



## Minutes of ICARB Energy Workshop

Wednesday 21<sup>st</sup> November 2012

**Time:** 1.30pm - 3:30pm

**Venue:** Paterson's Land, University of Edinburgh, Holyrood Road, Edinburgh

### Summary

The following document provides minutes from the ICARB energy workshop. The workshop discussed best current practice in carbon accounting for life cycle carbon emissions from large-scale power infrastructure and the operational impacts of the relationship between different generation technologies on a distribution network. Key issues were introduced which covered: the harmonisation process developed by NREL and how it's methodology can be applied to developing frameworks; continued challenges in creating a standard framework; and grid and wind interaction through looking at marginal carbon offsets of wind power. A framework and review process is critical to decision making. There are levels of carbon accounting appropriate to different stakeholders and this must be reflected in developed guidelines. ICARB should include other institutions/initiatives working in carbon accounting in the development of any guidelines.

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

### Attendees

Ben Murray	Blackwood Environmental Consulting
Camilla Thomson	University of Edinburgh
Gareth Harrison	University of Edinburgh
Keith Baker	Glasgow Caledonian University
Samuel Chapman	Heriot-Watt University
Sergio Elizondo-González	Edinburgh University
Philip Cooper	Heriot-Watt University
Gillian Menzies	Heriot-Watt University
Kittitach Pichatwatana	Edinburgh University
Jim Hart	ECCI

## Minutes

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Copies of the presentations are available on the ICARB website. The following areas were covered by the three speakers, Samuel Chapman, Camilla Thomson and Gareth Harrison::

- The NREL Harmonisation Project and how ICARB can learn from its process in developing carbon accounting frameworks
- Grid and Wind interaction. Marginal carbon offsets of wind. Lessons from historical data – are we getting any closer to understanding how to balance and optimise the respective contributions of different technologies on the grid?
- Challenges in developing a standard framework in Scotland for the carbon accounting of power generation technologies.

## Discussions

Garvin Heath from NREL was available via web link for comment at the start of the workshop. He discussed the NREL harmonisation project and how it looks at attribution carbon accounting only. This is the accounting of specific projects only and not the accounting for consequences of decisions or marginal issues. Some region-specific issues such as peat disturbance in Scotland is difficult to include in such a process since it looks at global estimates. Consequential carbon accounting is important for understanding decisional impacts but very context dependant and so retrospective harmonisation is difficult in this situation.

The usual official statement of National Grid to which technology is currently reacting to wind power's intermittency is gas plant. However, data shows there is some coal reaction also, although it is not clear as to whether this is demand-driven for peaks or driven by wind power reducing output. Coal reacts in around 5 hours on average while gas reacts in 15 minutes on average.

A question was raised as to whether certain bodies within a sector could get in the way of carbon accounting standard development since they would wish to be the main contributors to the development. Within the energy sector, there are a number of different sectors developing who use carbon accounting in very different ways. The traditional plants use carbon accounting, as they are required to do so within environmental impact assessments. The newer subsectors, such as the renewables sector are using carbon accounting for justification of their technologies.

The energy sector is seen as a particular example of large governance by the industry itself as well as being largely impacted upon by the financial markets entrenched in the delivery of electricity via the National Grid. The current hierarchy of technologies coming online for power supply do so due to financial trade, not due to carbon intensity. The physicality of supplying power is not currently considered past supplying the required levels of power to regional demand.

