



# STOP SMART METERS AUSTRALIA INC

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Premises Standards Review Team  
Sectoral Growth Policy Division  
Department of Industry and Science  
GPO Box 9839  
CANBERRA ACT 2601

*By electronic lodgment*

Dear Sir/Madam

Thank you for the opportunity to comment on the *Review of the Disability (Access to Premises - Buildings) Standards 2010*.

Stop Smart Meters Australia (SSMA) is a volunteer-based advocacy group which incorporated as an Association in April 2013 in response to widespread community objection to the Victorian State Government mandated Advanced Metering Infrastructure (AMI) rollout. Paramount within our legal purposes is to provide support and assistance to people who are opposed to smart meters on the grounds of health. These include an increasing number who have become substantially disabled.

Exposure to smart meter emissions has led to the development of electrical hypersensitivity (EHS) in a portion of the population; in addition, individuals who had pre-existing environmental sensitivities have had these exacerbated following exposure to smart meters. EHS can be an extremely serious disability, which prevents many individuals dignified and reasonable access to buildings.

## **Percentage of the population with EHS increasing**

One of the key outcomes of the rollout of wireless smart meters has been an increase in the prevalence of people identifying as being EHS. According to the data analysed by Lamech (2014, p. 31) in *Self-Reporting of Symptom Development From Exposure to Radiofrequency Fields of Wireless Smart Meters in Victoria, Australia: A Case Series*, only 8% of this cohort considered themselves to be suffering from EHS prior to exposure to

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smart meters. Individuals who already had the condition prior to the rollout have also reported a worsening in their sensitivities. This has resulted in people suffering debilitating symptoms, not only when in the proximity of smart meters, but also when exposed to radiofrequencies from other sources, such as WiFi, as well as, in some cases, electromagnetic fields from sources such as fluorescent lights, unshielded building wiring, inverters (such as in air-conditioning units and as part of solar PV systems), transformers and other electrical devices.

The medical literature defines EHS as an *idiopathic environmental intolerance attributed to electromagnetic fields*. The World Health Organization's fact sheet on electromagnetic hypersensitivity states that "*While some individuals report mild symptoms and react by avoiding the fields as best they can, others are so severely affected that they cease work and change their entire lifestyle*" (WHO 2005). According to the WHO, the symptoms most commonly experienced include "*dermatological symptoms (redness, tingling, and burning sensations) as well as neurasthenic and vegetative symptoms (fatigue, tiredness, concentration difficulties, dizziness, nausea, heart palpitations, and digestive disturbances).*"

Estimations of the prevalence of EHS within the community vary. A 2008 research article, based on a statistical Austrian cross-sample in regard to age, gender and Federal State, showed a prevalence rate of 3.5% (Schröttner and Leitgeb). UK-based *EM Radiation Research Trust* state that it is currently estimated that between 2.5% and 8% of the population could have this condition (EM Radiation Research Trust 2015). Research conducted by Hallberg, an independent researcher, and Oberfeld, a medical doctor from the Austrian Department of Public Health, had previously indicated that up to 50% of the population will be electrically sensitive in the near future (Hallberg & Oberfeld 2006).

## Buildings covered by the standards also need to cater for EHS individuals

According to Australia's *Disability Discrimination Act 1992*, the definition of a disability includes the malfunction of a part of the person's body, as well as a disorder that affects a person's thought processes, perception of reality, emotions or judgment or which results in disturbed behaviour. It also includes a disability that presently exists, previously existed or may exist in the future. The Act specifically states that "To avoid doubt, a **disability** that is otherwise covered by this definition includes behaviour that is a symptom or manifestation of the disability."

EHS clearly fits this definition. EHS can cause both a malfunction of people's bodies (for instance, skin rashes, nausea, heart palpitations), as well as affecting sufferers' cognitive processes.

Scientific studies show that adverse outcomes as a result of exposure to microwave radiation include DNA single strand and double strand breaks, breaching of the blood-brain

barrier and increased production of heat-shock proteins (Maret 2012, p. 19). Such effects are a result of non-thermal levels of irradiation, and therefore are outside the scope of the protection intended by compliance with the Australian Radiation Protection and Nuclear Safety Agency's radiofrequency standard. Exposure to lower electromagnetic frequencies is also problematical, and can lead to outcomes such as an increased inflammatory response (Ganji & Johansson 2000).

