



Voluntary Carbon Dioxide Removal Purchasing Challenge

In March 2024, the U.S. Department of Energy's (DOE's) Office of Fossil Energy and Carbon Management (FECM) announced plans to launch the Voluntary Carbon Dioxide Removal (CDR) Purchasing Challenge, which calls on organizations to purchase high-quality, durable [CDR credits](#). This follows DOE's announcement last year stating that it would become one of the first governments worldwide to procure CDR credits with the [Purchase Pilot Prize](#).

CDR refers to approaches that remove already-emitted carbon dioxide (CO₂) from the atmosphere and durably store it in geological, terrestrial, or ocean reservoirs, or in products. Removals differ from emissions reductions or avoidances because CDR is net carbon negative. There are an emerging suite of removal solutions offering potential for high-integrity climate action.

To meet midcentury climate goals, CDR must complement, not replace, direct supply chain emissions reductions. At the same time, investments in CDR cannot wait until the last minute or the technology will not scale. Without delaying emissions reductions, organizations should start funding removals today.

CDR encompasses a wide array of approaches (a few examples are included below)



Direct Air
Capture with
Storage



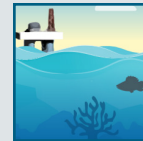
Soil Carbon
Storage



Biomass Carbon
Removal and
Storage



Enhanced
Mineralization



Marine CDR



Afforestation/
Reforestation

Visit [DOE's website](https://energy.gov/fecm/carbon-dioxide-removal) (energy.gov/fecm/carbon-dioxide-removal) for more information on CDR approaches.

The Voluntary CDR Purchasing Challenge comes during a decisive decade where the carbon removal market must advance to meet climate goals. Private sector purchases have the potential to catalyze CDR innovation, paving the way for removals to be available in the quantities required to meet both corporate net-zero and global climate goals in the coming decades. Participating in the Voluntary CDR Purchasing Challenge can enhance your organization's climate actions by:

- 1 Securing supply of CDR** today, ahead of net-zero target deadlines and projected supply constraints.
- 2 Maximizing impact on innovation and transparency in the CDR market.** The Challenge is an initiative working closely with the biggest leaders in CDR.
- 3 Earning recognition as a CDR champion** on DOE's website and at events. All participants will be featured for advancing DOE's carbon removal priorities.
- 4 Using new DOE resources.** In connection with the Challenge, DOE will make multiple resources public. This includes selected CDR suppliers from other DOE carbon removal programs in addition to guidance on credible climate action and disclosures.

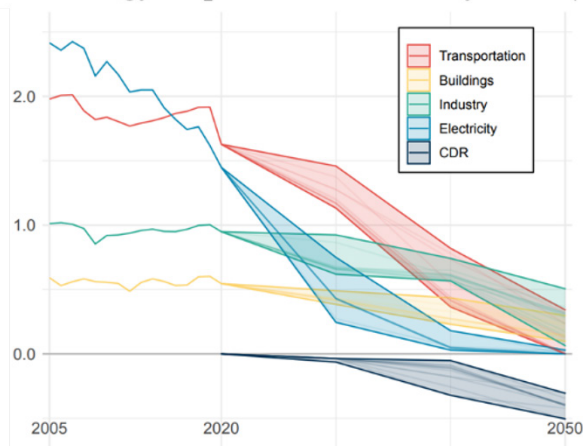
The Challenge builds on DOE's ongoing CDR investments:

- \$3.6B for the [Regional Direct Air Capture Hubs program](#)
- \$100M for the [Carbon Negative Shot pilots](#)
- \$35M for the [CDR Purchase Pilot Prize](#)

The Role of CDR in Achieving Net-Zero Greenhouse Gas Emissions

U.S. net-zero strategy projects >100 Mt of CO₂ removal per year²

U.S. energy CO₂ emissions to 2050 by sector (Gt)



According to the Intergovernmental Panel on Climate Change, gigatonne-scale CDR is essential to achieving global climate goals.¹ In the United States alone, achieving net-zero emissions by 2050 will require approximately 90% emissions reductions and more than 100 million tonnes of CO₂ removal per year.² Due to the market's early stage, near-term investment is crucial to long-term availability of CDR at scale. Carbon credits can be a convenient way to invest in the CDR market.

CDR complements organizations' direct emissions reductions but must not delay or diminish them. Removals will be important for many organizations to achieve net-zero goals by neutralizing hard-to-decarbonize residual emissions, which can often be 5-10% of baseline.

How to Get Involved in the Voluntary CDR Purchasing Challenge

Join DOE in purchasing high-quality CDR credits by following these steps:

- 1 Notify DOE of your interest by emailing voluntaryCDRchallenge@hq.doe.gov.
- 2 Make a purchase from a high-quality CDR supplier. There is no minimum size to join. Choose from the list of suppliers selected in DOE programs or source your own.
- 3 Submit your purchase details to DOE so your organization can be listed on the Challenge website, showcasing your leadership in furthering CDR.



For more information on the Challenge or to provide input, please read the [Notice Of Intent](#). Join the Challenge's mailing list for updates by contacting voluntaryCDRchallenge@hq.doe.gov.



1. Sixth Assessment Report (AR6): Synthesis Report, IPCC 2023

2. The Long-Term Strategy of the United States, U.S. Department of State and U.S. Executive Office of the President 2021