Price of sucking CO_2 from air plunges

Technology moves closer to economic viability.

BY JEFF TOLLEFSON

Siphoning carbon dioxide from the atmosphere could be more than an expensive last-ditch strategy for averting climate catastrophe. A detailed economic analysis published last week suggests that the geoengineering technology is inching closer to commercial viability.

The study was conducted by researchers at Carbon Engineering in Calgary, Canada, which has been operating a pilot CO_2-extraction plant in British Columbia since 2015. That plant — based on a concept called direct air capture — provided the basis for the economic analysis, which includes cost estimates from commercial vendors of all of the major components (D. W. Keith et al. Joule http://doi.org/cqqj; 2018).

Depending on a variety of design options and economic assumptions, the cost of pulling 1 tonne of CO_2 from the atmosphere ranges from US$94 to $232. By contrast, the previous comprehensive analysis of the technology, conducted by the American Physical Society in 2011, estimated that it would cost $600 per tonne (see go.nature.com/2xuauq7).

Carbon Engineering, which was founded in 2009, says that it published the paper to advance discussions about the approach's cost and potential. "We're really trying to commercialize direct air capture in a serious way," says David Keith, the company's acting chief scientist and a climate physicist at Harvard University in Cambridge, Massachusetts....

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