STOP SMART METERS AUSTRALIA INC
Reg. No. A0059190N ABN 14 717 028 504

4 December 2015

Willing to Work
Australian Human Rights Commission
GPO Box 5218
Sydney NSW 2001
By electronic lodgment

Dear Sir/Madam

Thank you for the opportunity to comment on the *Willing to Work: National Inquiry into Employment Discrimination against Older Australians and Australians with Disability*.

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 advocacy and support to people who are opposed to smart meters on the grounds of health. An increasing number of these people have become disabled following exposure to wireless smart meter emissions and other wireless technology.

Exposure to increasing levels of man-made electromagnetic fields (EMFs) 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 wireless emissions. EHS can be an extremely serious disability, and has led to a number of Australians no longer being able to participate in the workforce.

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 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

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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).

Other adverse health outcomes as a result of exposure to man-made EMFs

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). This may lead to an initiation of cancer or mutations that carry down generations (Johansson 2011). A recent study commissioned by the German Federal Office for Radiation Protection concluded that carcinogen-induced tumour rates were significantly higher when mice were exposed to radiofrequency EMFs that were significantly below existing exposure limits set by authorities for users of mobile phones (Lerchl et al. 2015). 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 (such as from computer monitors) is also problematical, and can lead to outcomes such as an increased inflammatory response (Ganji & Johansson 2000).

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Measures to assist participation of people with EHS

SSMA considers that, in the first instance, the Australian Human Rights Commission (HRC) should undertake a national inquiry into this emerging issue, in order to better understand the prevalence of EHS within Australia and its impact on the population. This will allow the HRC to formulate policy on the matter, which can be used as the basis for instituting programs which will lead to best practices within the work environment.

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 also 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).

As stated in *The Medical Perspective on Environmental Sensitivities*, another report which was commissioned by the Canadian Human Rights Commission in order to summarise scientific information about environmental sensitivities, "Accommodating people with environmental sensitivities presents an opportunity to improve workplace environmental quality and workers' performance, and may help prevent the onset of sensitivities in others" (Sears 2007, p. ii). The report details a number of possible problematical sources of electromagnetic fields (Sears 2007 pp. 39-41).

Simple steps can be taken to minimise electromagnetic fields in new buildings. These measures 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 also benefits other members of the community who might be accessing the building. For instance, exposure to AC magnetic fields is associated with childhood leukaemia (ARPANSA n.d. a).

In the case of electrical cables, measures might range from bundling cabling, ensuring that shielded cabling has been used and ensuring separation between cabling and places where people spend extended periods of time. ARPANSA's document on *Strategies to Reduce*

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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.

Landline telephones should be provided, as opposed to cordless phones, in order to eliminate radiofrequency microwave transmissions from this source.

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, may be problematical for some individuals.

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.

Other countries, in recognition of the consequences of exposing staff to unnecessary levels of radiation, have already taken measures to replace wireless connectivity with wired connectivity. For instance, the French national library replaced all Wi-Fi connections with wired connections in 2008 due to health concerns (Bibliothèque Nationale de France 2008). As well as assisting people who have developed EHS, wired connections provide for faster and more secure connectivity.

Simple measures can also be taken to minimise irradiation from devices. For instance, depending on the sensitivities of the individual, provision of an earthed computer monitor screen shield might be sufficient to enable an employee to work on a computer.

Workplace practices that actively encourage safer usage of mobile phones in the work environment should be implemented. Measures might include ensuring that employees do not carry mobile phones on their body and encouragement for employees to use the speaker phone or an air tube headset to increase the distance between the head and the phone when speaking. It is also important that employees who suffer a disability in consequence of mobile phone emissions are sensitively accommodated; for instance, it may be necessary to ensure that these individuals are not placed in near proximity to areas where other employees or the public may be carrying mobile phones.

