



**The Initiative for Carbon Accounting : Workshop Series 2012-13**

## **Accounting for Low Carbon Communities**

Wednesday 6 February 2013, Edinburgh Centre for Carbon Innovation

Minutes by Dr. Keith Baker, Glasgow Caledonian University

### **Summary**

The following document provides minutes from the ICARB Communities workshop. The workshop aimed to address the following questions:

1. How do we design policies and programmes to enable community projects to capture a realistic picture of their carbon savings whilst being sensitive to their capacities?
2. What information do community project need, and how can they find it?
3. What are the roles of community projects within the wider community empowerment and climate change agendas?
4. How can these outcomes be taken outcomes forward over the coming year?

The workshop was also asked to consider a discussion paper from Adrian Shaw at the Church of Scotland, which is appended to these minutes.

A copy of the agenda and presentations are available on the ICARB website: [www.icarb.org](http://www.icarb.org)

### **Present:**

Dr Keith Baker	<a href="mailto:keith.baker@gcu.ac.uk">keith.baker@gcu.ac.uk</a>	ICARB & Glasgow Caledonian University
Prof Sue Roaf	<a href="mailto:s.roaf@hw.ac.uk">s.roaf@hw.ac.uk</a>	ICARB & Heriot-Watt University
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## **Welcome and Introduction**

Keith Baker welcomed everyone to the event and gave a brief introduction to ICARB.

### **What do we need from community carbon accounting?– led by Kate Ainslie, KSB**

Kate opened with a plea from the Climate Challenge Fund not to professionalise community carbon accounting or produce new protocols, citing examples of bad practice where CCF groups have out-sourced carbon accounting to consultants. She stressed that KSB is more interesting in the learning process than the accuracy of the numbers, and asked how we could assess improvements in carbon literacy.

She also asked for better Scotland-specific conversion factors, citing Zero Waste Scotland's factors as a good example of what they / communities need, and for more support to highlight the supporting and enabling role of the CCF.

The group discussed the different approaches employed by community groups to date, and the need to be realistic about what community groups can do to match their bottom up approaches with top down accounting. Standardisation was discussed, with reference to resistance to the standard tool being brought in for CCF projects coming from some existing projects who have developed their own tools.

Finally, the effectiveness of community projects in achieving behaviour / lifestyle change was discussed with respect to the size of 'communities' (in their broadest sense). The (limited) evidence appears to suggest that such projects are more effective in smaller communities, and particularly the islands.

#### **Action Points**

- ICARB to consider how to promote examples of good practice as part of proposed activities for 2013-14
- ICARB to approach funders / partners / decision-makers regarding better Scotland-specific factors for community groups

### **Developing a community level GHG inventory - led by Susan Carstairs**

Susan produced a community level carbon GHG footprint of Lochaber for her MSc thesis. A summary of the work, which was enthusiastically received by participants, is appended to these minutes.

Susan took the group through the development of the footprint, which is aligned to the IPCC reporting categories and involved accessing and converting data from a wide range of sources to produce a nearly complete footprint for the region, which clearly shows that the vast majority of emissions come from just a couple of industrial / commercial sources. See the project summary and presentation for full details.

#### **Action Points**

- RD and KB to work with Susan to produce a paper for ICARB's guest edition of the International Journal of Greenhouse Gas Measurement and Management
- ICARB to discuss how this work could be promoted / developed as part of the work on city-level accounting proposed for 2013-14

### **The case for Community-based Equity Participation in energy production - Prof Bill Slee**

Bill presented his work on this issue, which is the subject of a forthcoming paper (and so cannot be published in full at this time), opening with the evidence for the benefits of community

ownership of wind turbines being significant and strong enough to drive real change - e.g. by supporting local businesses and services - and cited the Fintry wind turbine as a good example of such a project. Bill's work suggests that 250 500MW turbines could deliver the equivalent of the income from 20% of the Scottish farming sector. A video on the Fintry project can be found here: [https://www.youtube.com/watch?v=ls\\_1p8ad2mc](https://www.youtube.com/watch?v=ls_1p8ad2mc)

Bill and the group questioned the problem of how well socio-economic development is considered in planning. Although socio-economic development it is a material consideration in applications the reality appears the policy drivers can be over-ridden where planners / planning committees don't sufficiently consider it. A good example given of how benefits can be made more 'obvious' is Good Energy providing a 20% discount on bills to communities near wind farms in Wales.

