

Challenges and Opportunities for Carbon Dioxide Capture and Utilization

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Sustainably meeting our global energy needs while decarbonizing our energy sectors and economies presents daunting challenges and great opportunities. Carbon is and will remain a vital part of our economy in the form of energy dense fuels, materials, chemicals, and products. An overview of advances in carbon dioxide capture, utilization, and storage (CCUS) will be presented along with along with key questions, remaining challenges, and opportunities, including the nexus of CCUS with renewable energy and efficient interconversion of electrical, chemical, and thermal energy. An overview of the U.S. Carbon Negative Shot will also be presented along with the role of carbon dioxide removal (CDR) in our clean energy transformation.