



COLUMBIA GLOBAL ENERGY DIALOGUE

Boosting Carbon Credit Demand by Advancing Regulation and Market Infrastructure: New York Climate Week Roundtable Summary

By Preetha Jenarthan, Dr. Gautam Jain, Dr. Luisa Palacios, and Josh Zoffer

Top discussion points

- There was broad agreement at a Climate Week roundtable of project-based carbon credit market (PCCM) experts that reducing barriers to scaling PCCMs will require further progress on the regulatory front to improve buyer confidence and increase demand.
- But more durable demand will ultimately depend on clear incentives to purchase carbon credits, more compliance schemes that allow for them, and a broader range of corporate uses beyond offsetting, including helping to finance climate technology deployment.
- Stronger market infrastructure that allows for oversight, transparency, and ease of transactions, including cross-border trading, could improve liquidity and attract investors, with the roundtable discussion focusing on how carbon credits could function as regulated financial instruments.
- For the market to scale up, progress in supply-side credit integrity standards needs to be matched by demand-side regulation, including rules on credit use, claims, and disclosure, and a clear legal classification of credits to give buyers greater certainty.

This event summary reflects the authors' understanding of key points made in the course of the roundtable. It does not necessarily represent the views of the Center on Global Energy Policy. The piece may be subject to further revision.

Contributions to SIPA for the benefit of CGEP are general use gifts, which gives the Center discretion in how it allocates these funds. More information is available at <https://energypolicy.columbia.edu/about/partners>. Rare cases of sponsored projects are clearly indicated in published pieces.



Introduction

Project-based carbon credit markets (PCCMs) enable the issuance, trading, and retirement of credits generated from projects that remove, reduce, or avoid greenhouse gas emissions. PCCMs can mobilize finance for decarbonization activities that might otherwise struggle to attract investment, while also in some cases delivering co-benefits such as protecting water, land, forests, and biodiversity. Historically, demand for these credits has come primarily from voluntary carbon markets, driven by corporate climate commitments, disclosure requirements, and investor expectations. More recently, compliance carbon markets and international mechanisms such as Article 6 of the Paris Agreement have emerged as additional sources of demand.

However, PCCM growth has slowed in recent years. Annual credit issuance in 2025 was about 40 percent below its 2021 peak, even as retirements of credits have remained steady, as demand is concentrating in high-integrity credits.¹ In addition to compliance schemes for carbon emissions reductions increasingly allowing the use of carbon credits, new approaches have emerged such as long-term offtake agreements and buyers' clubs aggregating demand for high-quality credits. Concerns around credit integrity remain, but buyers also face uncertainty about how credits may be used, what claims can be made, what disclosure and assurance expectations are, and whether market infrastructure is available to support transparent and efficient transactions.²

On September 24, 2026, during New York Climate Week, the Center on Global Energy Policy (CGEP) at Columbia University SIPA convened a private roundtable to focus on ways to address persistent demand- and market-side regulatory gaps. The discussion, held under the Chatham House Rule, brought together representatives from the public and private sectors, including government officials, multilateral development banks' executives, carbon credit buyers, project developers, standard setters, registry operators, financial market participants, and other experts across the PCCM value chain.

The roundtable built on CGEP's recent white paper examining PCCM regulations across G20 countries and Singapore.³ Among other insights, the white paper found that supply-side frameworks governing credit generation have generally advanced further than demand-side rules overseeing credit use and market-side rules covering trading infrastructure. Requirements for credit buyers remain inconsistent across jurisdictions, and formal market infrastructure and investor protections are unevenly developed. Against this backdrop, the discussion focused on the following questions:

- What are the major challenges that credit buyers are facing that are leading to demand stagnation? Can some of these barriers be addressed through regulations?
- Which regulatory uncertainties—such as lack of clarity on permissible uses and claims,

ownership, liability, and recourse—most discourage buyers from participating?

- What demand-side regulations could give buyers greater confidence without creating excessive compliance burdens or discouraging participation? Have any jurisdictions developed such regulations?
- Which elements of market infrastructure—such as registries, standardized data, and regulated exchanges—are most important for improving transparency, price discovery, and liquidity that can help attract buyers?
- What market infrastructure is necessary to integrate carbon credits with compliance markets and Article 6 mechanisms to create more reliable demand? Are there elements of market infrastructure that need greater alignment across jurisdictions?

