

Announcement of a Plan for a Peer Review of a “Synthesis and Assessment Report on Scenarios of Greenhouse Gas Emissions and Atmospheric Concentrations and Review of Integrated Scenario Development and Application”

Pursuant to Section V of the “Information Quality Bulletin for Peer Review” of the Office of Management and Budget (OMB), under the authority of the Information Quality Act of 2000 (P.L. 106-554), the U.S. Climate Change Science Program (CCSP) announces a plan for a peer review of its Synthesis and Assessment Report 2.1 entitled “Scenarios of Greenhouse Gas Emissions and Atmospheric Concentrations and Review of Integrated Scenario Development and Application” The CCSP (see <http://www.climatechange.gov> for details) integrates federal research on climate and global change, as sponsored by thirteen federal agencies and overseen by the Office of Science and Technology Policy, the Council on Environmental Quality, the National Economic Council and the Office of Management and Budget.

The US Department of Energy is the lead agency for the completion of this synthesis and assessment report. Inquiries or comments regarding this peer review plan may be submitted via email to: john.houghton@science.doe.gov or in writing to: John Houghton, Office of Biological and Environmental Research, SC23.1/Germantown Building, U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585-1290.

The Highly Influential Scientific Assessment (HISA) is entitled: Scenarios of Greenhouse Gas Emissions and Atmospheric Concentrations and Review of Integrated Scenario Development and Application. Scenario analysis is a widely used intellectual device for decisionmaking in complex and uncertain situations. Scenarios are ‘what ifs’—sketches of future conditions (or alternative sets of future conditions), used as inputs to exercises of decisionmaking or analysis. Scenarios are not predictions. Scenarios have been applied extensively in the climate change context. Examples include emissions scenarios, climate scenarios, and technology scenarios.

This product has two components, in conformance with the requirements of the Strategic Plan for the U.S. Climate Change Science Program (CCSP): development of new scenarios of greenhouse gas emissions and atmospheric concentrations (Part A) and a review of integrated scenario development and application (Part B). This product is one part of a larger suite of CCSP scenario analysis products that includes Product 3.2 (Climate projections for research and assessment based on emissions scenarios) and Product 4.5 (Scenario-based analysis of the climatological, environmental, resource, technological, and economic implications of different atmospheric concentrations of greenhouse gases).

This product will contribute to and enhance the ongoing and iterative international process of producing and refining climate-related scenarios and scenario tools. This process includes, among others, efforts undertaken by Intergovernmental Panel on Climate Change (IPCC), the Climate Change Technology Program (CCTP), and non-governmental forums such as Stanford’s Energy Modeling Forum. Part A will contribute new scenarios to this process based on the evolving state-of-the-art in integrated assessment modeling and building on lessons learned in

previous scenario efforts. Part B will guide the development and application of future scenarios.

Work on the project began in January of 2005 and the estimated dissemination date is August 31, 2006. The estimated start date of the peer review is March 31, 2006. The review will be conducted through individual letters. The anticipated number of reviewers is 4-8 for Part A and 4-8 for Part B. Separate expert peer reviewers will be selected for Part A and Part B, although there may be overlap. There will be opportunities for the public to comment on the work product to be peer reviewed via a public review period following the expert peer review. DOE will not provide significant and relevant public comments to the peer reviewers before they conduct their review since the public comments will follow the expert peer review. DOE will commission the NRC to select the peer reviewers. Scientific or professional societies will not be asked to nominate potential peer reviewers.

The primary disciplines or expertise needed in the review are as below:

- (a) Integrated assessment modeling (for Part A and Part B): Integrated assessment here refers to the use of computer models that combine models of the global climate with economic-based models of the factors that drive emissions of greenhouse gases. These models integrate the disciplines of economics, energy systems analysis, climate modeling, land-use and land-use change, and demographic and economic change over time.
- (b) Greenhouse gas emissions and concentration scenario development (for Part A and Part B): This refers to the development of scenarios that explore the forces that drive the emissions of greenhouse gases and their accumulation in the atmosphere. A range of such scenarios have been developed over the last decade through such entities as the IPCC, Stanford's Energy Modeling Forum, and the Climate Change Technology Program.
- (c) Global climate modeling (for Part B only): Global climate modeling includes computer-based modeling of the global climate system using inputs of greenhouse gases and other radiatively-important substances. Good examples would be the National Center for Atmospheric Research's (NCAR's) Community Climate System Model (CCSM) and the Geophysical Fluid Dynamics Laboratory (GFDL) climate model.
- (d) Assessments of Impacts, Adaptation, and Vulnerability (for Part B only): This includes a wide spectrum of analytical activities exploring the potential impacts of climate change on human societies and the potential for adaptation, and includes such diverse areas as the impacts of sea-level rise, changing rainfall patterns on water availability and agriculture, and health affects from changing temperatures and moisture patterns.