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Premises Standards Review Team
Industry Growth Division
Department of Industry, Science, Energy and Resources
GPO Box 2013, CANBERRA ACT 2601
By electronic lodgment

Dear Team Members

Stop Smart Meters Australia (SSMA) was relieved to see environmental sensitivities identified as a key theme in the 2020 review of the *Disability (Access to Premises - Buildings) Standards 2010*. In particular, recognition of electromagnetic hypersensitivity as a prominent sub-theme, gives us hope that the needs of people suffering this disability might be met in the future when accessing public buildings.

Reform of the Premises Standards is an essential starting point to address the issues caused by the explosion in complex electromagnetic wave forms that now saturate the air-space of buildings coming within the ambit of these Standards. The proliferation of highly pulsed signals, incorporating numerous modulation frequencies, has significantly altered the internal built environment in recent times. Electromagnetic fields, covering extremely low frequencies through to high frequencies, make access difficult, if not impossible, for a growing cohort of people.

Responses to the questions specific to the environmental sensitivities theme follow.

30. Do you think there is another way to fix these problems that does not include the Premises Standards?

The manner in which buildings are constructed lays the foundation for creating premises which are accessible to people living with environmental sensitivities. Although it may be possible to mitigate issues around exposure to electromagnetic fields (EMF) within buildings following construction, measures that require retro-fitting may prove to be cost-prohibitive and impractical. As pointed out in a report prepared for the Canadian Human Rights Commission entitled *The Medical Perspective on Environmental Sensitivities*, 'Building codes, the rule-books for construction of indoor environments, are the first place to look for

standards that may address environmental sensitivities' (Sears 2007, p. 29). Another report prepared for the Canadian Human Rights Commission, entitled Accommodation for Environmental Sensitivities: Legal Perspective, encapsulates this assertion in one of its seven recommendations, calling for building codes to proactively address issues related to accommodation of people with environmental disabilities (Wilkie & Baker 2007, p. 4).

It is critical that common-sense measures for reducing potential exposure to unnecessary EMF are incorporated during the building design phase.

31. In your opinion, how are these issues directly or indirectly related to Premises Standards?

The unfortunate lack of consideration in the current Premises Standards towards the accommodation of environmental sensitivities has resulted in haphazard public building outcomes for people living with electromagnetic hypersensitivity (EHS). Electromagnetic pollution also plays a role in other conditions. It can increase inhalation of harmful submicron pollutants, including pathogens, and cause microbial multiplication in buildings (SSMA 2018). A number of people who have Multiple Chemical Sensitivity eventually develop EHS (with the reverse also occurring). The implementation of design principles in public buildings that serve to reduce environmental contaminants is directly related to the Premises Standards as exposure levels significantly impact sufferers' health and wellbeing and their ability to access public buildings and services within buildings.

SSMA's advocacy role focuses on the needs of individuals with electrical sensitivities; however, it is essential, especially in light of the interconnection between EHS and other disabilities triggered by environmental pollutants, that all people living with environmental sensitivities are afforded dignified, equitable and reasonably achievable access to public buildings, and services within buildings.

31. What do you think the Premises Standards should do to fix these problems?

New provisions, aimed at reducing electromagnetic fields in public buildings, should be introduced into the Premises Standards. Experts in reducing electromagnetic fields (EMF) in buildings, such as Building Biologists, are best suited to providing advice on the most efficacious measures for ensuring that healthier buildings are being built. SSMA recommends that their input is sought, in the formulating of such provisions.

Specific attention should be directed at:

- Ensuring that electricity meters are positioned as far as possible from where people spend time and, in particular, ensuring that in places such as short-term rental holiday accommodation, electricity meters are not installed on bedroom walls.
- Minimising extremely low frequencies.

- Making provision for wired (ethernet) internet inside buildings.
- Providing multiple hard-wired telephone points.
- Providing access to natural light sources.

An elaboration on the rationale for the above points follows.