The following is a summary of key insights that emerged from the roundtable discussion.

Clearer Demand-Side Rules Are Necessary to Increase Buyer Participation

Participants first broadly recognized the progress made on supply-side regulations, particularly in strengthening carbon credit integrity. Several experts pointed to growing convergence around common quality thresholds, including the Integrity Council for the Voluntary Carbon Market's Core Carbon Principles (CCPs). They noted that greater alignment around credible integrity standards could provide clearer signals to buyers, project developers, and investors while improving market liquidity and lowering transaction costs. One contributor highlighted how CCP-labeled projects have been successful in channeling capital into various nature-based projects while delivering co-benefits, such as biodiversity restoration, improving local livelihoods, watershed and soil protection, and sustainable management of forests. They also said governments could potentially reinforce these integrity signals, including by prioritizing CCP-labeled credits when purchasing or approving carbon credits under the Paris Agreement's Article 6.2, which establishes a decentralized framework for bilateral trading of carbon units between countries.

Other participants cautioned against setting universal integrity thresholds at levels that may be viable only in jurisdictions with high carbon prices, as this could exclude projects and countries where such prices cannot be sustained, underscoring the need to retain flexibility for different crediting programs and national circumstances. One participant suggested that since the environmental impact of carbon credits can be quantified, it should be possible to create minimum thresholds for integrity that policymakers can require via regulations.

A recurring theme at the roundtable was that stronger supply-side integrity, while necessary for a well-functioning market, is not sufficient to generate demand. This shifted the discussion toward the demand-side uncertainties that continue to discourage buyer participation, such as how credits can be used, what claims can be made, how purchases fit within broader corporate decarbonization strategies, and what disclosure, accounting, and assurance requirements apply. Participants therefore emphasized the value of clearer guidance, regulation, and “safe harbor” approaches that have been proposed to reduce legal, reputational, and greenwashing risks for companies, giving them greater confidence to participate in the market.⁴ Regarding claims from the use of credits, one participant said it is difficult for policymakers to ascertain their validity, which complicates the task of drafting appropriate regulations.

But participants emphasized that greater clarity should not come at the expense of simplicity. One expert suggested that, rather than developing numerous competing national approaches, governments and standard setters could converge around a limited number of workable pathways for corporate credit use that provide greater certainty without imposing overly restrictive requirements.

Similar to progress on supply-side regulation, however, participants stressed that clearer demand-side rules would primarily help reduce barriers to participation rather than generate demand on their own. Stronger underlying demand drivers would still be needed to expand buyer participation and for the market to scale up.

Compliance Schemes and International Mechanisms Could Provide More Durable Sources of Demand

Several experts emphasized that voluntary corporate purchasing alone is unlikely to sustain demand at the scale needed for PCCMs to grow. As an argument for diversifying demand drivers, one participant pointed to Microsoft’s outsized role in the carbon dioxide removal (CDR) market, noting that it accounted for roughly 80 percent of the durable CDR credit purchases to date.

Domestic compliance carbon market schemes that permit carbon credits, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), and international mechanisms under Article 6 of the Paris Agreement—which introduced a framework to facilitate voluntary cooperation between countries using carbon markets to help achieve their nationally determined contributions—were identified as more predictable sources of demand. A contributor highlighted the potential for greater convergence between voluntary and compliance schemes in the future, suggesting that it may be time to drop the term “voluntary” and refer to the market as an all-encompassing “project-based carbon credit market.”

The discussion also focused on how existing regulatory systems could create additional demand. One expert pointed to the potential for countries to link domestic carbon credit purchases to obligations associated with the European Union's Carbon Border Adjustment Mechanism, while noting that this approach would require further analysis. They also added that Article 6 transactions could benefit from greater private-sector participation by permitting companies to buy and sell credits directly rather than relying primarily on government-to-government deals. As an example, they cited Singapore's implementation agreements with host countries that allow for companies to transact commercially with each other, while the government handles authorization and corresponding adjustments.

Participants also stressed that demand from these sources depends on policy consistency and enforcement. One expert said that policy and methodology changes cause buyers and investors to hesitate because such changes limit their ability to make decisions based on expected future demand. Another cited CORSIA as an example of a scheme that has set clear rules but for which potentially uneven enforcement across jurisdictions could reduce demand if airlines do not comply.

