

Carbon Capture: The Solution to the Carbon Crisis?

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With the looming threat of global warming caused in part by carbon dioxide emissions, the world has been looking for a solution. While the obvious answer would be to reduce or even stop emitting carbon into the atmosphere, that is a difficult task that can only go so far in reducing the rate of global warming. However, there is a potential new technology that has been gaining a lot of momentum. It is known as carbon capture. Carbon capture and storage is a way of removing carbon dioxide from emitting sources pollution streams before it enters the atmosphere and is then either “locked away” underground or used in products like concrete where the carbon will not enter the atmosphere.¹ Carbon capture technologies got a recent funding boost from both the inflation reduction act and the bipartisan infrastructure bill.² While carbon capture seems like a great solution, critics argue that it is just a temporary solution and will only cause the perpetuation of the use of fossil fuels instead of reducing the reliance on fossil fuels altogether.³

While carbon capture technology is new, there are already over 10 existing commercial plants in the United States utilizing carbon capture as of 2021, with over 100 planned or in construction.⁴ At these facilities carbon dioxide is removed from the facilities emissions, liquified and transported to an underground storage facility.⁵ Since carbon capture technologies are so new, they are very expensive to implement and are often still experimental. However, there have been several recent policy changes at both the state and federal level that have attempted to reduce these costs. For example, section 45Q of the internal revenue code was created, which grants large tax credits for carbon sequestration.⁶ In addition to this federal program, several states have passed their own carbon capture tax credits.⁷ However the largest subsidies have come from the inflation reduction act and the recent infrastructure law that allocated billions in both research and development subsidies as well as billions towards subsidizing the cost of implementing carbon capture technologies at existing facilities.⁸

Although carbon capture technologies sound like a great solution, critics argue that they will prolong the use of fossil fuels and prevent the transition to renewable energy. Proposals for carbon capture technology largely revolve around facilities that produce energy using fossil fuels.⁹ However, the ultimate goal of many environmentalists is to see the abandonment of fossil fuels altogether.¹⁰ These environmentalists view technologies like carbon capture as a way of enabling the fossil fuel industry to continue for longer and prolong their existence.¹¹ While it may seem like a noble goal, I can’t help but think that in this case the pursuit of perfection is

¹ Katie Lebling, *7 Things to Know About Carbon Capture, Utilization and Sequestration*, World Resources Institute (Nov. 13, 2023). <https://www.wri.org/insights/carbon-capture-technology>

² *Id.*

³ *Id.*

⁴ Vincent Gonzalez, *Carbon Capture and Storage 101*, Resources for the Future (Feb. 3, 2023). <https://www.rff.org/publications/explainers/carbon-capture-and-storage-101/>

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

⁸ Lebling, *supra* note 1.

⁹ *Id.*

¹⁰ ‘Fossil fuels are a dead end’, says top UN climate adviser on ‘Decarbonization Day’ at COP27, UN News (Nov. 11, 2022). <https://news.un.org/en/story/2022/11/1130462>

¹¹ Lebling, *supra* note 1.

getting in the way of what is good about carbon capture. The best part of carbon capture is that it allows fossil fuels to be burned in a much more efficient way that greatly reduces their carbon footprint.¹² While a long term goal of eliminating fossil fuels is one that should still be strived for, the pursuit of that goal should not interfere with a good option that is currently available that can be used to reduce the carbon footprint. However, it is worth noting the skepticism that critics of carbon capture express is not the opinion of all environmentalists. In fact, many environmentalists welcome carbon capture technologies with open arms.¹³

Carbon capture has a great potential to reduce the carbon footprint of fossil fuels, it alone cannot be the solution to climate change. It is just one tool that, if invested in and used effectively, can buy time for us to find a way to completely decarbonize. Before carbon capture can be used on a wide scale, it needs further investment and research to lower costs and find the best methods of implementation. In its current state, it is still seen as costly and experimental.¹⁴

Investments from the inflation reduction act into carbon capture are a good starting point but there needs to be much more research and attention to get industries to buy in and install carbon capture on their own. If carbon capture becomes widely adopted many experts believe it will greatly reduce the amount of carbon emitted into the atmosphere and could help slow the rate of climate change.¹⁵ From my personal viewpoint, it is one of the best tools currently available to quickly address climate change and one day lead to a carbon free footprint, despite the criticisms and costs involved with carbon capture technologies. While it is not the only potential tool to solve the climate crisis, it has a lot of potential. The more people, governments and industries that get behind carbon capture, the better the odds that carbon capture technologies become cheap enough to be universally adopted. If universal adoption occurs, there will be an incalculable impact on climate change that would truly change the world as we see it. In my opinion, carbon capture is one vital tool needed in order to see a world free from climate change. A world free from the burdens of climate change will likely not occur without carbon capture and technologies like it.

¹² *Id.*

¹³ Gonzalez, *supra* note 4.

¹⁴ *Id.*

¹⁵ *Id.*