Minutes of the first meeting of the SAP Scientific Integrity Group 8th August 2012.

Attendees

SAPSIG members:
Robert Lowe (RL) [Group chair]
John Counsell (JC)
John Tebbit (JT)
Martin Searle (MS)
Neil Cutland (NC)
Tessa Hurstwyn (TH)
Apology for Absence – Malcolm Bell

Government Department attendees:
Alan Christie (AC) - DECC
Paul Decort (PD) - DCLG
Apologies for absence - Stephen Rippon and Neil Witney (DECC), Francois Samuel (Welsh Govt), Gilliam McCallum (Scottish Govt), Michael Hunter (Northern Ireland Govt).

BRE attendees:
Brian Anderson (BA)
Bruce Young (BY)
Les Shorrock (LS)
Ludmilla Kosmina (LK)
Christine Pout (CP)
John Henderson (JH)
Will Griffiths (WG)
Simon Nicol (SN)
Apology for absence – Paul Davidson

Initial orientation session

LS gave a presentation on the background to SAP and BREDEM, the model development, and the rationale for the SAP Scientific Integrity Group (SAPSIG). This concluded by listing examples of issues that the group is likely to encounter and will need to address.

WG gave a presentation on SAP Appendix Q, the means by which many (but not all) SAP developments are initially introduced. This covered the history of Appendix Q and emphasised that there are well defined processes that are followed both for the listing of products for which there are existing categories in Appendix Q, and for new technology applications.

SAPSIG members had no specific observations on the presentations. However, the discussions that followed touched upon some of the issues that had been mentioned.

Terms of reference

Draft terms of reference had been circulated. Various questions and issues relating to these were posed and discussed. These included matters relating to the process for reporting, conflicts of interest, confidentiality, and the boundaries of SAP. Some amendments to the terms of reference were proposed.

- Following the discussions it was agreed that there should be a further iteration of the terms of reference before the next meeting of the group.

Discussion of technical papers

Four technical papers had been circulated for discussion. The topics covered in these included weather data for cooling calculations, assumed heating patterns and time and temperature zone control, smart meters, whole life carbon performance, localised biogas, carbon emission factors, electrically led micro-CHP and voltage optimisers.

Decisions were reached by the group on some of these topics. In several cases the view of the group was simply that more data was needed in order to make any recommendations. Therefore, it was felt that one important role of the group would be to highlight where there is profound scientific uncertainty, and hence a need for data collection. In summary:

- Cooling is really a local issue rather than regional (i.e. noise in cities prohibits window opening and this means that cooling in city apartments can be a good technical fix). The demand is actually driven by some kind of “unpleasantness index” but there is insufficient data to properly quantify this.

- There were differing views expressed on heating patterns and time and temperature zone control. On the one hand, it was argued that checks within the SAP model can sometimes drive things in unsuitable directions – e.g. encouraging zoning and time controls in new homes when this may not be appropriate. However, it was also argued that there is a need to keep things simple and therefore a pragmatic approach is required. It was agreed by all that more data is needed. In this regard it was noted that the Energy Follow Up Survey will shortly be providing one-off heating pattern and temperature data from a significant number of homes, but that collection of more regular data would potentially be helpful.

- Smart meters had been flagged up as a topic for the future. This was not considered an urgent priority at this stage and so there was no discussion on it.

- It was recognised that whole life carbon performance, although important, goes beyond the remit of SAP. Thus, it was decided to firmly uphold the position that SAP is not intended to deal with embodied energy / carbon. Such matters are dealt with via other policies and tools.

- Localised bio-gas injection into the gas main was already counted via the use of a UK average emission factor. This treatment was no different to wind farms where local emission factors are not considered – i.e. the UK average emission factor for electricity takes account of wind farm generation. The group concluded that a general

principle should be that where a scheme is connected to the grid, the grid emission factor should be used.

- It was noted that there were issues with bio-fuels in that there was not enough data and so there were inevitable uncertainties. This was a key reason why the practice of using UK average emission factors in SAP was both appropriate and necessary. Other policies outside of SAP help determine whether bio-fuels are “good” or not. Both of these points were accepted by the group.

- It was suggested there may be a need for a research project on real time carbon emissions. The market for time shifting / smart appliances would be driven by time dependent electricity costs. However, it was agreed that this was not an urgent issue at present but that the group should return to it in future meetings.

- Three possible options for the treatment of electrically led micro-CHP were outlined in the paper that had been circulated. It was noted that the paper highlighted the potential un-intended consequences that could arise in SAP when a given technology is pushed to an extreme (in this case the extreme of a unit that is effectively a power station, producing huge amounts of waste heat). No decisions were reached about the options but it was agreed that SAP is about dwellings, not about industrial installations, and that this principle has to be upheld. It was also agreed that calculations should be undertaken applying each of the three options to see what the effect on SAP ratings was.

- The general conclusion on voltage optimisers was that this technology was not part of the remit of SAP, it could only apply to a very small proportion of the energy use of appliances, and the effect on this energy use was unlikely to be significant. However, there was insufficient time to discuss this topic fully so it was agreed to refer it forward to the next meeting.

- PV panels, and in particular how much of the generated electricity is used in the home and how much is exported, was added to the topics discussed. It was noted that the Elexon profiles data allows the relevant proportions to be estimated (at the 100 or so homes level) and this data should be consulted. However, it was also noted that this was an issue that had been created by politics - it was not of any intrinsic scientific interest. Therefore, the message should be fed back to DECC that matters would be made much simpler if there was just one tariff.

Any other business

It was remarked that the papers that had been produced on electrically led micro-CHP and voltage optimisers were a useful format to follow when preparing future papers for SAPSIG meetings.

Next meeting

Wednesday 21st November 13:00 to 16:00 was proposed.