Governments Need to Define Clear Use Cases for Carbon Credits

Several participants emphasized the need to clearly articulate the use case for credits. Beyond purchasing requirements of compliance schemes and international mechanisms, several contributors thought that the rationale for buying credits could be broadened. One participant said governments can harness innovations via carbon credits, and some corporate buyers are already using credits to support technology deployment, climate adaptation, and resilience. Another pointed to sectoral decarbonization, in which credits are issued for reductions across a whole sector against a sector-wide baseline rather than for individual projects, as a more robust approach beyond traditional project-based offsetting.

One expert thought that focusing primarily on lower-cost mitigation and providing climate finance for developing countries may not provide a sufficiently compelling basis for greater demand. Instead, they pointed to tying credits more closely to opportunities associated with international partnerships, trade agreements, and technology exports, which can provide political and corporate support for purchasing credits.

Participants also questioned whether demand-side rules should apply equally to all companies. One contributor suggested they should apply only to large corporate emitters that have the financial and administrative resources to meet additional requirements, rather than imposing the same burden across a much broader group of companies. However, another pointed to the risk of

creating loopholes while acknowledging that starting with larger companies before spreading the net wider is likely the right approach.

Developing Market Infrastructure and Legal Clarity Can Expand Liquidity

Roundtable participants also largely agreed that market infrastructure needs to develop further to support PCCM transactions. While regulated exchanges and registry-linked settlement are developing in some jurisdictions, for the vast majority, transactions are bilateral, which limits formal oversight, data transparency, and price discovery. Several experts also pointed to functions that are standard in more mature financial markets but remain less developed in PCCMs, including authoritative records of title, unique identifiers, settlement finality, custody arrangements, and standardized contracts.

Legal title emerged as a key area requiring greater clarity. One expert emphasized the importance of having authoritative records of ownership and clear rules governing the transfer of carbon credits, particularly to provide certainty over who holds legal title at each stage of a transaction. They added that without this clarity, building additional layers of market infrastructure could leave transactions resting on an uncertain legal foundation.

These legal foundations are already the focus of several ongoing initiatives. One participant highlighted the United Nations International Institute for the Unification of Private Law's (UNIDROIT's) work to develop private law principles for carbon credits, covering their legal nature and transfer, custody, insolvency, and registry records of legal title.⁵ The participant also noted that classifying credits as commodities may not translate across varying legal systems of different jurisdictions and thought UNIDROIT's approach of treating carbon credits as objects of property rights, allowing jurisdictions to determine their specific treatment under domestic law, was better.

Another participant suggested that treating carbon credits as assets can allow them to be held on a balance sheet and subject to traditional accounting rules. Others, however, raised questions about how to accomplish that, given credits are not backed by either cash flows or "consumption," unlike wheat or oil futures.

In the context of this discussion, one participant highlighted the World Bank's Legal and Regulatory Reform Toolkit for High-Integrity Carbon Markets,⁶ which provides countries with several options for developing national legal frameworks for carbon credits, including the implications of treating them as property or financial securities.

The discussion also focused on how greater legal clarity could support the development of more

sophisticated financial infrastructure around carbon credits. One contributor explained that treating credits as regulated financial instruments could enable banks to provide custody, use them as collateral, and offer lending services and allow asset managers to hold them in investment funds and support the development of structured products. These functions provide certainty to investors and intermediaries, which in turn could deepen financial intermediation and increase market liquidity.

One participant asked whether carbon markets need a shared infrastructure layer, comparable to the systems that underpin other financial markets, such as registries, data standards, and settlement systems. The participant stressed that this layer would not necessarily be government-owned but could instead be industry-owned and -operated on a cost-recovery basis, providing common infrastructure on which private market participants could build. Others argued that regulatory oversight is also necessary, noting that financial markets have expanded successfully over the past century under government supervision. The appropriate governance structure, including who should own the infrastructure and who should oversee it, remains open to future analysis.

