TAXPAYERS for COMMON SENSE

FACT SHEET

Section 45Q: Carbon Oxide Sequestration Credit

Carbon capture and sequestration (CCS) is a process that captures carbon emissions from large industrial sources, such as power plants and factories, and stores or utilizes them to prevent their entering the atmosphere. The 45Q tax credit encourages the deployment of CCS projects by functioning as a production tax credit for every metric ton of carbon oxide captured and stored.

Legislative History

Introduced in the Energy Improvement and Extension Act of 2008, the 45Q tax credit was initially designed to incentivize early adoption of CCS by setting a cap of 75 million tons of carbon sequestered. The Bipartisan Budget Act of 2018 significantly modified the credit, expanded its application, and removed the cap, making its benefits available to more CCS facilities.

The Inflation Reduction Act (IRA) broadened the 45Q tax credit further by making more facilities eligible with reduced capacity requirements, allowing tax-exempt and governmental entities to receive benefits, extending the credit duration by seven years until the start of 2033, and increasing credit values for different carbon storage and utilization methods.

Eligibility

To be eligible for the 45Q tax credit, a project must be a "qualified facility" that meets certain minimum capture thresholds. The carbon must be captured from an industrial source by carbon capture equipment or be captured directly from the ambient air through Direct Air Capture (DAC). The carbon must be measured at the source of capture and verified at the point of disposal, injection, or utilization. A qualified facility must begin construction before January 1, 2033. The party eligible to claim the tax credit is the owner of the capture equipment who must physically or contractually ensure the storage or utilization of the carbon and may elect to transfer the credit to another party that stores or puts the CO_2 or CO to beneficial use.

Credit Amount

	Equipment in Service 10/3/2008 – 2/9/18	**Equipment in Service 2/9/18 – 12/31/22**	**Equipment in Service after 12/31/22 – Construction Begins Before 1/1/33**
Claim Period	75 million cap already reached (No Longer Effective)	12 years	12 years, reduced to 5-year period if transferred.
Credit Amount			
Geologically Sequestered CO_2	$20	2018 base credit $25.70, increasing annually to $50 in 2026	$17 ($36 DAC)
Enhanced Oil Recovery	$10	2018 base credit $15.29, increasing annually to $35 in 2026	$12 ($26 DAC)
Other Qualified Use of CO_2	$10	2018 base credit $15.29, increasing annually to $35 in 2026	$12 ($26 DAC)
Bonus Credit Amount			
Credit Amount multiplied by 5 if prevailing wage & apprenticeship requirements are satisfied			Yes
Annual Capture Requirements	Capture ≥ 500,000 metric tons	*Power plants that emit > 500,000 metric tons*: Capture ≥ 500,000 metric tons. *Facilities that emit ≤ 500,000 metric tons per year:* Capture ≥ 25,000 metric tons. *DAC and other capture facilities:* Capture ≥ 100,000 metric tons.	*Power Plants*: Capture ≥ 18,750 metric tons AND ≥ 75% baseline carbon oxide production. *Other Facilities:* Capture ≥ 12,500 metric tons. *Direct Air Capture:* Capture ≥ 1,000 metric tons.

Taxpayer Costs

The Joint Committee on Taxation (JCT) estimates that the IRA expansion of 45Q will cost taxpayers $3.2 billion from FY2022 to FY2031, but the overall costs are much higher. More recent estimates show that the cost of 45Q could increase steeply over the next 10 years. The JCT estimates that 45Q will cost $4.8 billion from FY2023 to FY2027, while the U.S. Treasury estimates the cost to be $3.4 billion for the same period but increasing sevenfold to $24.8 billion over the following five-year period (FY2028-FY2032).

Taxpayer Concerns

Effective implementation of the 45Q credit will require stringent compliance measures to prevent fraud and abuse.

- **Verified Compliance**: The potential misuse and abuse of the 45Q tax credit raises concerns about the responsible use of taxpayer funds. The existing oversight mechanisms have proven insufficient, as evidenced by the massive fraud involving $1 billion in tax credits claimed for sequestered carbon that did not comply with Environmental Protection Agency (EPA) monitoring, reporting, and verification (MRV) requirements. This history of noncompliance undermines the credibility of the credit and calls for stricter monitoring and enforcement measures to safeguard taxpayer dollars.
- **Insufficient Rules**: To demonstrate secure geological sequestration, facilities must comply with Subpart RR of EPA's mandatory GHG reporting program and have an approved MRV plan, which they are already required to comply with. In the case of enhanced oil recovery, facilities may comply with subpart RR or ISO standards backed by the American National Standards Institute. These requirements, however, do not include sufficient testing or validation of CO_2 amounts, which are self-reported.
- **No Legal or Regulatory Framework to Address Long-term Liability:** To date, there is no legal or regulatory framework that specifically oversees long-term liability issues associated with carbon storage. There are significant health, environment, and climate impacts if the stored carbon is not managed properly.
- **EOR Undermines Overall Emissions Reduction:** CCS remains prohibitively expensive compared to other climate mitigation strategies, and its efficacy in reducing greenhouse gases is speculative at best. The primary use of captured carbon for Enhanced Oil Recovery (EOR), which may actually increase overall carbon emissions, raises doubts about the environmental benefits of this approach. The lack of a proven market for captured carbon, along with the expensive and energy-intensive infrastructure required for transportation and storage, adds to the skepticism surrounding the cost-effectiveness of the 45Q tax credit.