

Carbon Management Legislative Priorities: 117th Congress

Carbon management technologies are central to **achieving emissions reduction goals**, while **preserving and creating middle class jobs** that pay family-sustaining wages, **providing environmental and other benefits** to communities, and **supporting regional economies** across our country.

The groundbreaking provisions to scale deployment of carbon capture, removal, utilization and associated CO₂ transport and storage infrastructure included in bipartisan bills before the 117th Congress are essential to placing America's energy, industrial and manufacturing sectors on track to reach net-zero emissions by 2050. Together, the inclusion of these elements into any broader legislative package would make a critical down payment on the investments in American innovation required to achieve net-zero emissions.

This portfolio of complementary policies could deliver an estimated 13-fold scale-up of carbon management capacity and 210-250 million metric tons in annual emissions reductions by 2035. There is potential to create tens of thousands and hundreds of thousands of high-wage jobs from carbon capture and direct air capture deployment, respectively, and generate hundreds of billions in investment if these technologies are deployed at levels needed to meet net-zero targets.¹

Carbon Management Policies Included in Bipartisan Legislation:

Critical Enhancements to the Federal Section 45Q Tax Credit to Leverage Private Investment

The 45Q tax credit is the cornerstone federal policy for enabling economywide deployment of carbon management technologies. Enhancement of the 45Q tax credit is crucial to providing investment certainty, additional incentive value and the flexibility needed to drive greater private investment in carbon management projects.

- **Providing a direct pay option for the federal Section 45Q tax credit:** This is the most important next step Congress can take to realize the full emissions reduction and job creation benefits of the credit. Direct pay would address the current significant loss of tax credit value to burdensome, costly and inefficient tax equity transactions, creating an urgently needed alternative for most project developers, who otherwise lack sufficient taxable income to fully utilize the credits, or who are exempt from federal tax liability altogether.
- **Extending the commence construction window for the 45Q credit:** Extending the commence construction window to qualify for 45Q by an additional ten years, to the end of 2035, would establish a critically needed investment horizon to give carbon management projects the time required to scale up between now and midcentury.
- **Enhancing 45Q credit values for industrial and power plant carbon capture and direct air capture:** Recent analyses and commercial experience underscore that current 45Q credit values are insufficient to drive the early deployment needed in industry, electric power generation and direct air capture to bring costs down and reduce commercial risk. For industrial and power generation projects, credit values should be increased to \$85 per metric ton for CO₂ captured and stored in saline geologic formations, \$60 per ton for storage in oil and gas fields and \$60 per ton for utilization of captured CO₂ and its precursor carbon monoxide to produce low and zero-carbon fuels, chemicals, building materials and other products. For direct air capture projects, credit values should rise to \$180 per ton for saline storage, \$130 for oil and gas field storage, and \$130 for carbon utilization. Boosting 45Q credit values would aid in safeguarding domestic production and high-wage, blue collar jobs and in maintaining U.S. technology leadership in this arena.
- **Eliminating annual carbon capture thresholds:** Current thresholds in the 45Q program are arbitrary, serve no policy purpose and reduce the overall technology innovation and emissions reduction potential of the incentive. Based on 2019 U.S. Environmental Protection Agency (EPA) data, approximately 54 percent of power plants and 75 percent of industrial facilities fall below eligibility thresholds, and many direct air capture and carbon utilization projects deploying emerging technologies simply lack the scale to meet these requirements.

1. Rhodium Group. The Economic Benefits of Carbon Capture: Investment and Employment Estimates for the Contiguous United States. <https://rhg.com/research/state-ccs/>. April 2021.

Financing the buildout of regional CO₂ transport and storage networks

Robust infrastructure to safely transport and store captured CO₂ in secure saline geologic formations is a key pillar of any broader strategy to achieve net-zero emissions economywide, while preserving existing jobs and creating new, highly-skilled jobs in energy and industrial sectors that consistently pay above prevailing wages.

- **Enactment of the Storing CO₂ and Lowering Emissions (SCALE) Act:** This bipartisan bill would enable deployment of the essential backbone CO₂ transport and storage infrastructure needed to achieve net-zero emissions by midcentury. Federal low-interest loans and grants authorized by the SCALE Act will leverage private capital to finance the buildout of shared CO₂ transport infrastructure networks and saline geologic storage hubs to achieve economies of scale and reduce overall system costs. In addition, the legislation provides cost share to develop large-scale commercial saline geologic storage sites, as well as increased funding for the Environmental Protection Agency (EPA) to support federal and state permitting of such storage projects.

