



# Jim Skea

Candidate IPCC Working Group III Co-Chair

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## Career path

Jim Skea is currently the Research Councils UK Energy Strategy Fellow based at Imperial College London, supporting the UK Research Councils in deciding where and how to invest their energy research resources. His three previous posts have entailed high level research leadership. From 2004-2012, Jim was Director of the interdisciplinary UK Energy Research Centre, a collaboration between 14 institutions with 200 members at the peak of its cycle of activities. Within the Centre, Jim initiated and managed 'flagship' projects that involved interdisciplinary collaboration across institutions, such as *UK Energy 2050* which explored the social, economic, environmental and technological dimensions of one's country's transition to a low-carbon economy. In the 1990s, Jim directed the Economic and Social Research Council's Global Environmental Programme which was similarly directed towards shared products. From 1998 to 2004 Jim was Director of the London-based Policy Studies Institute whose remit included environmental, social and labour market policy. Much of the earlier part of Jim's career was spent on energy and environmental issues at the Science Policy Research Unit at Sussex University, an important hub of research and original thinking about technological change.

## Research interests

Although Jim's first degree is in Physics, he has worked in an interdisciplinary environment throughout his career. He received training in economics when working on his Doctorate. His research leadership roles have required him to engage actively with disciplines ranging from nuclear physics (UK Energy Research Centre) to sociology (Global Environmental Change Programme). The main focus of his own research has been policies for energy and the environment with a particular emphasis on the role of technological change and innovation. Energy and climate change have been the dominant interests over the last decade. His current research addresses systems of innovation surrounding energy technology, the role of public policies and institutions in steering innovation and the effectiveness of arrangements in selected European, Asian and North American countries.

## Science-policy interface

Jim Skea has consistently engaged with the policy and business worlds throughout his career. He is a founding member of the UK's Committee on Climate Change, a statutory body independent of government which recommends the UK's carbon budgets and reports annually to Parliament on progress towards their achievement. He has long experience of interacting with policy officials and elected politicians, having organised regular briefings by researchers for the Energy Minister when Research Director of the UK Energy Research Centre. He has both advised and provided written and oral evidence to Parliamentary committees. Jim is currently President of the UK Energy Institute which has Royal Charter status and is the professional body for individuals working across the energy industry. It provides accreditation for engineers, organises training and develops technical standards. Jim also acted as Launch Director for the Low Carbon Vehicle Partnership, an industry-government partnership aimed at facilitating the roll-out of cleaner vehicles. He has been a non-Executive Director of two companies, one publicly quoted.

## **IPCC involvement**

Jim Skea has performed a number of roles within IPCC across Working Groups II and III. He was Vice-Chair of Working Group III in the Fifth Assessment cycle and was active at both the Working Group and Bureau levels. He performed additional tasks as Review Editor of WG-III Chapter 7 on *Energy Supply* and Review Editor of the Synthesis Report. He was Coordinating Lead Author of Chapter 11 on *Energy, Industry and Transportation: Impacts and Adaptation* in Working Group II in the Second Assessment cycle and acted as Review Editor for the *Human Settlements, Energy and Industry* chapter in the Working Group II Third Assessment Report.

Jim helped to develop the response to the Interacademy Council review of IPCC, acting as Rapporteur for the Conflict of Interest Task group. In the last 18 months, he has been engaged in Fifth Assessment outreach activities, communicating through the media and presenting the findings of both the Working Group III report and the Synthesis Report to audiences from government, business and civil society in both his home country and internationally.

## **Aspirations for the IPCC Sixth Assessment**

In scientific terms, Jim would like to see Working Group III building on the achievements of the Fifth Assessment Report by: a) deepening engagement with the other Working Groups, notably with Working Group II on responses to climate change and Working Group I on scenario approaches; b) establishing stronger links between the insights obtained from high-level integrated assessment modelling and sectoral chapters which provide insights on the concrete steps required to mitigate climate change; and c) enhancing the relevance for policymakers charged with following through decisions made under the Framework Convention.

Scientific rigour and relevance rely on robust processes. The Panel's desire to enhance participation from developing countries needs positive action. The challenge is not only to increase numbers but to ensure that participation is meaningful and helps to shape IPCC products in a substantive way. Maintaining IPCC's credibility and reputation means building on the IAC reforms to ensure that the transparency of processes is enhanced and the effective communication strategy employed in AR5 is continued.

## **Career highlights**

### **Education**

1971-1975	University of Edinburgh, BSc Mathematical Physics
1975-1978	University of Cambridge, PhD. Energy Research Group, Cavendish Laboratory (Physics Laboratory), 1979. Dissertation topic <i>Energy Use in the Aluminium Industry</i> .

### **Professional appointments**

2012 -	Research Councils UK Energy Strategy Fellow
2009 -	Professor of Sustainable Energy, Imperial College London
2004 - 2012	Research Director, UK Energy Research Centre
1998 - 2004	Director, Policy Studies Institute, London
1995 -1998	Director, Economic and Social Research Council Global Environmental Change Programme
1983 - 1995	Science Policy Research Unit, Sussex University, progressed from Research Fellow to Professorial Fellow. Starting in the Energy Programme, established and led the Environment Programme.
1981 - 1983	Research Associate and Visiting Assistant Professor, Department of Engineering and Public Policy, Carnegie-Mellon University, Pittsburgh
1978- 1981	Research Assistant, Energy Research Group, University of Cambridge, England