Participants differed, however, on how quickly these different elements need to develop. Some emphasized that functions such as authoritative title records and settlement certainty are foundational and should be established before more complex layers of infrastructure are built. Others cautioned against treating sophisticated exchanges or standardized contracts as prerequisites for market activity, arguing that transaction volumes may need to grow first and that additional infrastructure can develop alongside expanding demand.

Greater Cross-Border Alignment Can Support Transactions without Requiring Identical Rules

Participants emphasized the value of greater alignment across jurisdictions as carbon credit markets become increasingly interconnected. This was not framed as a need for identical regulatory frameworks across jurisdictions. One expert noted that countries will continue to have different priorities but argued that rules should be sufficiently compatible for credits to be transacted across jurisdictions with confidence in their underlying characteristics.

One participant highlighted work by the Coalition to Grow Carbon Markets,⁷ co-chaired by the United Kingdom, Singapore, and Kenya, which is developing a policy playbook to grow demand for high-integrity credits, due to be launched at the UN Conference of the Parties (COP31) in Türkiye in November. The playbook is intended to set out policy steps that governments can adapt to national circumstances while supporting greater consistency across jurisdictions. The participant also noted the difficulty of developing jurisdiction-specific rules for areas such as corporate claims when many buyers operate across multiple markets and must navigate differing standards.

Implementation capacity was also raised as an important consideration, particularly for developing countries. One expert noted that countries are at varying stages of regulatory and market development and may need support not only to draft legislation but also to determine which regulatory elements should be prioritized. Capacity building and technical assistance were therefore identified as important for moving from regulatory design to implementation.

Supply-side integrity standards, clearer demand-side rules, and a proper regulated market infrastructure were viewed as distinct but complementary components of a functioning cross-border market. One expert stressed that all three need to work together, even if the specific regulatory approach differs across countries. Greater alignment can reduce fragmentation and make cross-border transactions easier, while preserving flexibility for jurisdictions to develop frameworks suited to their own legal and market circumstances can ensure that each country's PCCM is viable.

Notes

1. Authors' calculations based on data from the "State and Trends of Carbon Pricing Dashboard," World Bank, accessed September 29, 2026, <https://carbonpricingdashboard.worldbank.org/>.
2. Gautam Jain, Preetha Jenarthan, Victoria Prado, and Shubham Deshmukh, "Taking Stock of the Regulatory Landscape for Project-Based Carbon Credit Markets," Center on Global Energy Policy, Columbia University, June 17, 2026, <https://www.energypolicy.columbia.edu/publications/taking-stock-of-the-regulatory-landscape-for-project-based-carbon-credit-markets/>.
3. Ibid.
4. Ruth Dagan and Hanni Maoz, "Unlocking Carbon Market Demand: How Safe Harbors Can Protect Corporations from Greenwashing Risk," Herzog Fox and Neeman, May 3, 2026, <https://herzoglaw.co.il/en/news-and-insights/unlocking-carbon-market-demand-how-safe-harbors-can-protect-corporations-from-greenwashing-risk/>.
5. UNIDROIT, "Verified Carbon Credits," accessed October 2, 2026, <https://www.unidroit.org/work-in-progress/verified-carbon-credits/#1637156948432-1d04168e-7a08>.
6. World Bank, "Legal and Regulatory Reform Toolkit for High-Integrity Carbon Markets," May 18, 2026, <https://openknowledge.worldbank.org/entities/publication/764cd842-c99a-46dc-b62c-cac101480556>.
7. Coalition to Grow Carbon Markets, "About Us," accessed October 9, 2026, <https://coalitiontogrowcarbonmarkets.org/about-us/>.



About the Authors

Preetha Jenarthan is a Senior Research Associate at the Center on Global Energy Policy (CGEP) within Columbia University's School of International and Public Affairs (SIPA), where she focuses her research on mobilizing capital for clean energy and low-carbon infrastructure development. Prior to joining CGEP, she was a climate finance professional with experience in sustainability strategy, including decarbonization pathways for hard-to-abate sectors. At CIMB Group, a leading Southeast Asian bank, she helped develop and operationalize a five-year sustainability roadmap, elevating its Dow Jones Sustainability Index ranking from the bottom to the top quartile within three years.