Economic and social costs and costs to productivity of employment discrimination

A number of people have reported to SSMA that they have had to give up their careers since the advent of WiFi and other wireless devices in their workplace. This has led to a heavy toll on individuals and their families as well as contributing to a loss of self-identity and self-worth. In *McDonald v Comcare* (2013), which concerned a case involving aggravation of an electromagnetic hypersensitivity syndrome as a result of exposure to EMFs in the course of his employment, it was stated that Dr McDonald described "his feeling of depression as 'a

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deep sadness, almost guilt' by reason of the effect of his condition on his family and colleagues and 'an incredible regret of losing my career'."

As primary outcomes of EHS are symptoms such as headaches, fatigue, blurred vision, concentration problems ('brain fog') and memory loss, the costs to productivity are also likely to be significant; this will increase as the number of EHS-impacted individuals in the workplace grows. People with an EHS disability also suffer from indirect discrimination if they lose employment in consequence of their inability to perform their duties in an inferior environment at the same level as non-EHS impacted individuals.

Legal framework

Although a very broad definition of disability has been adopted in the *Disability Discrimination Act 1992*, people with EHS are being discriminated against in the workplace. This is due to a lack of understanding in Australia by employers, government agencies and the general public of electro-sensitivity triggers, in addition to an absence of relevant legislation.

The Council of Europe's 2011 resolution on the potential dangers of electromagnetic fields recommended that all reasonable measures are taken to reduce exposure to electromagnetic fields (Council of Europe 2011). The Council also recommended that particular attention be given "to 'electrosensitive' people who suffer from a syndrome of intolerance to electromagnetic fields and introduce special measures to protect them, including the creation of wave-free areas not covered by the wireless network".

ANSES (France's Agency for Food, Environmental and Occupational Health & Safety) echoed these recommendations in its 2013 assessment of the risks related to exposures to radiofrequencies (RF). Specifically, ANSES recommended "limiting the population's exposure to radiofrequencies – in particular from mobile phones – especially for children and intensive users, and controlling the overall exposure that results from relay antennas" (ANSES 2013).

There is an absence of policy or leadership on this issue across all levels of government in Australia. As it stands, the Australian Communications and Media Authority (ACMA), which is the body generally considered as having regulatory responsibility for making standards to protect public health from radiofrequency emissions (despite the fact that the legislative instrument under which it operates has not given it exclusive responsibility in this regards), has advised SSMA that it is not qualified to investigate the possible health effects of human exposure to electromagnetic energy and that it is not an expert body in health matters.

The ACMA summarised its position in its 2014 response to comments received on the remaking of the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard*, stating that the ACMA instruments "regulate the technical performance and

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operation of equipment, not the use of equipment by consumers or other organisations" (ACMA 2014).

In order to fulfil this role, the ACMA has partially (having dropped the precautionary aspects of the standard) adopted ARPANSA's standard, *Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz*. The fact that the ACMA also does not take into account the general principles contained in ARPANSA's standard regarding simultaneous exposure to fields of different frequencies (which is the reality in today's workplace) is troubling from a health perspective.

This omission assumes even greater import in light of the fact that the ARPANSA standard does not, in the first place, provide a high level of protection when compared with some of the other guidelines and standards in place in other jurisdictions. Forty percent of the world's population has the benefit of higher levels of protection than what is provided by ARPANSA's standard. Radiofrequency exposure guidelines in place in these jurisdictions are ten to thousands of times more rigorous than the ARPANSA standard, which is based on 1998 ICNIRP guidelines (Jamieson 2014).

Recommendations

- The Australian Human Rights Commission conducts a national inquiry into human rights issues surrounding the rapid increase in the population's exposure to man-made EMFs.
- This inquiry is used as a basis for informing HRC policy in addition to policy and legislation across other Government agencies.
- Building codes strengthened in order to specifically cater for the needs of EHS individuals.
- The Department of Health assumes responsibility to develop and promote policies within the health sector which assist members of the population with EHS disabilities to participate in the workforce.

SSMA hopes that our recommendations will be carefully considered. Improvement in employment conditions for EHS-disabled individuals will benefit all Australians.

Yours sincerely

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