## ***Recognition***

- 2013 CBE for services to Sustainable Energy
- 2011 Honorary Fellow Society for the Environment
- 2010 Energy Institute Melchett Award for “outstanding contributions to the science of fuel and energy”
- 2009 Ambassador of Japan Commendation for “distinguished service and contribution to the deepening of mutual understanding and friendship between Japan and the UK”
- 2004 OBE for services to Sustainable Transport

## ***Academic advisory roles***

- Board Member: Journal of Power and Energy; Technological Forecasting and Social Change; Journal of the Energy Institute
- Editor: Routledge Global Environmental Change Series, 1996-2001
- Board Member, Stockholm Environment Institute, 2004-2011
- Advisory Board Member: Scott Institute for Energy Innovation, Carnegie-Mellon University Pittsburgh
- Advisory Board Member: E.ON Energy Research Centre Aachen 2011-12
- Member Peer Review College, Economic and Social Research Council, 2010-
- Member Peer Review College, Engineering and Physical Sciences Research Council, 2005-09
- Member, Economic and Social Research Council Research Evaluation Committee, 2003 – 2006
- UK ‘expert’ representative, EU FP7 Energy Committee, 2006–13
- Member, International Science Panel on Renewable Energies (ICSU), 2006 – 2008
- Member, Irish Energy Research Council, 2006 – 2007
- Member, Executive Committee, Association of Research Centres in the Social Sciences, 2001 – 2005 (Chair 2003-2004)

## ***Policy/business engagement***

- Energy Institute: President 2015-17; previously Vice-President, 2013-15
- Founding member, Committee on Climate Change, 2008-17
- Non-Executive Director, Blackrock New Energy Investment Trust plc, 2009-14
- Non-Executive Director, Renewables East, 2006 - 2009
- Member, Panel of Judges, Queen’s Award for Enterprise (Sustainable Development), 2006 -12
- Carbon Trust/DEFRA/BSI Carbon Labelling Advisory Group, 2007 - 2008
- Chair, Scottish Power Green Energy Trust, 2000 - 2008
- Member, Commission on Environmental Markets and Economic Performance, 2006-07
- Launch Director, Low Carbon Vehicle Partnership, 2002-2003
- Chair, DTI Automotive Innovation and Growth Team Environment Group, 2001-2002
- Member, UK Foresight Programme Panels, 1995 - 2002
- Special Adviser, House of Commons Environment, Transport and Regions Committee, Climate Change Inquiry, 1999-2000
- Core Faculty Member, HRH The Prince of Wales’s Business and Environment Programme, Senior Executive’s Seminar, 1997-2000
- Member, UK Climate Change Impacts Review Group, 1995-96 and 1990-91

## ***Selected publications***

The global energy context. In: *Global Energy: Issues, Potentials, and Policy Implications* (edited Ekins P, Bradshaw M and J Watson, ISBN 978-0-19-871952-6, Oxford University Press, Oxford, 2015

The clean energy imperative. In: *Renewable Energy Finance: Powering the Future* (Edited CW Donovan), Imperial College Press, London, 2015

The renaissance of energy innovation, *Energy and Environmental Science*, 2014, 7 (1), 21 – 24, DOI: 10.1039/C3EE43034K

(with M Hannon), UK innovation support for energy demand reduction, *Proceedings of the Institution of Civil Engineers*, Energy 167, Issue EN3, pp 171–180, August 2014

(with S Kokoni), Input–output and life-cycle emissions accounting: applications in the real world, *Climate Policy*, 2013, DOI: 10.1080/14693062.2014.864190

(with Hourcade J-C and Lechtenböhmer S), Climate policies in a changing world context: is a paradigm shift needed?, *Climate Policy*, 2013, Vol:13, Pages:1-4, ISSN:1469-3062

(with Lechtenböhmer S and Asuka J), Climate policies after Fukushima: three views, *Climate Policy*, 2013, Vol:13, Pages:36-54, ISSN:1469-3062

Research and evidence needs for decarbonisation in the built environment: a UK case study, *Building Research & Information*, 40:4, 432-445, 2012

(with Chaudry M, X Wang and N Jenkins) Modelling UK energy system response to natural gas supply infrastructure failures, *Journal of Power and Energy*, Vol 226 (4), pp 501-513, June 2012

(with Chaudry M and X Wang) The role of gas infrastructure in promoting UK energy security, *Energy Policy*, Volume 43, April 2012, Pages 202-213

(with Ekins P and Winskel M) *Energy 2050*, Routledge, 2011, ISBN:9781849710848

Valuing diversity in energy supply, *Energy Policy*, Vol 38, No 7, pp 3608-3621, July 2010, doi:10.1016/j.enpol.2010.02.038

(with Fankhauser S and D Kennedy), Building a low-carbon economy: the inaugural report of the UK committee on climate change. *Global environmental change part B: environmental hazards*, 8 2009, 201–208, doi:10.3763/ehaz.2009.0020, ISSN 1464-2867

Cold comfort in a high carbon society?, *Building Research & Information*, Vol 37, No 1, February 2009, pp 74-78

(with S Nishioka), Policies and Practices for a Low Carbon Society, In: *Modelling Long-Term Scenarios for a Low Carbon Society*, Special Issue of *Climate Policy*, 8 2008, 5-16 doi:10.3763/cpol.2008.0487

(with Anderson, D.; Green, T.; Gross, R.; Heptonstall, P.; Leach, M. Intermittent renewable generation and maintaining power system reliability, *IET Generation, Transmission and Distribution*, 2(1) pp 82-89, 2008, doi:10.1049/iet-gtd:20070023