



STOP SMART METERS AUSTRALIA INC

Reg. No. A0059190N ABN 14 717 028 504

15 June 2015

DSE Review
Economic and Social Advisory
Urbis
Level 12, 120 Collins Street
Melbourne, Victoria 3000

By email to: dsereview@urbis.com.au

Dear Sir/Madam

Thank you for the opportunity to contribute to the *2015 Review of the Disability Standards for Education*. We hope that you will be able to take on board our comments, given the seriousness of the issues that we wish to raise, despite not meeting the deadline for submissions.

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 of people, including children, 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 from being unable to access and participate in education and training opportunities on the same basis as those without disability.

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).

Educational and training facilities 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 reviewers 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 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).

The situation is especially concerning in relation to children; the bone marrow of a child's head absorbs 10 times more radiation than that of an adult (Morgan et al. 2014). Children also face the prospect of being exposed to man-made radiation, at unprecedented levels, for a life-time.

Measures to reduce electromagnetic fields in educational facilities

A number of simple steps can be taken to minimise electromagnetic fields in educational and training facilities. Ensuring that buildings have minimal levels of man-made radiation benefits not only students who are EHS, but also other students. For instance, high magnetic fields are associated with childhood leukaemia (ARPANSA n.d. a).

In the case where unshielded electrical cabling has been used, measures might be as simple as ensuring separation between cabling and places where students 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, often needs to be avoided by people with EHS.

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 in finding educational facilities suitable for their EHS-impacted children in consequence of the introduction of WiFi.

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). This legislation also requires that WiFi in primary schools is only enabled at such times as it is being used for teaching purposes. As well as assisting people who have developed EHS, wired connections provide for faster and more secure connectivity.

Recommendations

- The *Disability Standards for Education* minimise the potential for students at educational and training facilities to be exposed to man-made electromagnetic fields, in particular wireless emissions.
- Provision should be made for a portion of educational and training facilities to specifically cater for the needs of EHS students.

SSMA hopes that our recommendations will be carefully considered. It is imperative that the needs of students with EHS are considered.

Improvements in the standards to protect the human rights of students with this disability will also inevitably be of benefit to other students, as well as teachers.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Janobai Smith', with a stylized flourish at the end.

Ms Janobai Smith, BEc (Monash), Cert. EMF Testing (ACES)

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