

New US Tax Incentives for CCUS (The FUTURE Act)

Clean Air Task Force

August 30th , 2018

New US CCUS Tax Incentive: The FUTURE Act

(Furthering Carbon Capture, Utilization, Technology, Underground Storage, and Reduced Emissions)

- Adopted by Congress on February 9th, 2018, amending section 45Q of the US Tax Law
- Eligible based on 6-year commence construction window from date of enactment
- Credit is available for CO₂ captured from coal and gas power plants, industrial sources, and direct air capture that is certified by EPA to be securely stored geologically (such as in saline formations or oil fields) or to have reduced emissions through utilization (verified through a life-cycle analysis)
- Credit is assigned to owner of carbon capture equipment (to help facilitate lease swaps)
- Credit can be transferred to storage operator
- For enhanced oil recovery (EOR) and utilization, credit includes a linear ramp from \$12.83/ton in 2017 to \$35/ton in 2026, and then increases at inflation rate
- For saline, credit includes a linear ramp from \$22.66/ton in 2017 to \$50/ton in 2026, and then increases at inflation rate
- Each eligible project can receive the credit for a period of 12 years

What, in particular, Makes the FUTURE Act Catalytic

- Meaningful credit levels – by 2026, \$50/ton saline storage, \$35/ton EOR storage and other forms of utilization
- Monetization of tax credit
 - Transferable to storage entity
 - Credit attaches to capture equipment owner (not also operator) – opportunities extend beyond tax equity market to lease-swap deals
- 6 years commence construction window (instead of 75 million ton cap in old 45Q)
- 12 year receipt of credit
- Industrial threshold at 100,000 tons capture level (power still at 500,000 tons)

IEA and DOE Assessment of Impact

- International Energy Agency - 10 to 30 million tons of increased capture capacity by 2030
 - Only assessed impact on industrial sources
 - Projects both EOR and saline projects

- US Department of Energy 10 to 30 million tons by 2030 emissions reduction (FUTUTRE Act and FUTURE Act adjusted cases)
 - Assessed both power and industrial projects
 - Most projects are low cost industrial sources
 - Adjusted case shows new gas power CCS and coal retrofit CCS projects, central case sees only new gas power CCS projects

Early Indications from Industry on Potential Projects

- Occidental Petroleum outlined vision for trans-Texas pipeline CCUS corridor
 - A pipeline across Texas could connect 100 potential carbon capture sources to oil fields for enhanced oil recovery
 - This would store over 80 million tons per year
- Oxy and White Energy (ethanol producer) announced joint project evaluation, driven by 45Q
- EPA has approved CO₂ geologic storage accounting plans for Oxy and Exxon, and other smaller operators have plans currently under consideration – this step is necessary to receive credit
- Industrial sources (Midwest, Interior West, South Central US) are investing in undertaking financial analysis and developing pre-engineering studies
 - Ethanol (e.g. North Dakota Red Tail project)
 - Gas Processing
 - Chemical production
- Developers appear interested in both enhanced oil recovery and saline storage projects.