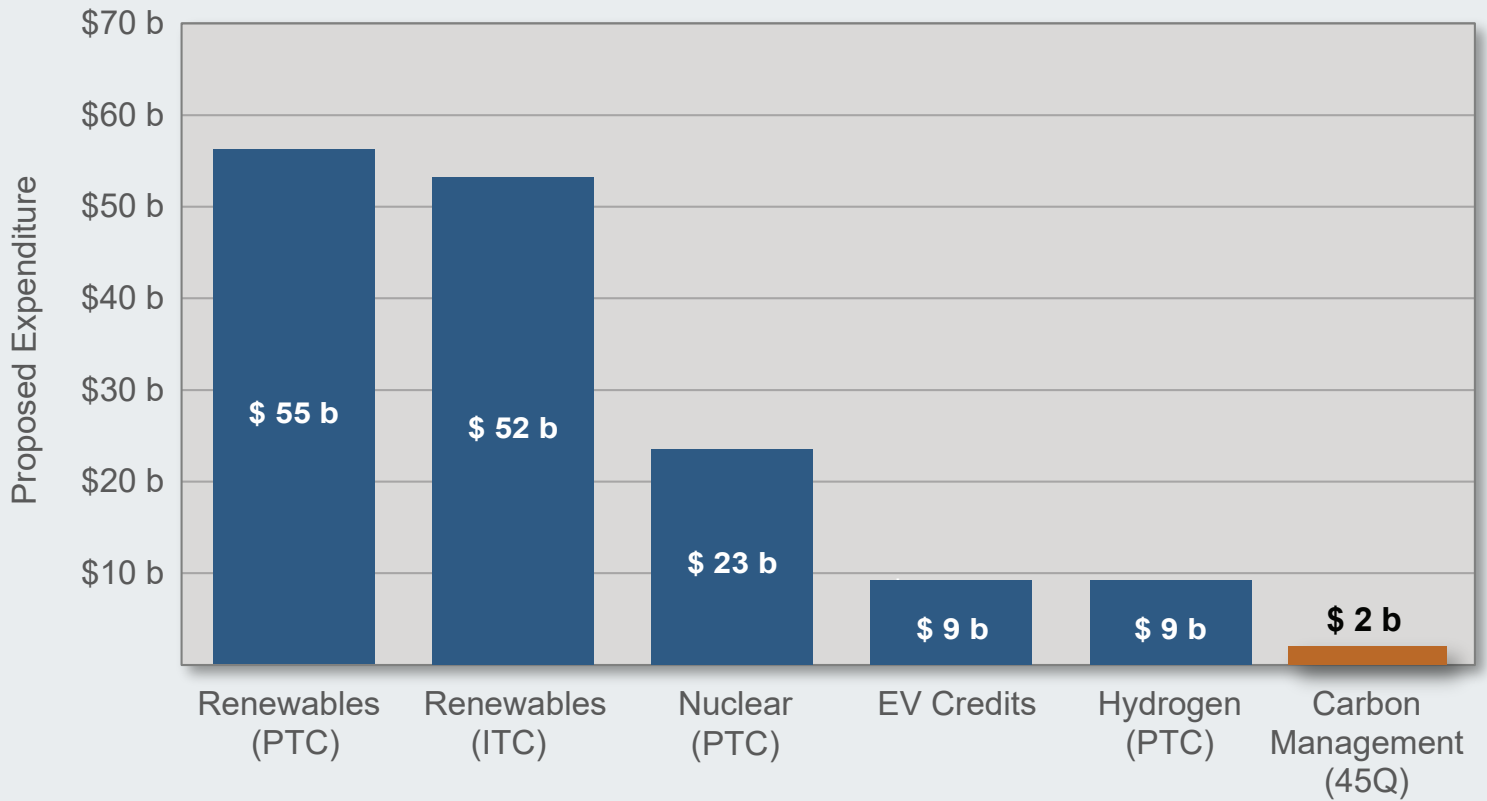
Robust funding for commercial scale demonstration of carbon management technologies

Carbon management technologies have suffered a significant lack of federal investment compared to historic levels of support for other clean energy technologies. Providing appropriations at the levels authorized under the 2020 Energy Act and the bipartisan Infrastructure Investment and Jobs Act will ensure that the carbon management industry can scale over the next decade to meet net-zero emissions targets; particularly crucial is providing funding for large-scale commercial demonstrations in a variety of industries. Large-scale pilot and demonstration projects are key to achieving our emissions reduction objectives and to driving near-term jobs creation and economic activity, while spurring additional project development.

The table below shows the multiple bills reflecting these policies in the 117th Congress. In addition, the attached graph highlights proposed levels of federal investment in enhancements to the 45Q tax credit in comparison to proposed investments in other key clean energy and industrial incentives in the House passed Build Back Better Act.

	Bill	Direct Pay	Increased Industrial/Power Credit Value	Increased DAC Credit Value	Commence Construction Window Extension	Eliminate Eligibility Thresholds	Funding for Pilots and Demos	Transport and Storage Infrastructure Financing
Senate								
Bipartisan	Carbon Capture Utilization, and Storage Tax Credit Amendments Act of 2021 (S. 986)	✓		✓	✓			
	Clean Energy for America Act (S. 1298)	✓		✓	✓			
Bipartisan	CATCH Act (S.2230)		✓			✓		
Bipartisan	SCALE Act (S. 799)							✓
House								
Bipartisan	ACCESS 45Q Act (H.R. 1062)	✓			✓			
Bipartisan	CATCH Act (H.R. 3538)		✓			✓		
	GREEN Act of 2021 (H.R. 848)	✓			✓			
	H.R. 2633	✓	✓	✓	✓			
Bipartisan	Infrastructure Investment and Jobs Act (H.R. 3684)						✓	✓
Bipartisan	SCALE Act (H.R. 1992)							✓

Proposed Expenditures for Clean Energy Tax Credits in House Build Back Better Act



Source: Great Plains Institute, December 2021.