Her responsibilities included overseeing programs with cross-functional teams across the region, which involved developing sustainable finance sector policies, driving sustainability-linked corporate finance and debt capital market transactions, and advising clients on their transition action plans. She also designed an ESG risk framework to incorporate climate-related risks into credit assessments and the organization's risk appetite statement. Additionally, she supported regulatory initiatives for the Joint Committee for Climate Change, co-chaired by the Central Bank and Securities Commission of Malaysia, including the Climate Change and Principle-based Taxonomy, the Value-Based Intermediation and Investment Impact Assessment Framework sectoral guides for renewable energy and energy efficiency, and organizing their inaugural climate finance conference. She also played a key role in incubating the CEO Action Network, driving policy advocacy with the public sector, capacity-building efforts, and collective commitments on climate action and social stewardship for over 50 private sector organizations across energy, finance, and other industries. She was also a member of several working groups on climate finance, including the UN Principles of Responsible Banking Impact Reporting and Disclosure task force.

Earlier in her career, Preetha was a Business and Strategy Associate at American International Group (AIG) Malaysia, where her responsibilities included conducting business analytics to optimize profitability and ensure capital adequacy, managing digital partnerships, and leading a new market entry strategy proposal for the Asia Pacific region. She holds a master's degree in Economic Policy Management with a concentration on Energy and Environment from Columbia University and a bachelor's degree in Actuarial Science and Finance with a minor in Economics from Drake University.

Dr. Gautam Jain is a Senior Research Scholar at the Center on Global Energy Policy (CGEP) of Columbia University's School of International and Public Affairs (SIPA). He focuses on the role of financial markets and instruments—including thematic bonds, blended finance structures, and carbon markets—in the energy transition, with an emphasis on emerging economies.

Dr. Jain has an extensive background in the financial industry where he covered emerging



markets as a portfolio manager and strategist. He has worked at asset management firms and an investment bank, including The Rohatyn Group, Barclays Capital, and Millennium Partners. He has helped manage emerging market local debt and hard-currency bond portfolios, encompassing currencies, interest rate instruments, and sovereign credits. He specialized in portfolio construction and asset allocation incorporating macroeconomic, policy, and political developments in emerging markets.

He holds a Ph.D. in Operations Research from Columbia University. He also has an M.S. in Industrial Engineering from Iowa State University and a B.Tech. in Mechanical Engineering from the Indian Institute of Technology, Bombay. He is a CFA charter holder, a Cornell Emerging Markets Institute Fellow, and an Adjunct Professor at Columbia University's School of International and Public Affairs. He is a consultant to the Inter-American Development Bank on local currency hedging mechanisms and has previously been one to the United Nations to support a Global Investors for Sustainable Development (GISD) Alliance workstream on "Tackling Local Currency Risk".

He has co-authored publications in the Journal of Derivatives, the Journal of Banking and Finance, the Journal of Applied Probability, Probability in Engineering and Informational Science, and the International Journal of Production Economics. He has also contributed chapters for the 2020 and 2021 Cornell EMI Annual Reports.

Dr. Luisa Palacios is an Adjunct Senior Research Scholar at Columbia University's Center on Global Energy Policy (CGEP), where she also served as Interim Senior Research Director and Managing Director of Energy Transition Finance.

She joined CGEP after a multidisciplinary career in the intersection of energy, finance, and policy. She served as the first Chairwoman of Houston-based Citgo Petroleum Corporation during a critical period in its history, as it faced significant geopolitical, financial, operational, and legal challenges. As Citgo's first-ever chairwoman, Dr. Palacios also shaped efforts to strengthen corporate governance, ethics, and social responsibility. During that time, she was also President of Citgo Holding and PDV Holding.

Prior to Citgo, Dr. Palacios was a Senior Managing Director and a member of the management committee at Medley Global Advisors, a macroeconomic and energy policy advisory firm based in New York. Earlier in her career, she worked at Barclays Capital as a Director in the emerging markets research department in New York, and as an Economist in the risk department at Société Générale in Paris. She also served as a Senior Economist at the Japan Bank for International Cooperation and as a Consultant in the Office of the Chief Economist for Latin America at the World Bank in Washington, D.C.

Dr. Palacios has a bachelor's degree from Universidad Católica Andrés Bello (Caracas, Venezuela),

holds a master's degree in international affairs from Columbia University's School of International and Public Affairs, and earned a Ph.D. in international affairs from The Johns Hopkins University School of Advanced International Studies (SAIS).

