



Climate Change and Energy

Climate change is one of the world's greatest environmental concerns, and signals the beginning of the next major shift in how we produce and use energy. How we make that shift has implications for all aspects of the U.S. economy and global development.

As the science becomes clear and public concern grows, political leaders are under increased pressure to limit U.S. greenhouse gas emissions, and are facing a number of proposals to enact a market-based pollution reduction program. Business leaders and investors are seeking clarity, and leaders from sectors such as agriculture and manufacturing are waking up to the opportunities and risks in making this change.

The Nicholas Institute for Environmental Policy Solutions at Duke University is acting as an honest broker, collaborating with those leaders as we develop economic analysis and applied research to design the program that will work.

To Consider

- A program to **reduce carbon dioxide pollution** could engage new players – from U.S. farmers to rainforest nations – in new economic and environmental opportunity
- Change the manufacturing face of the **U.S. economy**
- Change **trade relationships** with developing energy-hungry nations like China

q1

Could a carbon pollution limit help us develop technology faster?

q2

How will a U.S. carbon limit affect our competition with China?

Nicholas Institute Brings

- Economic and political analysis.
- Limiting costs.
- Addressing international competitiveness concerns.
- Brokered dialogue.
- Identifying legislators' concerns and working to address them.
- Working with corporations to develop analyses and evaluate policy options
- Applied research.
- Developing the nation's first "Gold Standard" for agricultural carbon sequestration.
- The Duke Energy and ConocoPhillips project to prove new technology feasibility for electric power carbon sequestration.
- Evaluating the potential for renewable energy in North Carolina, the Southeast, and the Midwest, and how it can be incorporated into an electricity grid.

Our Projects

See www.nicholas.duke.edu/institute for a full list of our current projects.

Developing carbon policy

- Economic analyses: risks and opportunities across sectors
- Ideas on international competition
- New sector engagement: farms and forests.
- Partnership with players: corporate and political.

Encouraging oceans governance

- Mapping our oceans: developing the tools.
- Showcasing regional approaches.
- Incorporating coastal development concerns.

Helping journalists

- Providing new research findings and analysis.
- Making new connections between beats.
- Educating editors.

Resources

Institute Staff and Partners

Tim Profeta, Director

Brian Murray, Director for Economic Analysis

Nicole St. Clair, Associate Director,
Washington Office

John Fay, Research Associate/Instructor
Geospatial Analysis Program

John Raidt, Senior Advisor

Gabriele Hegerl

Associate Research Professor
Nicholas School Earth and Ocean Sciences Division
Primary area of expertise: Global Climate Change
Hegerl's expertise lies in anthropogenic climate change, natural climate variability, Statistical techniques for climate research.

Robert B. Jackson

Professor of Biology and Environmental Sciences
Nicholas School Earth and Ocean Sciences Division
Primary area of expertise: Ecology
Jackson's expertise lies in ecosystem functioning and feedbacks between global change and the biosphere.

Faculty

Thomas J. Crowley

Nicholas Professor of Earth Systems Science
Nicholas School Earth and Ocean Sciences Division
Primary area of expertise: Global Climate Change
Crowley's expertise lies in the study of past climates -- patterns and nature of climate change during both warm and cold periods, and their relevance to understanding present climate change and future projections of climate change.

Prasad Kasibhatla

Associate Professor of Environmental Chemistry
Nicholas School Environmental Sciences and Policy Division
Primary area of expertise: Environmental Chemistry
Secondary areas of expertise: biogeochemistry, global climate change

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The Nicholas Institute is a university-wide initiative that operates in conjunction with the Nicholas School of the Environment and Earth Sciences at Duke University.

Nicholas Institute for Environmental Policy Solutions

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