

5th International Conference on

# CARBON ACCOUNTING

13<sup>th</sup> March 2013 Edinburgh

James Watt Centre 2, Edinburgh Conference Centre  
Heriot-Watt University, Riccarton EH14 4AS

## Conference Programme



### Welcome from the Chair of the Initiative for Carbon Accounting

Welcome to ICARB's 5th International Conference on Carbon Accounting.

We have a full and exciting programme and are particularly grateful to Garvin Heath, with support from the US National Renewable Energy Laboratory, for coming to share with us their recent work in developing a unified method for carbon accounting for different energy generators. Discussions today of how Scotland will be impacted by the Mandatory Reporting of GHG emissions are timely, as are the leading edge insights of our other speakers.

In 2011 we concentrated on mapping the landscape of carbon accounting in Scotland across all sectors and this year we have been tackling accounting for the Energy, Forestry, Tourism and Agriculture sectors, looking at issues of compatibility, complexity and replicability of methods. Next year we plan to focus on community, neighbourhood and city level accounting, building on the hard work of this year's ICARB workshop attendees.

Your contributions to the afternoon workshops will be invaluable in informing ways forward for ICARB's activities next year and in building the rules and tools we need for carbon accounting in Scotland. A special thanks goes to Sarah Boyack MSP for her constant support for ICARB. Thank you all for coming and enjoy the day.



**Professor Susan Roaf**

Organiser



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# Carbon Accounting 2013 : Agenda

■ 9.00 – 9.30 Coffee and Registration

## Session 1: Policy and Practice

**09.30 Welcome on behalf of ICARB and the Scottish Parliament**

*Sarah Boyack MSP and Professor Sue Roaf, ICARB*

**09.50 Mandatory Carbon Reporting: Supply Chain Impacts on Scottish Business**

*Fraser Wilson, PricewaterhouseCoopers*

A view from the accountancy profession on the different and varying impacts that mandatory carbon reporting will have on key business sectors within Scotland, specifically considering the impact on different stakeholder groups and the consequential effects for others in complex supply chains.

**10.10 Harmonising Greenhouse Gas Emissions Estimates for**

**Electricity Generation Systems: A US approach** *Dr. Garvin Heath, NREL, Denver*

Lenders, utilities and lawmakers need the most comprehensive and accurate information on GHG emissions from various sources of energy to inform policy, planning, and investment decisions. The National Renewable Energy Laboratory (NREL) recently led the Life Cycle Assessment Harmonization Project, a study that gives decision makers and investors more precise estimates of life-cycle GHG emissions for renewable and conventional generation, clarifying inconsistent and conflicting estimates in the published literature, and reducing uncertainty. The methods and results to-date will be presented by the leader of this study, Dr. Garvin Heath.

■ 10.50 – 11.20 Tea and Coffee

## Session 2: Key Issues for Correct Reporting

**11.20 The True CO<sub>2</sub> Impact from Electricity Demand and On-site Generation Choices**

*Dr. Adam Hawkes, Imperial College London*

This talk will consider approaches to analysing CO<sub>2</sub> impact across power generation options to build a framework through which the commissioning of large power stations can be compared with policies promoting on-site generation of electricity.

**11.45 Taking a Whole Systems Approach** *Dr. Angela Druckman, Centre for Environmental Strategy*

Speaking from her background analysing consumption and production with a whole-systems approach, this talk will address carbon accounting for “scope 3” emissions including consideration of how to avoid unintended consequences in the process.

**12.10 Mandatory Reporting: A Flexible Friend?** *Gary Davis, Ecometrica*

As more details emerge about the forthcoming requirement for firms listed on the London Stock Exchange to report their emissions in their Directors’ Reports it is becoming clear that companies will have much greater choice about what sources of emissions they are required to report. This talk will discuss the implications for reporting companies and those looking to use and understand the reported data.

**12.35 Question Time** *Chair: Professor Gareth Harrison, University of Edinburgh*

A chance to put your carbon management and measurement questions to our speakers.

■ 13.05 – 14.00 Lunch with networking and exhibitions

## Session 3: Workshops

14.00 – 15.30 Five discursive workshops will run in parallel:

### **Tourism: Towards a Scottish Accounting Method for Tourism**

*Chair: Dr. Rachel Dunk, Crichton Carbon Centre*

Is it possible to have an integrated carbon accounting methodology for tourism that can be applied across a range of destination scales? The Scottish Green Tourism Business Scheme, Visit Scotland and the Crichton Carbon Centre have contributed to ICARB's work to develop an accounting tool that can be applied to tourism across sectors and scales.

### **Business: Making Carbon Reporting Work for Your Business**

*Chair: Paul Adderley, Sustainable Opportunity Solutions*

Although 99% of UK business will not fall under Carbon Accounting and Reporting Regulations measuring their carbon impact will help management discover hidden savings. This workshop explores how tackling the carbon impact helps business evaluate their processes from a new angle, enhance their reputation in the supply chain and strengthen their bottom-line.

### **Land-use: Towards a Harmonised Land-use Accounting Method for Scotland**

*Chair: Vicky West, Forestry Commission*

The recent ICARB workshop on accounting for carbon in land-use revealed support across land-uses for further work to understand and compare accounting methods across forestry, agriculture and in peatlands. We will take these ideas further and formulate a plan towards greater integration over coming year.

### **Power Generation: Rules and Tools for Wind Energy Accounting**

*Chair: Sam Chapman, Heriot-Watt University*

This workshop will present two methods of carbon accounting for wind power in order to create reliable, robust accounting tools for the life cycles of power generation technologies. Discussion will focus around the applications and requirements for different stakeholders in using carbon accounting tools in practice.