Dr. Palacios is an adjunct faculty member at the School of International and Public Affairs, an affiliated faculty member at the Institute for Latin American Studies at Columbia University, and a member of the faculty advisory committee of Columbia University's Santiago Global Center in Chile. She also serves on the Editorial Board of *Americas Quarterly* and is a permanent member of the Council on Foreign Relations.

Among her international engagements, Dr. Palacios serves on the Steering Committee of the Methane Finance Working Group (MFWG). She previously served as Deputy Chair of the Transition Finance and Investments Working Group of the Sustainable Business COP (Brazil, 2025) and as Deputy Chair of the B20 Finance and Infrastructure Task Force during Brazil's G20 Presidency. She is also a member of the Board of Trustees of The Hudson School.

Dr. Palacios is on the Advisory Board of Flying Rivers, a Latin American investment fund.

Josh Zoffer is a Senior Non-Resident Fellow at the Columbia Center on Global Energy Policy. His research and writing focus on climate and energy policy, international economics, emerging technologies, and global technology competition.

Mr. Zoffer is an investor and leads research at CIV, an investment firm that builds and backs technology companies in critical industries. From 2023 to 2024, Mr. Zoffer served as Special Assistant to the President for Economic Policy at the White House National Economic Council (NEC). At the White House, he led the NEC's work on energy security, climate and energy-related technology investment, trade policy, and various industrial policy and supply chain issues.

From 2021 to 2023, Mr. Zoffer served at the U.S. Department of the Treasury, most recently as Senior Advisor to the Deputy Secretary. In that capacity, he served as the Deputy Secretary's principal advisor on economic and foreign policy issues and as his chief speechwriter. He played a key role in many of the Treasury Department's signature policies during this period, including the design and negotiation of the price cap on Russian oil and the implementation of the Inflation Reduction Act. He also co-led the negotiation of the U.S.-Japan Critical Minerals Agreement. He is a recipient of the Treasury Medal.

Mr. Zoffer also served on both the Biden-Harris Presidential Transition Team and the Clinton-Kaine Presidential Transition Team and advised the Biden-Harris campaign on economic policy issues. Before serving in government, he worked at a technology-focused private equity firm and in McKinsey & Company's New York Office.

October 2026

His writing has been published in the New York Times, Wall Street Journal, Financial Times, Washington Post, The Atlantic, Foreign Affairs, The New Republic, and others, as well as academic journals such as the Yale Law Journal and Stanford Law Review. A native of Chapel Hill, NC, he graduated with an A.B. in Social Studies from Harvard University and a J.D. from Yale Law School.



About the Center on Global Energy Policy

The Center on Global Energy Policy at Columbia University SIPA advances smart, actionable and evidence-based energy and climate solutions through research, education and dialogue. Based at one of the world's top research universities, what sets CGEP apart is our ability to communicate academic research, scholarship and insights in formats and on timescales that are useful to decision makers. We bridge the gap between academic research and policy — complementing and strengthening the world-class research already underway at Columbia University, while providing support, expertise, and policy recommendations to foster stronger, evidence-based policy.

Visit us at www.energypolicy.columbia.edu

   @ColumbiaUEnergy

About the School of International and Public Affairs

SIPA's mission is to empower people to serve the global public interest. Our goal is to foster economic growth, sustainable development, social progress, and democratic governance by educating public policy professionals, producing policy-related research, and conveying the results to the world. Based in New York City, with a student body that is 50 percent international and educational partners in cities around the world, SIPA is the most global of public policy schools.

For more information, please visit www.sipa.columbia.edu

For a full list of financial supporters of the Center on Global Energy Policy at Columbia University SIPA, please visit our website at www.energypolicy.columbia.edu/partners. See below a list of members that are currently in CGEP's Visionary Annual Circle. This list is updated periodically.

Corporate Partnerships

Occidental Petroleum
Tellurian

Foundations and Individual Donors

Anonymous
Anonymous
Aphorism Foundation
the bedari collective
Children's Investment Fund Foundation
David Leuschen
Ray Rothrock
Mike and Sofia Segal
Kimberly and Scott Sheffield
Bernard and Anne Spitzer Charitable Trust
The William and Flora Hewlett Foundation