



## Karolinska Institutet

Department of Neuroscience  
Experimental Dermatology Unit

Stockholm, July 9, 2011

California Public Utilities Commission

Cc Susan Brinchman, Director, Center for Electromog Prevention, P.O. Box 655, La Mesa, CA 91944-0655, USA

To: The California Public Utilities Commission,

I understand that you at present are concerned about the fast deployment of smart meters on homes in California, without adequate sharing of information with the public.

I work as an associate professor at the Karolinska Institute; we are world-famous for our Nobel Prize in Physiology or Medicine, which we many times have awarded to your fellow countrymen and –women. I also uphold a professorship at the Royal Institute of Technology; it being closely tied to the Nobel Prizes in Physics and Chemistry. For many years I have been studying health effects of wireless gadgets, such as Smart Meters.

Wireless communication is now being implemented in our daily life in a very fast way. At the same time, it is becoming more and more obvious that the exposure to electromagnetic fields may result in highly unwanted health effects. This has been demonstrated in a very large number of studies and includes cellular DNA-damage (which may lead to an initiation of cancer as well as mutations that carry down generations), disruptions and alterations of cellular functions like increases in intracellular stimulatory pathways and calcium handling, disruption of tissue structures like the blood-brain barrier (which may allow toxins to enter the brain), impact on vessel and immune functions, and loss of fertility. It should be noted that we are not the only species at jeopardy, practically all animals and plants may be at stake.

Because the effects are reproducibly observed and links to pathology can not be excluded, the precautionary principle should be in force in the implementation of this new technology within the society. Therefore, policy makers immediately should strictly control exposure by defining biologically-based maximal exposure guidelines also taking into account long-term, non-thermal effects, and including especially vulnerable groups, such as the elderly, the ill, the genetically and/or immunologically challenged, children and fetuses, and persons with the functional impairment electrohypersensitivity (which in Sweden is a fully recognized functional impairment, and therefore receives an annual governmental disability subsidy).

Prompted by all this, a group of international experts recently published a very important paper, The Seletun Scientific Statement (2011). Among its points are:

- 1) Low-intensity (non-thermal) bioeffects and adverse health effects are demonstrated at levels significantly below existing exposure standards.
- 2) ICNIRP/WHO and IEEE/FCC public safety limits are inadequate and obsolete with respect to prolonged, low-intensity exposures.
- 3) New, biologically-based public exposure standards are urgently needed to protect public health world-wide.

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4) EMR exposures should be reduced now rather than waiting for proof of harm before acting. It is not in the public interest to wait.

5) There is a need for mandatory pre-market assessments of emissions and risks before deployment of new wireless technologies. There should be convincing evidence that products do not cause health harm before marketing.

6) The use of telephone lines (land-lines) or fiber optic cables for SmartGrid type energy conservation infrastructure is recommended. Utilities should choose options that do not create new, community-wide exposures from wireless components of SmartGrid-type projects. Future health risks from prolonged or repetitive wireless exposures of SmartGrid-type systems may be avoided by using fiber-optic cable. Energy conservation is endorsed but not at the risk of exposing millions of families in their homes to a new, involuntary source of wireless radiofrequency radiation, the effect of which on their health not yet known.

Many smart meters are close to beds, kitchens, playrooms, and similar locations. These wireless systems are never off, and the exposure is not voluntary. The smart meters are being forced on citizens everywhere. Based on this, the inauguration of smart meters with grudging and involuntary exposure of millions to billions of human beings to pulsed microwave radiation should immediately be prohibited until 'the red flag' can be hauled down once and for all.

The recent determination of the World Health Organization (WHO) to include radiofrequent radiation on the 2B list of carcinogens also applies to devices such as smart meters. Already September 4, 2008, the European Parliament voted 522 to 16 to recommend tighter safety standards for cell phones (Europ. Parl. resolution on the mid-term review of the European Environment and Health Action Plan 2004-2010). In light of the growing body of scientific evidence implicating cell phone use with brain tumors, the Parliament said, "The limits on exposure to electromagnetic fields [EMFs] which have been set for the general public are obsolete." The European Parliament "was greatly concerned at the Bioinitiative international report concerning EMFs, which summarises over 1500 studies on that topic and which points in its conclusions to the health risks posed by emissions from mobile-telephony devices such as mobile telephones, UMTS, WiFi, WiMax and Bluetooth, and also DECT landline telephones, and now it is again – and more firmly and seriously - repeated in the form of WHO's recent cancer classification.

With my very best regards,  
Yoursincerely,

Olle Johansson, Assoc. Prof.,  
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&  
Professor,

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