

Scaling Up Climate Ambition:

Carbon Capture, Removal, and Storage Priorities in the 117th Congress



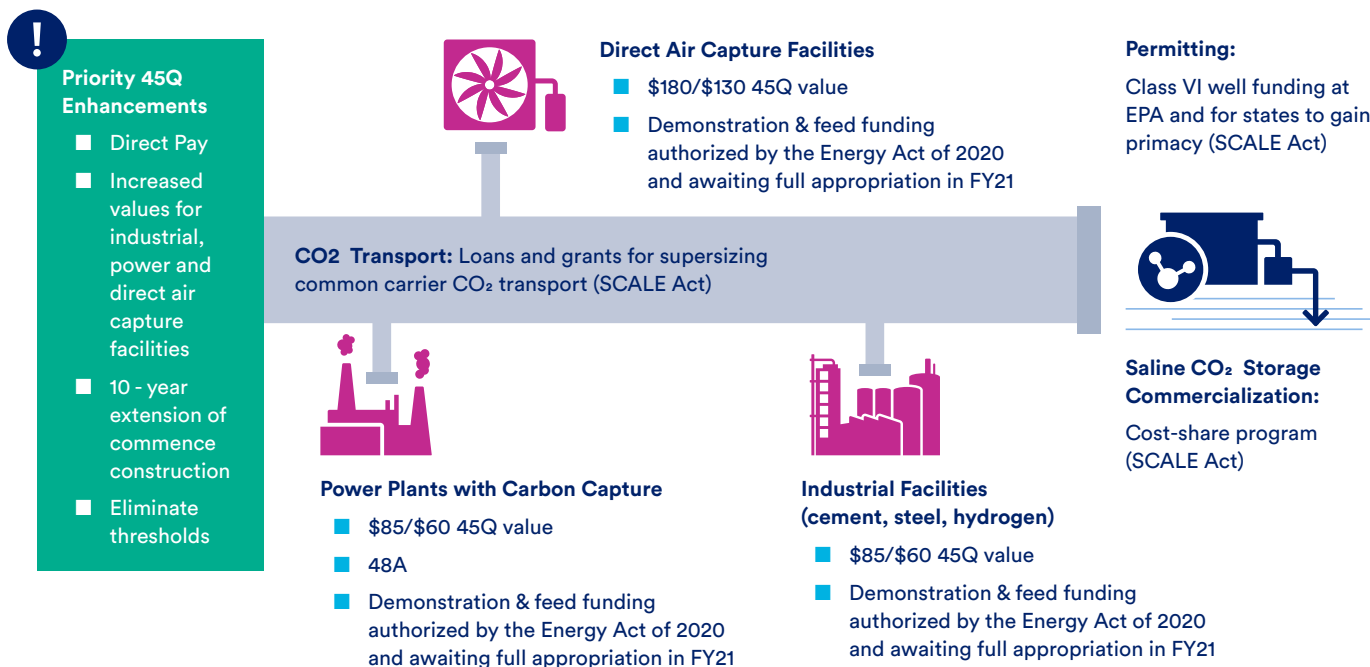
Carbon capture, removal, and storage technologies are essential for achieving climate and net-zero emissions goals.

Congress can build on the Energy Act of 2020 and enact legislation to create powerful economic incentives for emitters to capture their CO₂, including policies that connect emitters capturing their carbon to commercialized saline geologic storage of CO₂.

The US can maintain innovation leadership in carbon capture and storage, but we must act quickly. Other governments, such as [Norway](#), the [EU](#), the UK, Australia, and the [Netherlands](#) have committed billions of dollars for carbon capture and storage commercialization. In the US Congress, a series of pending bills – which this factsheet explains – would enable the decarbonization of industrial facilities, power plants, transportation fuels, and catalyze the removal of CO₂ directly from the atmosphere. The vital bipartisan provisions that enhance 45Q, along with the [SCALE Act](#), are mirrored in the carbon management priorities included in President Biden’s American Jobs Plan, which is the largest ever proposed investment in carbon capture commercialization put forward by a single government. Together, these policies form a carbon capture policy package that could grow [US carbon management capacity 13-fold by the mid-2030s](#), reducing the cost of these technologies and making them available for global deployment. This will bolster the US to become a global climate tech leader while creating hundreds of thousands of American manufacturing jobs across the US, utilizing the existing skills sets of our labor force.

Carbon Capture Legislation Introduced In Congress: Impact on Carbon Capture, Removal and Storage Value Chain Deployment

Together these policies could deliver a 13-fold growth of US carbon management capacity by the mid-2030s, in line with pathways to achieving to net-zero emissions.



1. 45Q enhancements to catalyze investment in CO₂ capture.