SSMA wishes to direct the Premises Standards Review Team to the 2013 legal case between CSIRO scientist Dr McDonald and Comcare, where the decision was made to award Dr McDonald compensation in accordance with the *Safety, Rehabilitation and Compensation Act 1988*, in respect of an injury incurred due to exposure to low-level electromagnetic fields. The claim, for aggravation of electromagnetic hypersensitivity syndrome, was satisfied by Dr McDonald having suffered either an aggravation of sensitivities to electromagnetic fields (EMFs); or, an aggravation of his symptoms by reason of his honest belief that he suffered from the condition of EMF sensitivity and that his exposure at his workplace worsened his sensitivity (Administrative Appeals Tribunal of Australia 2013).

In a research paper commissioned by the Canadian Human Rights Commission, titled '*Accommodation for Environmental Sensitivities: Legal Perspective*', which includes electromagnetic field sensitivity in its definition of environmental sensitivities, the authors recommend that building codes proactively address these issues (Wilkie & Baker 2007, p. 4). They point out:

"There are many more obstacles to accommodation for environmental sensitivities than there are to many other disabilities. A person with sensitivities may find it difficult to understand his or her condition and its triggers, and may then find it difficult to explain and document these to employers and service providers. Successful accommodations require innovative strategies to minimize or eliminate exposure to triggers through their elimination or removal from the environment or through avoidance of the environment."

(Wilkie & Baker 2007, p. 33).

## Measures to reduce electromagnetic fields in buildings

A number of simple steps can be taken to minimise electromagnetic fields in new buildings. The measures sit well with the *Disability (Access to Premises - Buildings) Standards*, as they are best implemented at the time that buildings are constructed, in order to avoid the unnecessary cost of retrofitting. Ensuring that buildings have minimal levels of man-made radiation benefits not only people who are EHS, but also other members of the community. For instance, high magnetic fields are associated with childhood leukaemia (ARPANSA n.d. a).

In the case of electrical cabling, measures might range from bundling cabling, using shielded cabling and ensuring separation between cabling and places where people spend extended periods of time. ARPANSA's document on *Strategies to Reduce Magnetic Field Exposure (Mitigation)* contains other useful suggestions (ARPANSA n.d. b); Building Biologists are also able to provide advice on how best to achieve low field levels.

Attention also needs to be given to lighting, as fluorescent lighting, as well as any other form of light which creates high frequency voltage transients, should be avoided.

In particular, where internet connectivity is required, provision should be made for this to be provided via cabled means (for example, ethernet), in order that EHS sufferers are not irradiated by wireless internet emissions. Many of SSMA's members have reported difficulty with accessing public buildings, such as libraries, which they attribute, in particular, to the introduction of WiFi. Other individuals have reported that they have had to give up their teaching careers since the advent of WiFi, or have struggled to find educational facilities suitable for their EHS-impacted children.

Other countries, in recognition of the consequences of exposing the public to unnecessary levels of radiation, have already taken measures to replace wireless connectivity with wired connectivity. The French national library replaced all Wi-Fi connections with wired connections in 2008 due to health issues (Bibliothèque Nationale de France 2008). Russia's peak radiation authority issued a statement in 2012 warning against the use of wireless broadband systems, including Wi-Fi, in kindergartens and schools (Russian National Committee on Non-Ionizing Radiation Protection 2012). Legislation banning the use of WiFi in toddler childcare centres was passed in France this year, as part of the *Law on Sobriety, Transparency, Information and Consultation for Exposure to Electromagnetic Fields* (Le Hir 2015). As well as assisting people who have developed EHS, wired connections provide for faster and more secure connectivity.

It is also critical that health-care buildings make adequate provision for EHS patients. In Sweden, where EHS has been recognised as a functional impairment for some years (Johansson 2006), provision is made in hospitals to provide designated consultation and treatment rooms for EHS patients. According to a 2007 survey of hospitals in different regions, measures include shielding, special consideration being given to the choice of wiring and location of electrical installations to reduce the overall radiation level everywhere in the hospital, ability to eliminate electricity in a room, provision of direct access to outside so patients aren't required to walk through the entire building and identification of rooms which already have low radiation levels (EI Wellspring 2007).

## Recommendations

- The *Disability (Access to Premises - Buildings) Standards 2010* should be updated to require the building industry to minimise the potential for users of the premises to be exposed to man-made electromagnetic fields.
- In particular, provision should be made for a portion of buildings to specifically cater for the needs of EHS individuals.

SSMA hopes that our recommendations will be carefully considered. It is imperative that the defect in the current legislation, which makes no accommodation for people with an environmental sensitivity disability, is remedied.

Improvements in the standards to protect the human rights of EHS individuals will inevitably be for the national good.

Yours sincerely



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