ELECTRICITY METERS

Australia's stock of analogue electricity meters is being replaced with 'smart' meters; in the case of Victoria, this has already occurred for about 98 per cent of small customers. Traffic profiles of smart meters show that typically, regardless of the type of network in place, hundreds to thousands of radiofrequency pulses (in the microwave range) are emitted from these meters on average per hour. SSMA is in receipt of in excess of 400 (unsolicited) reports alleging a variety of adverse symptoms, some of which have been life-threatening, as a result of exposure to smart meter emissions. Typical symptoms reported from exposure to smart meters are insomnia, headaches, tinnitus, fatigue, cognitive disturbances, dysesthesias (abnormal sensation), and dizziness (Lamech 2014, p. 28) with 40% of all participants in a Victorian study reporting four or more symptoms, 'which is likely to be predicative of a greater level of disability' (Lamech 2014, p. 32). Exposure to extremely low frequencies, due to the flow of electricity, is also a potential issue with any type of electricity meter, although these fields typically reach acceptable levels at a distance of two metres. It is therefore critical that electricity meters are sequestered far from where people spend time. Although general building access requirements in the current Premises Standards limit, for instance, the number of dwellings or bedrooms in a complex that must provide access to people with a disability, it would make sense to extend the requirement in regard to smart meters to apply to *all* situations. In particular, due to the likelihood that communicating meters will be installed in new builds, meters should not be permitted on bedroom walls or near any other place that people frequent and cautionary signage warning of radiofrequency non-ionising radiation should be placed on meter housing. An example of appropriate signage for radiofrequency emitters is shown on page 10 of *Physical Hazards: Non-Ionising Radiation -Electromagnetic* (HaSPA 2012). Such signage might prevent situations that SSMA has become aware of, wherein EHS individuals have inadvertently come into proximity with a communicating smart meter (for instance, at the entrance of a shop) and suffered in consequence.

EXTREMELY LOW FREQUENCIES

As pointed out in a document entitled *Strategies to Reduce Magnetic Field Exposure Mitigation*), that was published some years ago by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), 'Substantial reductions in magnetic field exposure can be achieved through appropriate design' (ARPANSA, n.d.). Examples of practical steps provided in the paper include running main wiring cables along a route which will not expose occupants to prolonged periods of exposure and ensuring that buildings are not designed to facilitate the introduction of appliances that may produce elevated electromagnetic fields

(such as refrigerators or office photocopiers) in close proximity to where people spend extended periods of time; in particular, fields emanating from the back of appliances need to be taken into consideration. ARPANSA points out that magnetic fields will essentially pass through ordinary building materials; this means that anybody spending prolonged periods on the other side of the wall from such an appliance also risks significant exposure unless steps are taken to increase distance (for instance, good design might include the placement of a storage area to act as a buffer zone). Other measures, such as bundling wiring and shielding, are also discussed.

WIRED INTERNET

In addition to providing faster connections, being more reliable and providing superior security, wired (ethernet) networks play a crucial role in the provision of a safe environment for people living with EHS. It is critical that wired internet access points are available in public buildings such as schools and libraries in order to facilitate accessibility. Hard-wired networks also lessen the likelihood of future long-term adverse health outcomes, such as cancer. For instance, see the report from the Children's Environmental Health and Protection Advisory Council to the Maryland State Department of Education; this makes the recommendation that, 'If a new classroom is to be built, or electrical work is to be carried out in an existing classroom, network cables can be added at the same time, providing wired (not wireless) network access with minimal extra cost and time'.

CABLED TELEPHONE POINTS

Cabled telephone points should be provided to lessen the need for either cordless or mobile phones. These should be mandatory in places such as (new) hospital accommodation or other places in public buildings where people might have cause to require telephone access.

LIGHTING

Modern sources of lighting are often an overlooked issue for people living with EHS. Fluorescent lights, as well as many LED lights, are culprits. Both compact fluorescent lights (CFLs) and most LED light bulbs emit electromagnetic fields extending from the kHz range into the MHz range, which can cause significant adverse health effects. In a paper from Electrosensitivity UK, a UK charity which advocates for people who are electro-sensitive, the author writes, in regard to the health effects of CFLs, that these 'have been shown to produce adverse health effects on humans, ranging from involuntary muscular movement among people who are EMF-sensitive to cancers and increased diabetes and MS'. Problems include not only the introduction of harmonics and spikes on wiring but also are due to the light spectrum given off by these forms of light. The French Agency for Food, Environmental and Occupational Health & Safety (ANSES) warns in a 400-page report released in 2019 that 'exposure to an intense and powerful [LED] light is "photo-toxic" and can lead to irreversible loss of retinal cells and diminished sharpness of vision'. Given the Australian Government's phase-out of halogen light globes (and prior to that, the phase-out of incandescent light globes, which also provided a safe form of lighting for people living with EHS), it makes

sense to ensure that buildings are designed for maximum admittance of natural light in order to minimise potential problems.

Summary

The *Disability (Access to Premises - Buildings) Standards 2010* does not, in its current form, provide people with environmental sensitivities equitable and dignified access to public buildings. SSMA very much hopes that the challenge of updating the Premises Standards to give consideration for the cohort of the population with this disability will be met.

The incorporation of design principles that support this objective will also benefit the wider community, by providing safer working and living environments.

Given the burgeoning number of people suffering from environmental sensitivities, and the devastating consequences of not being able to access public buildings, time is of the essence in remedying this situation.

Yours sincerely



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