



Carbon Capture and Sequestration Tax Credit ("Section 45Q") Legislation in the 117th Congress

July 28, 2021

The [tax credit for carbon oxide sequestration \(Internal Revenue Code \[IRC\] Section 45Q\)](#) is intended to incentivize investment in carbon capture and sequestration technologies (also known as carbon capture and storage [CCS]). While deployment of CCS technology has been limited to date, academics and industry experts (see [here](#), [here](#), and [here](#)) believe the technology has great potential for achieving GHG emissions reductions. One barrier to CCS deployment has been cost. Tax credits, such as the [current-law tax credit in Section 45Q](#), are one policy option for addressing this barrier. There are a number of proposals in the 117th Congress to modify and expand Section 45Q. This Insight highlights the key changes that would be made to Section 45Q across different legislative proposals.

Legislative Proposals in the 117th Congress to Modify Section 45Q

Proposals introduced on a largely stand-alone basis are summarized and compared in [Table 1](#).

Table I. Stand-Alone Legislative Proposals in the 117th Congress to Modify Section 45Q

	S. 2230/H.R. 3538— Coordinated Action to Capture Harmful (CATCH) Emissions Act	S. 986—Carbon Capture, Utilization, and Storage Tax Credit Amendments Act of 2021	H.R. 2633—To amend the Internal Revenue Code of 1986 to increase and expand the credit for carbon oxide sequestration	H.R. 1062— Accelerating Carbon Capture and Extending Secure Storage through 45Q (ACCESS 45Q) Act
<i>Credit Amount</i>	Increase credit to \$85 per metric ton for carbon oxide captured and stored (inflation-adjusted after 2020); \$60 per metric ton for carbon oxide captured and used (inflation-adjusted after 2025, 2020 in House bill)	For direct air capture projects, increase credit to \$120 per metric ton for carbon oxide captured and stored; and to \$75 per ton (through 2030 for enhanced oil recovery) for carbon oxide captured and used. Both amounts inflation-adjusted after 2020	Increase credit to \$85 per metric ton for carbon oxide captured and stored; \$50 per metric ton for carbon oxide captured and used	—
<i>Expiration Date</i>	—	Start of construction deadline extended through 2030	Make credit permanent	Start of construction deadline extended through 2035
<i>Eligible Facilities</i>	Any facility with carbon capture equipment installed capturing qualified carbon oxide	—	Reduce minimum amount of carbon oxide that must be sequestered to 10,000 tons for direct air capture, 25,000 tons for nonpower manufacturing plants, and 100,000 tons for electrical generating facilities; and reduce the minimum amount of carbon oxide that must be sequestered from other qualifying facilities to 10,000 tons	—
<i>Direct Pay Option</i>	—	Provides direct pay option	—	Provides direct pay option
<i>Other Provisions</i>	—	Allow credit against the base erosion minimum tax (effective after December 31, 2017)	Extend time period for receiving credit to 20 years	Allow credit against the base erosion minimum tax (effective as if included in the Bipartisan Budget Act of 2018)
<i>Effective Date</i>	December 31, 2021	December 31, 2021	December 31, 2020	Date of enactment

Source: CRS analysis of legislative language.

Proposed Modifications to Section 45Q in Broad Energy Tax Proposals

The Senate Finance Committee has considered comprehensive energy tax reform legislation, the Clean Energy for America Act. The Administration has also proposed substantial energy tax policy changes. In the House, the Growing Renewable Energy and Efficiency Now (GREEN) Act proposes substantive changes to current-law energy tax policy. Each of these proposals would make changes to Section 45Q, as summarized in Table 2.

Table 2. Proposed Modifications to Section 45Q in Comprehensive Energy Tax Policy Proposals

	S. 1298—Clean Energy for America Act	Biden Administration Proposal	H.R. 848—Growing Renewable Energy and Efficiency Now (GREEN) Act
<i>Credit Amount</i>	For direct air capture projects, increase credit to \$175 per metric ton for carbon oxide captured and stored and to \$150 per ton for carbon oxide captured and used. Both amounts inflation-adjusted after 2026	For “hard-to-abate” industrial sources, increase credit by \$35 per metric ton (total credit of \$85 per metric ton in 2026) For direct air capture with secure geologic storage, increase credit by \$70 per metric ton (total credit of \$120 per metric ton in 2026)	—
<i>Expiration Date</i>	Credit to phase out when sector emissions (e.g., electricity, other industry) are 25% (or less) of 2021 emissions; phaseout does not apply to direct air capture facilities	Start of construction deadline extended through 2030	Start of construction deadline extended through 2026
<i>Eligible Facilities</i>	Minimum capture amounts for direct air capture eliminated; minimum capture requirements revised such that at least 75% of carbon oxide at electricity generating facility must be captured; 50% for other facilities. Credit cannot be claimed for facilities that begin construction after 2026 for carbon oxide used as a tertiary injectant (i.e., for enhanced oil recovery)		—
<i>Direct Pay</i>	Provides direct pay option (effective December 30, 2020)	Provides direct pay option	Provides direct pay option
<i>Other Provisions</i>	Impose wage and workforce requirements (prevailing wage and apprenticeship program requirements). Effective after December 31, 2021	Credits paired with “strong labor standards”	—

Effective Date Generally effective on date of enactment (exceptions noted) December 31, 2021 —

Source: CRS analysis of legislative language or source documents.

Notes: The Joint Committee on Taxation has released a [technical summary of S. 1298](#).

Other legislation, the Save America’s Clean Energy Jobs Act (S. 985), would allow certain energy-related tax credits, including Section 45Q, to be received as direct pay (issues related to allowing tax credits to be received as payments are discussed in [this CRS report](#)).

There are also proposals that would repeal all tax incentives that support the use of fossil fuels. The End Polluter Welfare Act of 2021 (S. 1167/H.R. 2102) would terminate Section 45Q. Carbon capture is not universally viewed as an effective tool for achieving long-run environmental or climate policy objectives. Some [environmental advocates oppose the policy](#) because it supports continued use of fossil fuels.

Author Information

Molly F. Sherlock
Specialist in Public Finance

Angela C. Jones
Analyst in Environmental Policy

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