

World Conference on

Climate Change

October 24-26, 2016 Valencia, Spain



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Pathways to net-zero carbon emissions

Limiting global warming requires that net emissions of greenhouse gases ultimately be reduced to zero. It is becoming increasingly probable that “negative CO₂ emissions” will be required to limit global warming to 2°C. I will discuss this thesis, various approaches to negative CO₂ emissions, the scientific challenges associated with these approaches and offer a prognosis.

Biography

Douglas Ray is Director of Strategic Partnerships at the US Department of Energy's Pacific Northwest National Laboratory. He is a Fellow of the American Association for the Advancement of Science and serves on the Editorial Advisory Board for the ACS journal Energy & Fuels, the Carbon Capture Simulation and the Joint BioEnergy Institute Boards of Directors, the Advisory Committee for the Dalian (China) National Laboratory for Clean Energy, the International Energy Agency's Experts Group on Science for Energy, and the Scientific Advisory Committee of the DOE's Combustion Research Facility. He holds a PhD in Chemistry from the University of California-Berkeley.

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