Statement of Compliance of Electricity Substations with Public Exposure Limits for Electric and Magnetic Fields

The UK has a carefully thought-out set of policies for managing and protecting against electric and magnetic fields (EMFs). This includes numerical exposure guidelines to protect against established, acute effects of EMFs. It is Energy Network Association members policy to ensure electricity assets comply with the exposure limits.

This Statement confirms that local distribution electricity substations are compliant with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) to power-frequency electric and magnetic fields (EMFs).

It is compiled in accordance with the provisions of "Power Lines: Demonstrating compliance with EMF public exposure guidelines. A voluntary Code of Practice." Issued by DECC March 2012 (see more details at the end of this Statement).

The Code of Practice states:

> *"The Electricity Industry agrees that whenever evidence is required of compliance with EMF exposure limits, it will provide evidence according to this Code of Practice. Government agrees that such evidence will be regarded as sufficient to demonstrate compliance."*

Situations envisaged in the Code of Practice where the need for evidence of compliance with exposure limits may arise include applications under the Planning Act 2008 and the Electricity Act 1989 and related activities such as property sales.

Thus, this Statement is regarded as sufficient to demonstrate compliance. Further calculations or measurements are not necessary.

For further information on EMFs, the exposure limits in the UK and compliance, see www.emfs.info

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Signature: 

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Policy on compliance with exposure limits

UK Government policy is that protection of the public in relation to EMFs is achieved by compliance with the 1998 ICNIRP Exposure Guidelines in the terms of the 1999 EU Recommendation. Full details are given in a Code of Practice published jointly by Government and industry, available at:

http://www.emfs.info/policy/uk-policy/links/

This Code of Practice specifies that the relevant limits for public exposure can be taken as:

- Electric field: 9000 V/m (volts per metre)
- Magnetic field: 360 µT (microteslas)
- Applying to residential properties, and to properties where members of the public spend an appreciable proportion of their time, defined in terms of Use Classes as "dwellinghouses", "houses", "houses in multiple occupation" and "residential institutions", and also embracing other residential properties which may not fall within a particular use class e.g. flats or hostels, along with schools, crèches and day nurseries. In each case, for practical application of the guidelines the definition should also be taken to include the curtilage of the building concerned.

Compliance with public exposure guidelines gives automatic compliance with occupational exposure guidelines.

The Code of Practice provides for certain classes of equipment that are inherently compliant with the exposure limits:

> *"The Energy Networks Association will maintain a publicly-available list on its website of types of equipment where the design is such that it is not capable of exceeding the ICNIRP exposure guidelines, with evidence as to why this is the case. ...*
>
> *Compliance with exposure guidelines for such equipment will be assumed unless evidence is brought to the contrary in specific ."* (page 4)

The list of compliant apparatus referred to is available at: http://www.emfs.info/compliance/

At the date of issuing this Statement, the list comprised:

- All overhead power lines at 132 kV and below
- All underground cables at 132 kV and below
- All substations not containing air-cored reactors
- Sealing end compounds

For equipment not included in this list, the Code of Practice requires that compliance should be demonstrated on a case-by-case basis. Calculations are specified as an acceptable method of demonstrating this, and the Code of Practice specifies the conditions and methods to be used for these calculations.