

RESEARCH CONFERENCES

ESF-VR-FORMAS Conference on
Global Change Research

Global Change Challenges: Transforming Energy Systems

Utsikten Meetings, Nynäshamn • Sweden
3-7 October 2009

Chairs: Kevin J. Noone, Stockholm University, SE
& Thomas B. Johansson, Lund University, SE

Organising Committee: Jonas Björck - Vetenskapsrådet, Stockholm, SE; John Marks - Former ESF Director of Science and Strategy; Nebojsa Nakicenovic - IIASA, Laxenburg, AT; Björn Sellberg - FORMAS, Stockholm, SE; Uno Svedin - FORMAS, Stockholm, SE

The human impact on global climate change is now deemed to be unequivocal. However, human impacts on the global environment go well beyond changes in the physical climate, into effects on ecosystems, biodiversity, and the essential goods and services provided by the environment on which we are dependent. In the next few decades, we will need to fundamentally transform a number of sectors if we are to be able to ensure the sustainable pursuit of the human endeavor. Among these sectors are energy, transportation and agriculture. The purpose of this conference is to provide the research basis for long-term transformation of energy systems that will allow us to achieve a sustainable production of energy for future generations. The conference will begin by mapping out the current landscape for energy production, and envisioning the goal for future sustainable energy systems. We will then explore the transformations necessary to realise this goal, and define the kinds of systemic-level analyses that will be necessary to support reaching this goal.

The conference will be a mix of plenary sessions and group meetings. As a prelude to the December UN climate conference in Copenhagen, it will aim to produce an openly available report detailing a) the major transformations needed, b) a picture of the desired energy systems landscape, c) a description of the necessary research, and d) suggestions for an implementation framework to enable and support it. Participants are invited to take part in this work.

Conference sessions will cover:

- Magnitude and needs of transformations
- Energy systems in the context of global environmental change: the big picture
- Mapping the energy systems landscape
- Eyes on the prize: envisioning future energy systems
- Details of the transformations: what are the big questions for transforming energy systems
- Break-out groups: details of transformations
- Analyses of future energy systems from different perspectives; e.g. global change, new economic models, new management systems
- Feeding into decision making: how can we help the Copenhagen negotiations
- Looking back from 2050 - what research should we have embarked upon back in 2010?
- Panel discussion: Synthesis of needed transformations and analyses and suggestions for ways forward
- Moderated discussion with plenary: forward look



Invited Speakers will include

- Guy Brasseur** - National Center for Atmospheric Research (NCAR), Boulder, US
Ged Davis - Global Energy Assessment Council, AT
Gerald Geernaert - Inst. of Geophysics & Planetary Physics (IGPP), Los Alamos, US
Jose Goldemberg - University of São Paulo, BR
Mark Jaccard - Simon Fraser University, Vancouver, CA
Bo Kjellén - former ambassador for Sweden, SE
Nebojsa Nakicenovic - Int. Inst. for Applied Systems Analysis (IIASA), Laxenburg, AT
Jean Palutikof - National Climate Change Adaptation Res. Facility, Griffith, AU
Anand Patwardhan - Shailesh J Mehta School of Management, Mumbai, IN
Leena Srivastava - Energy and Resources Inst. (TERI), New Delhi, IN / Energy and Resources Inst. (TERI-NA), US
Diana Urge Vorsatz - Center for Climate Change and Sustainable Energy Policy, Budapest, HU

Application Form & Programme available from

www.esf.org/conferences/09311

Closing Date for Application extended to 10 August 2009

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