Pumping Money Into the Oil Industry: Billions in Subsidies Flow Through Carbon Capture to Fossil Fuels

New analysis from Food & Water Watch finds that the Trump administration's 2025 tax law unlocked a potential $210 billion in additional subsidies for oil extraction through a process known as enhanced oil recovery (EOR). First promised as a way to justify continued burning of coal, the practice of capturing carbon and using it to extract oil was later touted as a critical "bridge" technology to "pure" sequestration that simply buried carbon underground. In fact, EOR has been the dominant fate of captured carbon for the entire history of carbon capture and sequestration (CCS). Changes brought about by the 2025 tax law appear to throw in the towel on using EOR as a stepping stone, eliminating the sequestration premium by raising the already generous 45Q tax credit 40 percent for oil producers.

Carbon Capture Is a Backdoor for Oil Subsidies

One of the largest federal subsidies for carbon capture is the 45Q tax credit, which rewards corporations for each ton of carbon dioxide (CO_2) they inject underground.[1] Historically, 45Q distinguished between CO_2 injected for EOR and CO_2 injected purely for sequestration.[2] However, the "Big Ugly Bill" of July 2025 erased the distinction between EOR and sequestration, raising the value of CO_2 used in EOR to $85 per ton (a more than 40 percent increase).[3] All told, this increase could be worth $210 billion to the oil industry.[4]

EOR is a disaster for the climate. According to an industry consultant, in 2022 EOR was used to produce an additional 88.2 million barrels of oil.[5] The U.S. Environmental Protection Agency (EPA) says that 36.7 million metric tons of CO_2 were "used" in EOR (although only 19 percent of that CO_2 met the EPA's "sequestration" criteria).[6] That means that every ton of CO_2 injected for EOR produces 2.4 barrels of oil, which when burned emits more CO_2 than was injected.[7] In recent years, oil production per metric ton of CO_2 used in EOR has increased.[8] A U.S. Geological Survey study of future EOR potential found that an average of 3.5 barrels of oil is produced per metric ton of CO_2 "stored"; if burned, this oil would emit 1.5 tons of CO_2 for every ton injected.[9]

45Q heavily subsidizes this process. At 2022 rates of CO_2 use per barrel of oil produced, 45Q would be worth around 37 percent of the average sale price of a barrel of oil.[10] This oil also contains potentially valuable CO_2. A single barrel of oil when burned emits 0.43 metric tons of CO_2.[11] If captured, this CO_2 would be worth $36.55 in 45Q credits — 48 percent of the cost of the oil sold on the market.[12]

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The Stepping Stone Myth

Supporting the oil industry was openly a goal of carbon capture when the technology was largely known as "clean coal." During the George W. Bush administration, Congress established the Clean Coal Power Initiative, providing $2 billion to fund private sector coal demonstration projects such as CCS.[13] These projects were touted as a way to boost oil production by supplementing the supply of naturally occurring CO_2 that oil producers injected into older oil reservoirs to increase production, a process known as enhanced oil recovery.[14]

However, much like the roundly debunked "bridge fuel" prediction that fracked natural gas would pave the way for a transition from coal to renewable energy,[15] CCS proponents claimed that EOR would help scale up carbon capture in the short term and improve the viability of pure sequestration in the long term.[16] In 2008, the environmental organization Natural Resources Defense Council (NRDC) promoted EOR as a great way to increase oil production.[17] In 2011, groups including the Clean Air Task Force and NRDC, along with corporations such as Archer Daniels Midland and Arch Coal, participated in the National Enhanced Oil Recovery Initiative (NEORI).[18]

NEORI argued that EOR deployment would lead to CCS cost reductions and create a national infrastructure that could be used beyond oilfields.[19] During the Obama administration, these groups promoted the idea that EOR could develop CCS technology and ultimately pave the way for CCS that does not involve oil production.[20]

CCS Is Still Almost Exclusively Used for Oil Production

To the extent that carbon capture has managed to scrape marginal amounts of CO_2 from the waste streams of industrial facilities, it has served to prop up oil production and supplement natural sources of CO_2. In the last few years, traditional "domes" where naturally occurring CO_2 is mined for EOR have experienced contamination, production declines, and in one case near-total depletion.[21] Carbon capture also enables oil fields that lack pipelines to CO_2 domes to use EOR, further increasing oil production.[22]

According to a December 2023 report from the Congressional Budget Office, nearly 95 percent of the CCS capacity operating as of September 2023 was providing CO_2 to oil producers for use in EOR.[23] Only 11 percent of all produced and captured CO_2 in the U.S. in 2022 went to non-EOR applications, primarily food and beverage applications in which CO_2 is re-emitted to the atmosphere.[24] Even as the transition to non-EOR CCS failed to emerge, the Clean Air Task Force continued to claim that future projects may not follow the same trend.[25]

As carbon capture has largely failed to progress from the "stepping stone" of enhanced oil recovery, CCS proponents and the EPA have begun to describe CO_2 used to extract oil as "geologically sequestered."[26] Rather than advancing CCS technology or applying it to new settings, EOR has become another way to claim that CCS is growing by redefining a fossil fuel industry activity as CCS.

Sequestration is a term that was historically distinct from EOR,[27] but fossil fuel advocates sought to muddy the terminology by including EOR under the umbrella of "utilization," and trying to use a new acronym that includes this (CCUS or carbon capture, utilization and storage).[28] However, of the 16 million metric tons of CO_2 reported as "sequestered," 92 percent is used in enhanced recovery wells, and less than 5 percent is injected in dedicated storage facilities (the rest is injected in Class 2 disposal wells).[29]

Conclusion

Academic research broadly concludes that an electricity system based on 100 percent renewables and energy storage is not only feasible, but would be comparable in cost or cheaper for consumers than the current electricity grid.[30] The results of a 2019 literature review of 180 peer-reviewed studies is unambiguous: "The great majority of all publications highlights the technical feasibility and economic viability of 100% RE [renewable energy] systems."[31] Technological improvement continues to widen the cost gap between fossil fuels and renewables. For example, a 2025 study modelling 100 percent renewable energy across the Americas found that the levelized cost of electricity in a 100 percent renewable scenario would be nearly half the cost of the "business as usual" fossil fuel scenario.[32]

On the other hand, carbon capture promises to save costly fossil fuel investments from the threat of climate policy by resurrecting the "clean coal" narrative, painting them as "clean fossil fuels" that can be burned forever.[33] According to Occidental Petroleum's CEO, "If it's produced in the way that I'm talking about, there's no reason not to produce oil and gas forever."[34] One oil driller claimed that direct air capture was like "draining the ocean with a straw," but praised the public relations benefit of the technology, saying, "Let's go run out there and build all these plants we can build to shut up whoever we need to shut up."[35]

Endnotes

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