Congress reformed the 45Q tax credit in 2018 to increase its value and broaden its applicability. These changes created new momentum for carbon capture, and have led to the announcement of more than [40 new projects in development](#), demonstrating its potential impact for climate. However, the existing 45Q credit also has significant limitations and needs enhancement to support CO₂ reductions in critical sectors including but not limited to steel, cement, and natural gas power plants, and other applications like direct air capture. Congress must enact a more complete portfolio of 45Q enhancements:

- **Add Direct Pay Option for clean energy tax credits:** This is the most critical reform to unlock investment in carbon capture projects. Most project developers lack sufficient taxable income to utilize 45Q or other clean energy tax credits. Direct pay is an option that provides the full value of the credit directly to projects and eliminates wasteful and costly losses of the incentive value to financial third parties. Offering a direct pay option will also enable access to a far larger capital pool for decarbonization projects.
- **Increase 45Q Credit Value:** Project developers need higher credit values to enable carbon capture in industrial, power, and direct air capture applications. Most industrial applications require at least \$85 per metric ton, while direct air capture needs \$180 per metric ton.
- **Extend the Commence Construction Window:** Capture projects are often large and complex and require several years of planning. To be eligible for 45Q, they currently have to commence construction by the end of 2025, meaning there is not sufficient runway for new projects to begin development with confidence they will be eligible for the credit. The commence construction window for 45Q credit eligibility should be extended by 10 years to the end of 2035.
- **Eliminate Eligibility Thresholds:** Current law arbitrarily limits 45Q eligibility to the largest sources of CO₂. Eliminating these thresholds will expand the pool of eligible projects and spur innovation that often starts with smaller projects.

The table below shows that there are multiple bills reflecting these enhancements in the 117th Congress, and that these enhancements enjoy bipartisan support.

	Bill	Direct Pay	Increased Industrial/Power Credit Value	Increased DAC Credit Value	Commence Construction Window Extension	Eliminate Eligibility Thresholds
Senate						
Bipartisan	Carbon Capture, Utilization, and Storage Tax Credit Amendments Act of 2021 (S. 986)	✓		✓	✓	
	Save America's Clean Energy Jobs Act (S. 985)	✓				
	Clean Energy For America Act (S. 1298)	✓		✓	✓	
House						
Bipartisan	ACCESS 45Q Act (H.R. 1062)	✓			✓	
Bipartisan	CATCH Act		✓			✓
	GREEN Act of 2021 (H.R. 848)	✓			✓	
	H.R. 2633		✓		✓	

2. Connecting emitters to CO₂ storage via the SCALE (Storing CO₂ and Lowering Emissions) Act.

The Section 45Q tax credit enables economic CO₂ capture from many sources, but the credit value is not sufficient to also fund major new CO₂ infrastructure. CO₂ transport and storage infrastructure is critical to enable large-scale carbon capture deployment and reduce system costs by realizing economies of scale. Planning and investing in CO₂ infrastructure today will facilitate efficient deployment and reduce cost and land-use impacts. Despite its importance, deployment of CO₂ infrastructure faces critical barriers that require federal support to be overcome. First, there is a **chicken-and-egg challenge**. CO₂ transport and storage infrastructure must exist, or at least be certain to be built, before CO₂ capture projects can be committed. But the CO₂ capture projects must also exist or be certain before the infrastructure can be committed. We also must build infrastructure to accommodate **future demand**. CO₂ transport and storage infrastructure should be built with excess capacity to realize economies of scale and enable future growth, but initial CO₂ capture projects must bear the cost of the infrastructure and cannot pay for over-sized infrastructure unless additional support is provided. If enacted, the SCALE Act would establish key policy pillars designed to overcome the barriers and drive CO₂ infrastructure deployment in the U.S:

- **A Secure Geologic Storage Infrastructure Development Program** building upon the CarbonSAFE program to provide DOE cost share for commercial CO₂ storage development.
- **Provide EPA with increased funding for permitting Class VI CO₂ storage wells**, and grants for states to establish their own Class VI permitting programs, to ensure rigorous and efficient permitting of CO₂ storage infrastructure.
- **Establish the CO₂ Infrastructure Finance and Innovation Act (CIFIA) program** to finance shared CO₂ transport infrastructure. Modeled on the TIFIA and WIFIA programs for highway and water infrastructure, CIFIA will provide flexible, low-interest loans for CO₂ transport infrastructure projects and grants for initial excess capacity on new infrastructure to facilitate future growth. Also includes grants for Front-End Engineering Design (FEED) studies for CO₂ transport infrastructure.
- **Provide grants for state and local governments to procure CO₂ utilization** products for infrastructure projects, and support state and local programs that create demand for materials, fuels and other products made from captured carbon.

3. Appropriating the Energy Act of 2020 to enable technology demonstrations.

The Energy Act of 2020 included important authorizations for provisions to support front-end engineering design (FEED) studies, six carbon capture, removal, and storage demonstrations through third-of-a-kind, the CarbonSAFE program and other R&D. Congress should appropriate the full authorizations to enable cost reductions and learning-by-doing. The American Jobs Plan also proposes 10 carbon capture demonstrations to commercialize the technology for applications such as cement and steel, where we have not yet built a first-of-a-kind plant.

For more information:

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