

Could companies someday make a profit off unwanted CO₂?

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The world has a carbon dioxide problem, and to fix it, much attention has been paid to renewable energy sources, which don't emit the greenhouse gas. But what if we could turn waste CO₂ into marketable chemicals and fuels before it escaped to the atmosphere? Would this help alter the climate change narrative? The cover story in *Chemical & Engineering News* (C&EN), the weekly newsmagazine of the American Chemical Society, parses this possibility.

Alex Scott, a senior editor at C&EN, reports that the answers to these questions are not yet clear cut. A handful of companies around the world are trying to capitalize on our combined need to reduce CO₂ and our demand for chemicals and fuels. But the practice of carbon capture and usage, or CCU, still faces many challenges. The processes developed so far to accomplish CCU are costly and require large amounts of energy. As such, most resulting products are exorbitantly expensive. For example, methanol from CO₂ costs almost three times more than if it were made from natural gas.

But proponents are optimistic that following climate talks in Paris this December, new regulations will put restrictions on carbon emissions that will be tight enough to make CCU profitable. Whether it will impact climate change, however, is another matter. Even if the chemical industry were based on CO₂ rather than fossil fuels, it would only consume 300 million metric tons of the gas while coal-fired power plants alone produce more than 14 billion metric tons of it each year.

More information: Learning to Love CO₂ -
cen.acs.org/articles/93/i45/Learning-Love-CO2.html

Provided by American Chemical Society

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