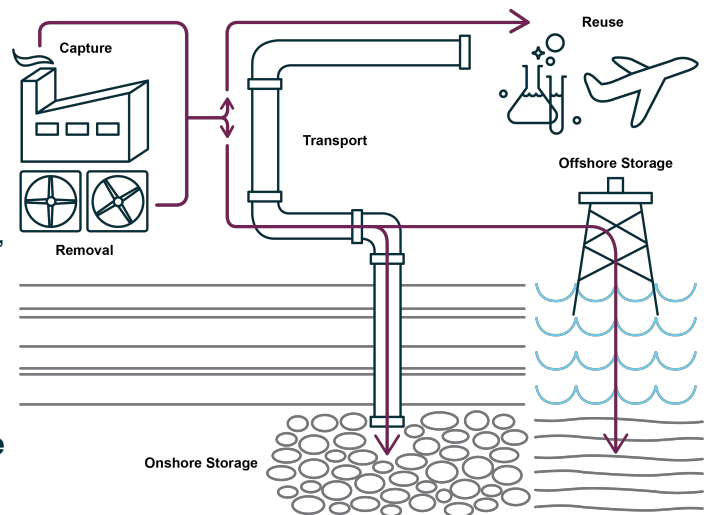


To: Vice President Kamala Harris  
From: Carbon Capture Coalition  
Date: October 21, 2024  
Re: Carbon Management's Role in an American Energy and Climate Strategy

## Executive Summary

Over the past several decades, global energy demand has increased significantly, reinforcing the need and urgency for a comprehensive, multifaceted strategy to address and mitigate the worst impacts of climate change, preserve, and create family-sustaining jobs that Americans depend on while providing clean, reliable domestic energy. Carbon management technologies, including carbon capture, removal, reuse, transport, and storage, are critical tools in this broader effort. **As the US continues to develop and deploy climate and energy policy solutions, carbon management technologies must continue to be a central piece of a broader federal strategy to meet our climate goals, cultivate a resilient and equitable economy, and prioritize sustainable energy production that ensures the benefits of clean energy deployment are shared across communities.**



## About Us

The [Carbon Capture Coalition](#) is a nonpartisan collaboration of more than 100 organizations spanning companies, unions, and conservation and environmental policy organizations building federal policy support to enable economywide, commercial-scale deployment of carbon management technologies. Coalition members recognize that economywide adoption of carbon management technologies is critical to achieving net zero emissions to meet midcentury climate goals, strengthening and decarbonizing domestic energy, industrial production and manufacturing, and retaining and expanding a high-wage jobs base. Successful commercial deployment of these technologies requires prioritizing meaningful engagement and consultation with local communities as well as associated education and workforce development.

Coalition participants have prepared this memo to provide a holistic view of carbon management's essential role in the nation's domestic energy policy portfolio as Vice President Harris and her advisors prepare for a potential Harris-Walz Administration.

## Carbon Management's Role as a Climate Tool

As the US and nations around the globe incorporate climate and energy considerations into their broader policy agendas, the world's climate scientists agree: carbon management technologies, while not a silver bullet, are a necessary part of a broad portfolio of strategies to reduce greenhouse gas emissions and address climate change while maintaining industries that Americans rely on for modern life. Multiple international scientific climate assessments have continued to emphasize the need for a wide range of climate solutions, including carbon management, to achieve the greenhouse gas emissions reductions necessary to avoid the worst impacts of climate change.

Modeling done by the United Nation's Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) to assess pathways to achieve 2050 climate goals continues to reaffirm the essential role that economywide and dramatically accelerated commercial deployment of carbon management technologies must play in managing emissions from existing industrial facilities and power plants, balancing emissions from critical-to-decarbonize sectors, and removing legacy CO<sub>2</sub> emissions from the atmosphere. One potential local benefit of carbon capture retrofits at industrial and power facilities is the reduction of other kinds of pollution in addition to CO<sub>2</sub> to protect communities from increases in cumulative pollution. Communities that are most vulnerable to climate change also typically suffer the most significant impacts from criteria air and other pollutants generated by nearby industrial and power facilities; carbon management technologies have the potential to play a pivotal role in addressing cumulative pollution in overburdened communities.

The IEA's Net Zero Emissions by 2050 Scenario estimates that the current slate of projects under development globally have the capacity to capture and store about 400 million tons of CO<sub>2</sub> annually until 2030. That number must increase to 1 billion tons by 2030 and 6 billion tons by midcentury to reach net zero.<sup>1</sup> Additionally, while most of this captured CO<sub>2</sub> is permanently stored, the IEA estimates significant markets for carbon reuse, particularly for synthetic fuels.

Even in scenarios that rely on high levels of renewable energy and electrification, IPCC estimates that globally, carbon management technologies will be needed to capture a total of two gigatons of CO<sub>2</sub> in the industrial sector by 2030.<sup>2</sup> In terms of the number of facilities needed to reach the goals discussed above, a commercial-scale carbon capture and storage facility is typically considered to be storing one million metric tons of CO<sub>2</sub> per year, which would translate to multiple thousands of carbon management facilities in industry, power, and direct air capture deployed between now and 2030.

