Carbon Capture: Costly, Useless & Harmful

Carbon capture and storage (CCS) has been presented by some as a promising technology to address the supposed threat of global warming while making possible the use of fossil fuels that emit carbon dioxide the promoters view as a pollutant. None of this is true.

CCS is expensive and unnecessary. It would raise the cost of energy, make uneconomic the operation of power plants and other facilities fueled by coal and natural gas, raise the cost of energy, and would have no positive effect on the environment. In short, CCS costs too much and is certain to fail at what its proponents promise.

Using data from the National Energy Technology Laboratory (NETL) and the U.S. Energy Information Administration (EIA), we found the following:

Costly

- The cost of retrofitting 114 U.S. coal-fired power plants (not scheduled for retirement) to achieve 90% carbon capture would be more than $148 billion, or about $2 million per megawatt of net power output. Operation and maintenance costs of coal plants would increase by more than 40%.
- The power output of coal-fired power plants equipped with carbon capture technology would be reduced by 24%, adding to the cost of the electricity generated.
- The cost of building a $1 billion natural gas combined cycle power plant would be increased by nearly 80% if CCS technology were added to it, according to NETL data.

Useless

- Based on analysis using the Model for the Assessment of Greenhouse Gas Induced Climate Change (MAGICC), if the United States ceased all CO_2 emissions in 2010, the amount of warming averted would be only 0.07 °F by 2050 and 0.19 °F by 2100.
- CO_2 emissions from the burning of coal and natural gas account for about half of all such emissions from industrial processes, so the effect of installing CCS on power plants would be even less than the minuscule amounts listed above. In any case, such differences in temperature can hardly be measured, much less felt.

Harmful

- Higher concentrations of atmospheric CO_2 have contributed to increased crop production and a greening of Earth, 70% of which NASA has attributed to CO_2 fertilization. CCS would reduce these benefits of atmospheric carbon dioxide and lead to reduced crop productivity.