■ An additional discussion group on **Cities and Communities** with Dr. Keith Baker, Glasgow Caledonian University will also take place in parallel at this time.

## Session 4: Rules and Tools for the Future

### **15.30 Workshop Feedback**

*with Vicky West, Dr. Rachel Dunk, Sam Chapman and Paul Adderley*

### **16.10 Progress with Carbon Accounting in the Scottish Government: Lessons and Ways Forward**

*Dr. Daniel Hinze, Scottish Government*

We'll hear about the key role of carbon accounting in progress on the Scottish Governments Climate Change Delivery Plan including how carbon reduction policy is embedded in decision making and strategies to meet Scotland's ambitious carbon emission targets.

16.30 **Thank you and close** *with Professor Sue Roaf*

## Useful Contacts

**Stay up-to-date with the latest in carbon accounting**

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Email us [enquiries@icarb.org](mailto:enquiries@icarb.org) or visit our website [www.icarb.org](http://www.icarb.org).

# Carbon Accounting 2013 : Contributors



**Professor Sue Roaf, School of the Built Environment, Heriot-Watt University**

Best known for her Oxford Ecohouse, Sue is an award winning designer, teacher and author. She has chaired International Conferences including the International Conference on Solar Cities and is Chair of the Initiative for Carbon Accounting.

[www.sbe.hw.ac.uk](http://www.sbe.hw.ac.uk)



**Sarah Boyack MSP, Member of the Scottish Parliament for the Lothians**

Sarah was for several years co-ordinator for Labour's environmental policy in Scotland. In 2004 she received the RSPB Goldcrest Award and in 2005 she was named Best Politician by Scottish Renewables.

[www.scottish.parliament.uk/msps](http://www.scottish.parliament.uk/msps)



**Fraser Wilson, Director of Risk Assurance, PricewaterhouseCoopers**

Working primarily in financial services Fraser is responsible for delivering assurance and advisory work in respect of clients' risks, processes and controls. This focuses on

regulatory compliance, performance related information and non-financial reporting using recognised reporting standards. [www.pwc.co.uk/audit-assurance](http://www.pwc.co.uk/audit-assurance)



**Dr. Garvin Heath, Senior Scientist, National Renewable Energy Laboratory, Denver**

Garvin is senior scientist at NREL's Strategic Energy Analysis Center, specialising in the evaluation of environmental impacts of energy

technologies. He's worked as a government researcher and consultant for nearly two decades. [www.nrel.gov](http://www.nrel.gov)



**Dr. Adam Hawkes, Lecturer in Energy Economics & Technology, Imperial College London**

An expert in technical and economic assessment of energy technologies and energy systems, Adam has experience with energy trading companies, energy policy and technological development.

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**Dr. Angela Druckman, Senior Lecturer in Sustainable Energy & Climate Change Mitigation, University of Surrey**

At the Centre for Environmental Strategy, University of Surrey, Angela's research takes a multidisciplinary, whole-systems approach on consumption and production, including considering linkages between lifestyles and carbon emissions and the 'rebound effect'. [www.surrey.ac.uk/ces](http://www.surrey.ac.uk/ces)



**Gary Davis, Operations Director, Ecometrica**

Gary runs the greenhouse gas accounting team at Ecometrica and over ten years has managed over 500 greenhouse gas accounting projects, advising multi-billion dollar companies across many industry sectors, including oil and gas,

finance, aviation, and professional services. [www.ecometrica.com](http://www.ecometrica.com)



**Professor Gareth Harrison, Deputy Head of the Institute for Energy Systems, School of Engineering, University of Edinburgh**

Conducting extensive research on the carbon footprint of energy generation sources and networks, Gareth is the Bert Whittington Chair

of Electrical Power Engineering at the University of Edinburgh. [www.see.ed.ac.uk/~gph](http://www.see.ed.ac.uk/~gph)



**Vicky West, Climate Change Analyst, Forestry Commission**

Vicky is on the UK Management Team for the Forestry Commission's Woodland Carbon Code and has lead ICARB's work on carbon accounting for land-use systems. [forestry.gov.uk](http://forestry.gov.uk)



**Paul Adderley, Principal Advisor, Sustainable Opportunity Solutions**

Paul has over ten years' experience of providing assurance and risk assessment services to multi-national companies in the UK and Japan.

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**Dr Rachel Dunk, Academic Director, Crichton Carbon Centre**

Rachel contributes to MScs in 'Applied Carbon Management' and 'Sustainability, Professional Practice and Leadership'. Her research interests include effective engagement in carbon

reduction and sustainable business practices and social justice implications of climate policy. [www.carboncentre.org](http://www.carboncentre.org)



**Sam Chapman, Heriot-Watt University**

Currently completing his PhD, Sam's research looks at the carbon assessment of energy systems specifically focusing on renewable energy devices. Sam also runs a carbon accounting

consultancy, En-Count.

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**Dr Keith Baker, Sustainable Urban Environments, Glasgow Caledonian Uni.**

Co-author of the book 'Carbon Management in the Built Environment' (Routledge, 2012) Keith's research interests relate to energy and the built environment with clients including the Scottish

Government, ClimateXChange, and Historic Scotland. [www.gcu.ac.uk/ebe](http://www.gcu.ac.uk/ebe)



**Dr Daniel Hinze, Heading of Environmental Analysis Unit, Scottish Government**

A senior economist in the Scottish Government's Rural and Environment Science and Analytical Services division, Daniel works to oversee the Scottish Government's work on

climate change, environmental quality and natural resource policy. [www.scotland.gov.uk](http://www.scotland.gov.uk)