

DECC Science Advisory Group Minutes 10th July 2013

Agenda

1. Introduction and CSA's update
2. Presentation by *Heat Team*:
 - a. Heat policy document 2013 and how the conclusions were reached
 - b. The work programme that is now being taken forward
 - c. The research and analytical programme that is supporting the work programme
3. Discussion: "What will the UK energy infrastructure look like in 2050 in a low carbon heat world?" Discussion focussing on some of the following questions:
 - a. How should we address the interaction between low carbon electricity and low carbon heating in developing a whole systems approach?
 - b. How do we place a value on the role of heat storage?
 - c. What will the 'no regrets' options be over the next 5, 10 and 20 years, and how do we avoid locking in sub-optimal infrastructure solutions?
 - d. Levers for change – factoring in the consumer angle
4. SAG Horizon scanning paper – finalisation
5. AOB

Venue: Institute of Mechanical Engineers, London

Present:

Apologies:

John Shepherd (Chair)

Stuart
Haszeldine

David MacKay (DECC Chief Scientific Advisor)

Nick Jenkins

Jon Gibbins

Paul Watkiss

Sue Ion (via teleconf.)

Tadj Oreszczyn

Chris Mottershead

Nick Pidgeon

Peter Cox

Harshal Mehta (DECC Evidence Team)

James Davey (DECC Evidence Team)

Katherine Hill (DECC CSA's Office)

David Warrilow (DECC Head of Science)	
David Wagstaff (Head of the Distributed Energy/Heat Team)	
Sarah Montgomery (DECC Heat team)	
Graham Allardice(DECC Heat team)	
Chris Holland(DECC Heat team)	
Chris Wickins (DECC Heat team)	

Chairman's Introduction

John Shepherd welcomed everybody to the SAG meeting and gave a brief update:

John attended a meeting with GO-Science. He spoke with Government CSA, Sir Mark Walport about climate change/energy policy. These are key areas of interest for Sir Mark Walport and indicated he would like to work closely with DECC in the future

John also spoke to the Defra SAC chair Professor Christopher Gilligan about reservations about Climate Change risk assessment¹. This could be a possible SAG agenda matter for a future meeting.

John requested an updated on the Carbon Plan pathways work the SAG is due to participate in. James Davey explained the DECC Futures team do not have the resources at the moment to carry out such work with SAG. A future meeting agenda looking at technical aspects of the Carbon Plan pathways was suggested.

John requested an update from DECC on the forthcoming DECC Evidence Strategy.

Action: SAG secretariat to organise future meeting on Carbon Plan pathways.

Action: SAG in Emergencies- members to return forms to CSA's office if they are interested in being on the Emergency register.

Action: SAG members to complete the membership poll.

Action: Evidence Team to update the SAG and SSEP on progress on the Evidence Strategy

CSA's Update

- Changes to the DECC structure – A new Directorate General: International, Science and Resilience (which includes Nuclear decommissioning), is to be established in DECC. The CSA will be moving to a slightly different role working in coordination with Science and Strategy; in particular the 2050 Futures team. The Economics team and Strategy Directorate will move into the Finance and Corporate Services Directorate General, with Strategy reporting to the new Directors of Corporate Strategy and Change.
- Ravi Gurumurthy (Head of Strategy) will leave DECC.

¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69487/pb13698-climate-risk-assessment.pdf

