

# **STAKEHOLDER ADVISORY GROUP ON ELF EMFS (SAGE)**

summary record of the

## **DISTRIBUTION WORKING GROUP MEETING**

**9 June 2009**

**Baldwins Gardens, Holborn, London EC1**

### **DISTRIBUTION:**

Copies to       - Meeting Participants, Apologies, and SAGE Website  
1 copy           - Golder Associates (UK) Ltd

June 2009

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This document is a summarised report of the third meeting of the SAGE Distribution Working Group (DWG), held on 9<sup>th</sup> June 2009. A full report is also available.

**NOTE: Nothing in this report should be taken as representing a collective SAGE view. The views recorded are for the most part expressed by individual participants and even where the report indicates that an agreement has been reached, this has the status only of a working agreement for the particular meeting or workstream and should not be quoted as a SAGE view.**

**Attendees:**

Paul Bicheno	Institution of Engineering and Technology
Roger Coghill	Coghill Research Laboratories
Caroline Hampden-White	Children with Leukaemia
Andrew Hood	Western Power Distribution
George Hooker	Department of Health
Jill Meara	Health Protection Agency
Alasdair Philips	Powerwatch
Graham Philips	Electromagnetic Radiation Research Trust
Peter Roberts	Energy Networks Association
John Swanson	National Grid
Adrian Todd	Kilmorack Community Council

Facilitator - Nigel Westaway  
Technical Reporter - Simon Turner

Apologies - none

## **INTRODUCTORY PRESENTATIONS**

### **Substations**

John Swanson gave a presentation entitled, "An Introduction to Substations." The main points of the presentation and copy of the slides can be found in the full meeting report.

The work of the DWG is concerned mainly with final substations that step down voltages from 11kV to 400V for domestic purposes (of which there are thought to be approximately 90,000 in the south west alone). It was concluded that few homes lie within range of significant fields from the substations themselves, but more are affected by fields from the network of wires and cables feeding into and out of them. It would be difficult to gather more information on this or to interpret it, but it was

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noted that an international epidemiological study is being considered, focusing on residents of blocks of flats containing substations

### **Magnetic Fields from Overhead Distribution Lines (11kV and above)**

John Swanson gave a presentation on the typical magnetic fields from overhead distribution lines of 11kV and above. The main points and a copy of the slides can be found in the full report. is attached at **Appendix 2**.

Not many homes fall within critical distance of an overhead line and the UKCCS Residential Sources ("High Homes") Study did not record any overhead lines between 400V and 132kV as the source of fields above 0.2 or 0.4 $\mu$ T. It was suggested that these intermediate voltages were not a major issue for the DWG, but that wiring practice is. The group also acknowledged that there are exceptions (e.g. resulting from independent generation schemes embedded within the system).

### **ELECTRIC FIELDS**

Roger Coghill gave a presentation introducing concerns about electric fields and their possible health effects. The main points and a copy of the slides can be found in the full report. .

It was agreed that the existing body of work on electric fields from distribution systems be reviewed and the DWG would then decide whether to pursue the issue or not. It was acknowledged that there is no consensus on the health impacts of electric fields.

### **WORKPLAN**

A review of the DWG workplan was undertaken. It was agreed that all introductory information had now been presented.

### **MITIGATION METHODS**

A group from within the DWG was identified to assemble a "long-list" of possible mitigation techniques to be discussed at the next meeting. Electric fields and 11kV and 33kV overhead lines are to be excluded for the present.

### **MITIGATION ASSESSMENT CRITERIA**

An initial list of assessment criteria, by which to judge the mitigation methods, was produced. The list will be refined at the next DWG meeting.

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## **INFORMATION REQUEST**

The draft Information Request to be issued by the Energy Networks Association to its members was reviewed and agreed. It is appended to the full report.

It was also agreed to seek information separately on three further points:

- i) whether companies have net current trigger levels which lead to investigation, and how they detect and manage these events;
- ii) the numbers, types and voltages of UK substations and
- iii) the numbers of small generators connected to the grid.

## **REPORT TO MAIN GROUP**

It was agreed that Caroline Hampden-White and John Swanson would deliver a short report on behalf of the DWG to the Main Group on its progress thus far.

## **NEXT MEETING**

The next DWG meeting will be held on Thursday 3<sup>rd</sup> September 2009.