## **Further Discussion**

The group discussed issues around building capacity in leadership and governance within communities.

A good example of enabling leadership was given as the Welsh experience of the Community Energy Saving Programme (CESP), where local authorities acted as a facilitator between community groups and the energy companies.

The group identified the need for training communities in governance, which they felt needs to be Scottish-based, and incorporate upskilling and science communication.

Kate reported that KSB have found less environmentally-focused community groups have a broader / better reach, which was supported by the experiences of others in the group.

## **Appendix 1**

### ***Discussion paper for ICARB community workshop***

*Adrian Shaw, Church of Scotland*

#### What is the carbon footprint of the electricity we use?

Every unit of electricity we use has a carbon footprint associated with it, but it's not always easy for community groups like congregations to know precisely how much. If all our electricity comes from coal then the carbon footprint would be very high; if it all came from renewables it would be much lower.

#### How do we find out?

The UK Government publishes conversion factors that summarise, for the UK, how much carbon dioxide is released to the atmosphere for every unit of electricity generated in the UK. This figure reflects the mix of energy sources used to generate electricity in the UK, including coal, gas, nuclear and renewables. This mix has changed significantly in recent decades as many coal fired power stations across the UK have been replaced by gas fired power stations, so the proportion of coal in the fuel mix has gone down. In the UK in 1990 every Kilowatt hour (kWh) of electricity generated was responsible for over 700 grammes of carbon dioxide but by 2010 it had dropped to 454 grammes of carbon dioxide.

In Scotland the mix of fuels is different to the UK as a whole. There is a higher proportion of nuclear and a rapidly growing amount of electricity from wind power, so the figure for Scotland is lower: 347 grams of carbon dioxide per kWh of electricity generated, according to the Scottish Government. As further windpower is developed this figure should drop further.

In Argyll the figures must be lower again. Within a few miles of the community of Dalavich by Lochawe there are four major wind power schemes, hydro schemes at the Awe Barrage and Glen Nant and new micro hydro schemes being developed in several locations. Are carbon intensity figures published by local authority area and if so can we in Argyll use them to demonstrate how we are becoming a leading low carbon community?

Adrian Shaw

*Climate Change Officer*

*Church of Scotland*

## **Appendix 2**

### ***Developing a community level greenhouse gas inventory***

*Susan Carstairs*

Susan Carstairs completed a dissertation entitled Piloting the Global Protocol for Community Scale Greenhouse Gas Emissions in Lochaber in October 2012 as part of an MSc in Environmental Sustainability at the University of Edinburgh. She previously worked with SEPA as part of the National Waste Strategy Team and with the Lochaber Environmental Group as project manager.

A pilot protocol was issued in May 2012 through the Greenhouse Gas Protocol project to support an emissions inventory across all sectors of a community. Details are available at <http://www.ghgprotocol.org/files/ghgp/GPC%20v9%2020120320.pdf>. This was used in summer 2012 to calculate greenhouse gas emissions for the Lochaber area using national and regional data, previous research and interviews with local businesses and organisations. Data is recorded in four sectors: stationary units, mobile units, waste and industrial processes and product use. Due to the agricultural nature of Lochaber an attempt was also made to account for emissions from livestock. The trial enabled an assessment of the application of the protocol and raised points about both the data and its interpretation and usefulness.

The trial enabled an assessment of the application of the protocol. Some national data such as electricity usage was disaggregated to local level while travel data gave a mixed picture. From interview data, larger firms were generally able to provide data, smaller firms less so and public bodies very helpful. The protocol categories of stationary and mobile units are not readily comprehensible and need interpretation. The inclusion of industry raises the question of what constitutes a community in terms of carbon management. A major limitation of the protocol is that it does not include consumption based emissions. This is consistent with reporting under the UNFCCC but has the potential to seriously distort an account.