As the global leader in carbon management technology development, the US has a unique role to play in sharing resources, technology, and knowledge of carbon management technologies worldwide, to ensure that low- and zero-carbon energy technologies are affordable and accessible as global economies set net zero targets in motion.<sup>3</sup>

## **Carbon Management as a Key Economic Driver**

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Carbon management technologies have emerged as a powerful economic driver in the US, encouraging innovation, job creation and preservation, and attracting investment in new technologies. Widespread deployment of carbon management technologies at industrial, power, and large-scale direct air capture facilities economywide is an essential tool to preserving and expanding a high-wage jobs base in key sectors across almost every state in the nation. Furthermore, among the broader suite of low- and zero-carbon technologies needed to reach net zero emissions by 2050, the full suite of carbon management technologies is especially critical to helping to decarbonize and sustain our nation's domestic energy, industrial, and manufacturing base, whose vital products and services we will continue to rely on for decades to come. This combination of climate necessity and economic and jobs benefits fosters broad, deeply bipartisan support for carbon management technologies that is unprecedented in US climate and energy policy.

Significant federal investments in carbon management and associated infrastructure over the past few years has spurred the announcement of more than 200 publicly announced domestic projects that span the carbon management value chain and technology readiness levels, signaling that good policy translates into real-world projects. The US build-out of carbon capture retrofits at industrial and power facilities, coupled with the anticipated deployment of large-scale direct air capture facilities and associated infrastructure at levels consistent with meeting midcentury temperature targets, will provide for the creation of large numbers of skilled, high-wage jobs in both construction and operations, while supporting the retention of our nation's existing domestic energy, industrial, and manufacturing jobs.

As the US continues to lead the globe in the deployment of these technologies, we are in the unique position to place carbon management technologies at the heart of a national strategy for job creation and retention across a wide variety of skill sets, workforce development and training, economic renewal, and climate stewardship.

## Carbon Management's Role in Maintaining Global Energy Leadership

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Carbon management technologies are essential for preserving America's leadership in the global transition to a sustainable, low-carbon economy. As international markets increasingly embrace low- and zero-carbon energy sources, carbon management technologies will provide an important pathway to reduce emissions while protecting and creating family-sustaining jobs and ensuring economic resilience in key domestic sectors like manufacturing, industry, and energy. In decarbonizing processes essential for modern life, the US can improve efficiency, attract investment, and foster a sustainable economy.

While the US has been a pioneer in the commercialization of carbon management, other nations like Canada, China, the UK, and the EU are also accelerating their leadership in building the infrastructure and supply chains necessary for a low-carbon future. To remain competitive while prioritizing achieving the emissions reductions necessary to reach midcentury climate targets, the US must continue to lead in deploying technologies like carbon management that promote environmental stewardship and economic growth. Carbon management plays a critical role not only in addressing the urgent need to reduce emissions but also in securing America's position as a global leader in decarbonization. This balance between providing reliable domestic energy production and mitigating the worst impacts of global climate change is critical for long-term leadership in the evolving global energy landscape.

## Robust Bipartisan Support

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Historically, robust and wide-ranging bipartisan support for carbon management technologies has played a crucial role in advancing efforts to deploy these technologies at the levels necessary to have a meaningful impact on rising global temperatures while safeguarding our nation's economic interests.

Time and again, carbon management has proven to be a domestic climate and energy issue that can bridge the gap between political ideologies. While bipartisan collaboration on carbon management policy dates back to legislation like the Energy Act of 2005 and the American Recovery and Reinvestment Act of 2009, in more recent years, the enactment of groundbreaking legislation like the 2018 FUTURE Act expanded and restructured the federal Section 45Q tax credit, ensuring a broader range of sectors could access the credit, while the passage of the USE IT Act in 2019 began tackling a host of challenges associated with permitting these complex projects. Together, these important bipartisan advancements in carbon management federal policy laid the groundwork for the next generation of investments needed to realize economywide deployment of these essential technologies.

The intersection of climate and energy policy has traditionally convened a coalition of unlikely collaborators—and carbon management is no exception. Bipartisan support for carbon management has only grown over the course of the past several years, underscoring a unified commitment to leveraging American innovation to tackle climate challenges, protect and expand jobs in traditional energy sectors, and ensure that the US remains a global leader in clean energy technologies. The most significant legislative successes to date would not have been possible without a diverse group of stakeholders and policymakers working to provide comprehensive federal policy support for these technologies.

The Carbon Capture Coalition's broad membership, which includes environmental and conservation policy organizations, industry leaders, and labor voices, represents the diversity of advocates in this sector committed to ensuring carbon management technologies scale at the rate necessary to reduce greenhouse gas emissions and enable midcentury climate goals. In fact, these diverse allies uniting in common cause made possible the enactment of the most significant carbon management federal policy to date, including key provisions in the Bipartisan Infrastructure Law and essential enhancements to the 45Q tax credit.

Though the investments in these technologies made under the 117th Congress are just beginning to take hold, the benefits are already being seen and felt across the entire American economy. While there has been some concern between Republicans and Democrats over the partisan mechanism used to pass the Inflation Reduction Act, Members of Congress across the political spectrum recognize that energy tax credits, including 45Q, are driving investment and job creation in their states and districts. This support demonstrates that 45Q, and carbon management broadly, is good policy, above all else.

## Conclusion

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The Carbon Capture Coalition looks forward to working with the next administration and continuing to collaborate in a bipartisan way with Members of Congress to ensure that the full suite of carbon management technologies can be developed and deployed as an essential climate and economic development solution. Carbon management technologies are critical to maintaining domestic energy and manufacturing production, protecting and creating family-sustaining jobs that local economies depend on while maintaining America's place on the world stage as a technology innovation leader.

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<sup>1</sup> IEA (2023), Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach, IEA, Paris <https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach>.

<sup>2</sup> Priyadarshi R. Shukla et al., "Climate Change 2022: Mitigation of Climate Change," IPCC Intergovernmental Panel on Climate Change, 2022, <https://www.ipcc.ch/report/ar6/wg3/>.

<sup>3</sup> U.S. Environmental Protection Agency, EPA 430-R-24-004. EPA (2024) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2022>.