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**Climate Change**

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DOE's [Office of Fossil Energy](#) (FE) is pursuing two major strategies to reduce carbon emissions that contribute to global climate change concerns: (1) [Making fossil energy systems more efficient](#), and (2) [capturing and sequestering greenhouse gases](#). The first approach focuses on innovative technologies that boost the fuel-to-energy efficiencies of both coal- and natural gas-fired power plants. The second approach might one day virtually eliminate concerns over emissions of greenhouse gases from fossil energy systems. Carbon capture and sequestration systems could store, convert, or recycle greenhouse gases, preventing them from building up the atmosphere.

The [Office of Nuclear Energy](#) sponsors programs to maintain the Nation's existing nuclear electricity generating capacity and also develop advanced nuclear power plants. Since nuclear power plants do not emit the harmful gases that could cause climate change, expanded use of nuclear power helps meet national energy and environmental goals.

The Department believes that the future energy picture of the United States can and should include a large role for hydrogen. Hydrogen will make it possible to enhance U.S. energy independence and security while making significant improvements in environmental quality.

Additionally, DOE's [Climate Change Research](#) program supports four contributing areas of research: Climate and Hydrology; Atmospheric Chemistry and Carbon Cycle; Ecological Processes; and Human Interactions. The research is focused on understanding the physical, chemical, and biological processes affecting the Earth's atmosphere, land, and oceans and how these processes may be affected, either directly or indirectly, by energy production and use, primarily the emission of carbon dioxide from fossil fuel combustion.

The [Office of Science's Office of Biological and Environmental Research](#) (BER) has designed and planned the research program to provide the data that will enable objective assessments of the potential for, and consequences of, global warming. The BER Climate Change Research (OoS2) subprogram contributes to the Administration's Climate Change Research Initiative (CCRI).

[Data on Climate Change](#) is maintained by the [Energy Information Administration](#)

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U.S. Department of Energy | 1000 Independence Ave., SW | Washington, DC 20585

1-202-586-5000 | f/202-586-4403

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