

**DECC Science Advisory Group  
Meeting 13 October 2011: Minutes**

**Main topics discussed:**

- **International climate negotiations**
- **Climate change science (non CO<sub>2</sub> forcers and climate tipping points)**
- **Public perception of climate change**
- **Setting the strike price in the Electricity Market Reform**

Present:	Apologies:
John Shepherd (Chair)	Nick Jenkins
David MacKay (DECC Chief Scientist)	
Tadj Oreszczyn	
Nicholas Pidgeon	
Stuart Haszeldine	
Sue Ion	
Jon Gibbins	
Paul Watkiss	
Peter Cox	
Chris Mottershead	
David Bacon (representing Chief Scientist Welsh Assembly)	
Jim Penman, James Davey, Catriona Knox, Tim Deverell, John Holmes (DECC Evidence Team)	
Pete Betts (DECC – presenting on international negotiations)	
David Warrilow (DECC)	
Nick Skates (DECC – presenting on the EMR)	

### Opening Introduction – John Shepherd

The SAG agreed to offer advice on the environmental impacts of shale gas in the UK, if there was desire for this from DECC’s policy officials. **Action:** SAG Secretariat to liaise with DECC policy officials and will request advice from the SAG if needed.

### Report from Chief Scientific Advisor (CSA)– David MacKay

*Geoengineering update* – The CSA noted the recent problems with the SPICE<sup>1</sup> geoengineering field trial, and has involved the Science Media Centre in providing publicity for the project. As chair of the cross-Whitehall Geoengineering group, the CSA asked for the SAG’s opinion on the importance of reaching a joint government view on geoengineering. The Chair advised not to rush into decisions on government support or otherwise for specific technologies. It would be preferable to wait for lessons learnt from other expert bodies e.g. SPICE project, and current Royal Society work on geoengineering governance (SRMGI).

*Measuring radioactivity levels* –The CSA is interested in defining a scale for presenting radioactivity/radiation dose levels for use in the event of an accidental release, and a plan on what level of intervention to take at each level. Defra’s air pollution scale was referenced as a good example to follow.

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<sup>1</sup> SPICE = Stratospheric Particle Injection for Climate Engineering (sponsored by UK Research Councils)

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The SAG expressed support for a defined radiation scale as a means of improving responsible media coverage, and informing decisions on public spend for reducing radiation levels. Sue Ion referenced the Weightman report on the Fukushima accident for a useful (internationally accepted) scale of this kind. For discussion at the next meeting.

*Heat pumps standards* – DECC has published standards for the heat pump industry, including on the temperature at which HPs should operate and heat exchanger sizing. It is hoped this will increase performance in RHI installations.

*Innovation funding* – DECC's in-house team is allocating up to £140m over 4 years to low carbon innovation projects (with engagement from the Carbon Trust). Good progress is being made so far (e.g. £30m announced for reducing costs of offshore wind, £35m announced for innovation in the buildings sector.)

*Changes to DECC's Science and Innovation Group (SIG)*– 10 new engineers are being recruited to the team. SIG is combining with the strategy, economics and statistics directorates to become the Strategy and Evidence Group (SEG). SEG directors are considering how best to re-organise the structure of the group to give better, joined-up advice to Ministers and the Permanent Secretary.

*4<sup>th</sup> Carbon Budget Strategy, to be published ~ November* – The government is legally bound to produce this report which will outline policies for meeting the 4<sup>th</sup> Carbon Budget, showing consistency with pathways to 2050. The report also includes Government's response to Committee on Climate Change advice on meeting the budget.

*Inclusion of costs in the 2050 calculator* – The current approach is to assign prices to different technologies based on MARKAL's cost assumptions (excepting fossil fuels) where possible, though the user will be able to override these cost assumptions if desired. This approach will minimise the uncertainty range for the costs of different pathways. The new version of the Calculator will be launched shortly. The SAG welcomed this initiative as a significant enhancement..

### **Current state of climate negotiations and challenges for Durban – Pete Betts, DECC**

Pete Betts presented on DECC's strategy for driving international action on climate change, and on desired objectives for next year's negotiations in Durban. A summary is reported separately.

### **Current state of climate science – Peter Cox**

Peter Cox presented on the rationale for increased action on reducing non-CO<sub>2</sub> emissions, notably methane, other tropospheric ozone precursors and black carbon. The second half of the presentation focussed on possible climate tipping points (points at which the global climate system moves irreversibly to an alternative state), specifically linked to Amazon dieback and permafrost melt. Evidence from atmospheric CO<sub>2</sub> concentration measurements and tropical temperature anomalies suggested that the former is less likely than had been feared. Consideration of heat release leading to increased rates of oxidation of organic material in soils suggested that the latter might be more serious than previously thought.

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### **Public perception of climate change – Nick Pidgeon**

Nick Pidgeon presented the results of Cardiff University's 2010 Energy Climate Survey, and highlighted some issues concerning public perception of risk (especially of high impact events). Flooding emerges as a key issue for the UK. Public support for government action and even taxation is quite high even in the USA and China. There is still a need for more effective actions for increasing public engagement in climate change policy.

**The SAG will consider producing briefing material on international negotiations, climate science, and public perception of climate change for publication on the SAG webpage. Action:** SAG Secretariat to work with the Chair to draft Climate summary note based on discussion in the meeting, for consideration by the Group.

### **EMR: DECC Perspective – Nick Skates, DECC**

Nick Skates presented on current government policy proposals for the contract for difference, capacity mechanism, carbon price floor, and emissions performance standard.

The SAG discussed potential approaches to setting the strike price for the EMR contracts for difference. **This advice will be summarised in a separate note to be published on the SAG webpage. Action:** SAG Secretariat to work with the Chair to draft EMR summary note based on discussion in the meeting, and publish on webpage subject to SAG approval.

It was agreed that the SAG should continue to engage on EMR policy as it develops. **Action:** SAG Secretariat to set up a separate half day meeting between interested SAG members, the CSA, and the DECC EMR team, including adequate expertise on wind

### **Future agenda**

12<sup>th</sup> January was suggested as a suitable date for the next meeting.

**Action:** SAG Secretariat to commission DECC presenters for the next meeting.

A few suggestions were made concerning the future agenda:

- The CSA requested that electricity systems balancing, and response to the CCC Renewables Review and Poyry report on balancing renewables capacity be added to the future agenda.
- Future meetings should have a greater focus on specific technical issues rather than broad policy-orientated discussions.
- **Action:** John Shepherd invited SAG members to put forward by email additional ideas for future agenda items.

### **Outstanding actions list**

**Action:** Jon Gibbins to draft note on Bioenergy strategy (See minutes of July meeting for full action).