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**Smart Metering Implementation Programme:**

**Consultation on the second version of the Smart Metering Equipment Technical Specifications (URN12D/258).**

Consultation reference: URN 12D/258

**Question 1: Do you have any comments on the criteria used in the evaluation of the application layer standards?**

The key criterion used in the evaluation of the application layer standards and all the rest of SMETS 2 should be health, for the following reasons.

- (i) As referenced by submissions to DECC in previous consultations, there are increasing concerns about ill health caused by radio frequency wireless radiation, as proposed for HAN and WAN wireless smart meter solutions. The WHO's IARC has classified the radio frequency proposed for wireless communication as a class 2B carcinogen. Countries like China, Poland, Russia and Switzerland have rejected the private group ICNIRP's heating limits, as still held by DECC and the UK's HPA, and have long – since 1958 in the case of the USSR – adopted non-thermal limits. In 2012 India also rejected ICNIRP's heating limits and instead adopted non-thermal limits which recognize the established biological effects of radio frequency (RF). It is likely to be only a matter of time before increasing established scientific evidence and legal judgments will mean that even private groups like ICNIRP will have to recognize non-thermal limits. In this case the whole wireless system will become obsolete or have to be restricted.
- (ii) Some doctors are already saying that 80% of the ill health with which they deal is caused by or increased by electro-pollution. This includes RF, such as from wireless smart meters.
- (iii) Since the UK proposal to use wireless smart meters was made, many people with wireless meters fitted over the last 18 months in the US, Canada and Australia have reported electro-sensitivity symptoms caused by their wireless smart meters. As is now well established, once you have been sensitized to electro-magnetic radiation, it is very difficult to eliminate your body's sensitivity to it, meaning that many sensitized people lose their jobs, home and almost all social life – as evidenced in recent reports in the UK press of people having to live in woods or on mountains; this is becoming increasingly common in the UK and in countries which do not limit electro-pollution.
- (iv) Life is particularly difficult for children who are sensitized to electro-magnetic radiation, as can easily happen with RF transmitters fitted near to or within dwellings. Some sensitized children in the UK have been unable to find an appropriate school as a result, because of further problems of pollution from WiFi and mobile phones.
- (v) Since 2008 the majority of involved scientists have regarded RF, as proposed for wireless smart meters, as having adverse health effects. It does not make sense to ignore this evidence in proposing a national scheme of irradiating the population. Such irradiation would appear to be ethically unacceptable if this were to be a scientific experiment.

- (vi) More enlightened countries such as Italy and parts of France have policies to avoid all wireless smart meters and use cables instead. Just because the UK has no NHS centres of excellence in dealing with the medical issues caused by electrosensitivity, it does not mean that the UK should ignore established effects of RF radiation, especially where it is proposed for the HAN. Doctors now insist that it is crucial for good health than the sleeping area in particular is kept completely free from electro-pollution.

It is therefore inappropriate to be considering wireless for HAN or WAN. DECC should insist on wired or cabled systems instead.

**Question 8: Do you agree with the approach to allow the market to determine the balance between 2.4 GHz and 868 MHz? If not, please provide rationale and evidence.**

If the retrograde decision is upheld to allow radiation transmitters for WAN and HAN, then it is essential to assess the type of ill health which 2.4 GHz and 868 MHz will inflict on those living within range. The following points appear relevant.

- (i) Higher frequencies, such as the 2.4 GHz carrier in this case, although they penetrate the human body less deeply than lower frequencies, are nevertheless often associated with greater incidences of cancers and malfunction where the organs are close to the exterior of the body. Thus skin, breast and testicular cancer incidences appear greater for microwave frequencies than ELF, as do cardiovascular illness, cataracts and male infertility. If the WiFi standard is adopted, however, this has ELF 10 Hz and c250Hz components in the pulses, and these are particularly bio-active.
- (ii) Lower frequencies, in this case 868 MHz or perhaps components of the WiFi signals, penetrate further into the human body. They are therefore often associated with greater adverse health effects than some higher frequencies, especially in the development of neurological degeneration such as Alzheimer's. The exact pulse shape is significant too.
- (iii) Many houses and workplaces over the last year or two have begun to develop 'hot-spots' where interference between two or more sources of radiation combine to produce significantly higher levels of radiation than surrounding areas. These are hard to detect without appropriate meters and very thorough investigation, but are highly dangerous to people with a genetic make-up which makes them more susceptible to RF and ELF bio-effects, or have developing or weakened immune systems, such as children and the elderly.

In the light of the growing instances of medical suffering caused by wireless smart meters in other countries and increasingly in the UK where these transmitters have been tested, it would be appropriate for the SMETS 2 consultation to develop advice for the general public, if such irradiation is still to be allowed, on:

- (i) Ways in which properties and their gardens can be shielded from the radiation of their own wireless smart meter, and from the radiation of neighbours' wireless smart meters.
- (ii) Ways in which pets can be kept safe, since we have had growing numbers of reports of pets made electrosensitive or dying early from cancers and other illnesses once wireless installations are put in or near houses.
- (iii) Ways in which ordinary people can measure the electro-pollution emitted by utility wireless smart meters, including neighbours', since it will differ for every transmitter depending on where the other receivers/transmitters are located. Some of the worst situations are where a dwelling is located on the line between someone else's transmitter and the receiving transmitter.