Managing Alberta's Carbon Challenge

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Alberta produces more than a third of Canada CO2 emissions, as the pressure to constrain emissions grows so will Alberta's carbon challenge. I will review the tools for managing emissions from Alberta's industrial sector from CO2 capture and storage and nuclear power to wind power and efficiency improvements. I will then speculate about the kinds of public policies that might be necessary to stimulate sufficient investment and innovation to manage Alberta's carbon challenge.

Biography

Professor Keith works near the interface between climate science, energy technology and public policy. His technical and policy work addresses the capture and storage of CO2, the economics and climatic impacts of large-scale wind power, the use of hydrogen as a transportation fuel, and the technology and implications of geoengineering.

Keith has served as a member of several advisory boards and panels including Canada's 'blue ribbon' Panel on Sustainable Energy Technology and as a member of US National Academy committees. He currently serves on Canada's Capture and storage task force, and is one of the world's energy experts named by national science academies to the InterAcademy Council study on Transitions to a Sustainable Energy Systems. Keith has addressed technical audiences with articles in Science and Nature; he as consulted for national governments, industry and environmental groups and has reached the public through national media in Canada and the US.

As an undergraduate, Keith took first price in Canada's national physics prize exam. As a graduate student he won MIT's biennial departmental prize for excellence in experimental physics and most recently he was named environmental scientist of the year by Canadian Geographic in 2006.

Keith spent most of his career in the U.S. at Carnegie Mellon, Harvard and the National Center for Atmospheric Research. He returned to Canada in 2004 to build a research group on energy and environmental systems in Calgary.