and verification. For companies buying CDR, this means sourcing only CCP-approved credits. These approved credits also align well with SBTi and ISO expectations, so meeting the CCP bar keeps a company in line with the broader standards landscape.

For companies developing projects directly, it means adhering to a CCP-approved methodology from the start, including options such as Isometric's Biogenic Carbon Capture and Storage 1.1, CAR's US and Canada Biochar 1.0 or Isometric's Direct Air Capture 1.1.

Additional considerations for a high-integrity approach:

- **Accounting should stay clean and separate:** CDR credits should always be reported separately from the physical emissions inventory, and consistent with standards such as GHG Protocol's Land Sector and Removals Guidance, IFRS, and the EU's CSRD. Disclosures should note the credit type, methodology and standard in order for any claim to be traced back to its source.
- **Co-procurement should have formal governance:** Model B introduces questions around what happens when several companies claim credit against the same shared emissions. SBTi's Shared Responsibility guidance addresses this directly, and participants need a contract that defines how responsibility is allocated across the group and confirms that no ton is over-claimed.
- **Reduce and remove emissions in parallel, but for different purposes:** Reduction and decarbonization should take place before removing. This is especially relevant for Model C, the gas transition model, which carries the highest risk of CDR becoming a way to delay real action rather than support it. When CDR is used to compensate for natural gas emissions, it should be high-durability, including biochar, BECCS, DACS, and enhanced rock weathering, and should also cover the upstream footprint, not just combustion.
- **Companies should not wait until residual emissions have been fully quantified before engaging:** Early investment and procurement help scale the CDR industry, support project development, and build the market capacity needed to meet future net-zero commitments.

Regulatory guidance is consistent across all of these factors. Government policy and updated voluntary standards are also raising the bar on what counts as a credible claim. Companies that embed the right quality and accounting practices proactively will be ahead of these requirements and have an opportunity to inform best practices.

Conclusion: A blueprint for responsible AI scale

Today's AI infrastructure decisions are cementing a future emissions trajectory for the sector. Regardless of how quickly and aggressively grid decarbonization and reduction targets scale, new data center builds, particularly those focused on speed to power, come with unavoidable embodied and operational emissions. CDR procurement is one of the few credible mechanisms to address committed emissions and sourcing a diverse range of carbon removal pathways through a portfolio approach can go far beyond neutralization on paper.

Complete emissions data and a global industry standard do not need to be a prerequisite in order for companies to get started. In June 2026, SBTi published its Corporate Net Zero Standard V2.0 and introduced the Ongoing Emissions Responsibility framework. The Engaged tier, the first level of recognition, requires companies to address a minimum of 1% of ongoing Scope 1-3 emissions through verified removals. Though currently a voluntary benchmark, this will become mandatory for SBTi-aligned companies, which includes many of the world's largest companies, by 2035. SBTi's own calculations put the cost of meeting this threshold at a fraction of a percent of annual profit for even emissions-intensive sectors, which is a meaningful data point for any developer or investor assessing how to integrate carbon removal into broader capital planning.

While future shared industry standards may go far beyond this threshold, the Ongoing Emissions Responsibility guideline offers a credible starting point. Applied to a data center campus, a minimum 1% floor based on the expected emissions footprint at a campus level gives developers and value chain partners a concrete way to integrate removals.

Companies taking a comprehensive approach in addressing the full environmental impact will be better positioned to manage regulatory risk and maintain credibility over time. Across the infrastructure value chain, responsible AI growth will need a patchwork of durable, long-term solutions. The broader industry has an opportunity to proactively embed and signal demand for these solutions now, before the infrastructure is financed and built, and the scrutiny intensifies.

For any questions, contact us:

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