- The CSA has been helping with the British Energy Challenge. The British Energy Challenge is a series of events designed to engage the public in thinking about how the UK can move to a low carbon economy. The CSA has been facilitating 2050 pathway work with an audience in Liverpool, Sheffield and Leeds. The CSA will continue participating in the project which has been well received to date.
- On efforts to ensure bioenergy use in the UK is sustainable the CSA feels some good progress has been made. SIG has been working closely with ORED on a consultation on renewable obligations, in particular certification for forestry carbon stock. Progress on ensuring bioenergy sustainability through enhanced certification will be reviewed in 2016 by DECC.
- The Electricity Market Reform (EMR) Programme has been very busy. The CSA is confident that the contract-for-difference (CFD) approach to supporting low-carbon generation will be more successful than the renewable obligation. He feels that there is still room for improvement in CFDs but this is more an economic issue rather than a science one.
- The CSA is sitting on the Longitude committee chaired by Lord Martin Rees. Participants will be asked "What is the biggest challenge the world faces in the coming years, and how do we solve it?" The winner will be awarded £1million to help develop their innovation. The CSA has influence over the Energy and Environment themes.
- Risk and Emergency Issues – The CSA has had meeting with Public Health England who are having a review of emergency reference levels for advising counter measures in an emergency, and guidance issued on this. He hopes the outcome of the review will lead the clearer information given to the public on emergency risks of attacks on nuclear facilities. In addition the CSA has also been looking at cyber-attacks on gas plants and would like help in continuing to improve security to mitigate any potential threat.
- Climate Communications – A large number of Parliamentary Questions from the House of Lords have been received by the science team. The volume of questions is a concern and the Science team is looking at ways this can be managed.
- Renewables target – The CSA is interested to measure progress of all countries in Europe against the 2020 targets, and the potential impacts (e.g. is everyone planning to burn biomass all at once and will we therefore run out?) Strategy team are looking at progress against targets by all countries in Europe and will be drafting a paper in the upcoming months.
- The DECC Shale Gas study which reviews fugitive emissions and life-cycle analysis from the most recent shale gas literature is due to be published in September.

SAG Comments

JS – It might be a good idea to invite Myles Allen to the SAG to discuss how scientific evidence can best be used to inform climate policy

JS – Forest Stewardship Council could be a useful way to communicate the idea of bioenergy certification for forests through Europe. **Action:** pass on recommendation to Anna Stephenson/David Warrilow

JS – The Royal Society has been considering a study on cyber security. The CSA may have an interest in this.

Action – CSA to share final version of the Shale gas study with the SAG

Future of Heat

The session began with a presentation from members of the DECC Heat Team. The presentation summarised the contents of “The future of Heating: Meeting the Challenge”², a publication from DECC that covers the whole spectrum of heat and cooling in the UK.

The SAG had questions for the policy team with regards to the ESMI and RESOM modelling results and the uncertainty that is still present.

The first part of the afternoon session, David Wagstaff facilitated a discussion on what the UK energy infrastructure could look like in 2050 in a low carbon heat world.

There was a debate about technical aspects of heat pumps, the different variations including marine heat pumps, efficiencies and how best they can be employed. The CSA pointed out that he would like DECC to ensure the efficiency of heat pumps by metering and monitoring performance of installations. It is important that installations not only meet the minimum criteria to be considered renewable but also that the performance of an installation is equal to or better than the expected performance accredited under RHI in order to determine whether changes to the RHI scheme could deliver greater benefits.

Action: Nick Jenkins to share a paper on Marine heat pumps

During the late afternoon session there was more focused discussion around:

- a. How DECC should we address the interaction between low carbon electricity and low carbon heating in developing a whole systems approach
- b. How do we place a value on the role of heat storage?
- c. What will the ‘no regrets’ options be over the next 5, 10 and 20 years, and how do we avoid locking in sub-optimal infrastructure solutions?

Summary of discussion to be attached in a separate document.

AOB/ Forward Look

Next SAG on 31st October – discuss the technical aspect of the Carbon plan pathways (TBC).

Action – SAG Secretariat to send a doodle poll to confirm date for the December SAG meeting. International issues’, including the new IPCC Report, is a possible agenda item (also embedded carbon, fugitive emissions from fracking, and the Evidence Strategy).

Action – SAG to let the secretariat know if there are any remaining issues with the Horizon Scanning paper in the next two weeks.

² <https://www.gov.uk/government/publications/the-future-of-heating-meeting-the-challenge>