National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

NSF 10-040

Dear Colleague Letter: Climate, Energy, and Sustainability

Directorate for Biological Sciences, Directorate for Computer & Information Science and Engineering, Directorate for Education and Human Resources, Directorate for Engineering, Directorate for Geosciences, Directorate for Mathematical and Physical Sciences, Directorate for Social, Behavioral and Economic Sciences, Office of Cyberinfrastructure, Office of Integrative Activities, Office of International Science and Engineering, Office of Polar Programs

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In FY 2010, NSF is expanding its support for climate research by issuing five new cross-directorate solicitations:

- Water Sustainability and Climate (WSC) (NSF 10-524)
- Ocean Acidification (OA) (NSF 10-530)
- Climate Change Education Partnership (CCEP) (NSF 10-542)
- Decadal and Regional Climate Prediction Using Earth System Models (EaSM) (NSF 10-554)
- Dimensions of Biodiversity (NSF 10-548)

These solicitations are intended to support innovative research and education that will advance our capability and capacity to understand and predict changes to Earth's natural and human-dominated systems, to assess the vulnerability and resilience of these systems to change, and to foster workforce development and scientific literacy in these areas. These advances will strengthen the scientific knowledge base for policy decisions at regional and national levels.

Building on recommendations in the August 2009 National Science Board Report, *Building a Sustainable Energy Future* and the *IPCC Fourth Assessment Report: Climate Change* 2007, NSF has requested funds in FY 2011 to further expand research support in this area through new and existing programs focused on *Science, Engineering and Education for Sustainability (SEES)*. *SEES* is proposed to address challenges in climate and energy research and education using a systemic approach to understanding, predicting, and reacting to change in the linked natural, social, and built environment through:

- short and long term observations enabled by a new generation of experimental and observational networks;
- data analysis, modeling, simulation and intelligent decision-making facilitated by advanced computation;
- research at the energy-environment-society nexus;
- innovative strategies for energy production, distribution and use;
- study of societal factors such as vulnerability and resilience, and sensitivity to regional change; and
- building of research and education partnerships, both nationally and internationally.

The portfolio of *SEES* will also help develop the workforce required for future economic, energy and environmental sustainability.

Information on NSF's climate research activities as well as plans for *SEES* is available at

http://www.nsf.gov/sees.

Sincerely,

Karl Erb, Director/Office of Polar Programs
Joan Ferrini-Mundy, Acting Assistant Director/Directorate for Education and Human Resources
Myron Gutmann, Assistant Director/Directorate for Social, Behavioral and Economic Sciences
Lance Haworth, Director/Office of Integrated Activities
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