



# STOP SMART METERS AUSTRALIA INC

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Standing Committee on Health, Aged Care and Sport

PO Box 6021

Parliament House

CANBERRA

Canberra ACT 2600

*Submitted via electronic lodgment*

Dear Committee

## **Inquiry into Sleep Health Awareness in Australia**

Stop Smart Meters Australia (SSMA) is a volunteer-based consumer advocacy group which originally incorporated as an Association in April 2013 in response to widespread community objection to the Victorian State Government mandated rollout of electricity smart meters and infrastructure. Paramount within our legal purposes is to advocate for Australians whose health has been impacted by radiofrequency emissions from smart meters and other devices, and to raise awareness of this issue.

SSMA welcomes this inquiry as a number of our members and followers have experienced loss of sleep quality following the installation of a communicating smart meter on or near their home.

## **Pulsed radiofrequencies from smart meters cause inadequate sleep and sleep disorders**

The 24/7 pulsed nature of wireless smart meter transmissions is of particular concern, especially as in Australia many people sleep in close proximity to meters. A 2015 technical study commissioned by the Victorian Government revealed astounding levels of traffic across smart electricity meters.

Meters in mesh networks (which are predominantly deployed in Victoria) were transmitting up to an average of 15,396 times per hour. In the 3G smart meter network, the worst-case scenario was a meter that was transmitting an average of 176,201 times per hour (Total Radiation Solutions 2015, pp. 80-81).

Although, in many cases, high traffic profiles equated to only a few minutes' worth of transmissions per day<sup>1</sup>, exposure to these emissions, especially during sleeping hours, has biological implications.

As an analogy, if a bedroom light strobed hundreds of times per hour whilst one was sleeping, this would seriously impact the health of many people. Similarly, pulsed radiofrequencies (which, in the case of smart meters, are in the microwave range) have been shown to interfere with cellular processes, despite humans' inability to see waves in this portion of the electromagnetic spectrum.

The author of a well documented<sup>2</sup> 92-case study, entitled *Self-reporting of Symptom Development from Exposure to Radiofrequency Fields of Wireless Smart Meters in Victoria, Australia: A Case Series*, hypothesises that "some people can develop symptoms from exposure to the radiofrequency fields of wireless smart meters" (Lamech 2014, p. 38). The study's conclusions also raise the "possibility that smart meters may have unique characteristics that lower people's threshold for symptom development". The most common symptoms were insomnia, sleep disturbance, or sleep disruption, which 48% of the participants reported.

Biological symptoms reported by the Lamech smart meter case series accord with the findings of other surveys that have examined health issues caused by devices that emit electromagnetic fields (EMF). For instance, the Austrian Medical Association's 2012 *Guideline for the diagnosis and treatment of EMF-related health problems and illnesses (EMF syndrome)* referenced a 2001 Swiss survey, which found that 58% of the 394 respondents suffered from sleep problems or disorders that they attributed to EMF exposure (Austrian Medical Association 2012).

Worryingly, Australians are being harmed by EMF from wireless smart meters even in instances where they don't have their own transmitting smart meter, as a result of exposure to emissions from other smart meters in the neighbourhood.

Physicist Dr Ronald Powell analysed smart meters in light of the conclusions reached by the BioInitiative 2012 Report, a report compiled by 29 experts from ten countries which reviewed 1800 new scientific studies on non-ionising radiation since the BioInitiative 2007 Report (which had, in turn, reviewed over 2,000 studies).

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<sup>1</sup> This doesn't hold true for the 3G worst-case smart meter, which was transmitting the majority of time.

<sup>2</sup> American Academy of Environmental Medicine 2014, *Wireless Smart Meter Case Studies*, Available: <https://skyvisionsolutions.files.wordpress.com/2013/11/aaem-wireless-smart-meter-case-studies.pdf>

Powell concluded that the power density at 100 metres from a smart meter is "higher than the power density that triggered biological effects" in 6 of the 67 studies which he considered (Powell 2013, p. 12). His analysis also showed that the radiofrequency (RF) power density from a smart meter does not drop down to the level of the RF exposure limits proposed by the BioInitiative 2012 Report until distances of 180 to 200 metres from a smart meter are reached.

How many Australians are unknowingly (and without consent) having their quality of sleep compromised due to the deployment of wireless smart meters?

### **Impacts and costs (economic and social) of inadequate sleep and sleep disorders due to smart meters**

The majority of the population and medical fraternity in Australia have no previous experience, nor training, in identifying biological changes incurred as a result of increased non-ionising radiation exposure. These people are unlikely to link the rollout of smart meter technology to the onset of inadequate sleep or sleep disorders. Brief, high-intensity emissions from smart meters appear to have exacerbated existing symptoms as well as triggering new symptoms in parts of the population who had not previously exhibited sensitivity to wireless technology. Complicating this situation is that, although sleep issues are the most frequently reported symptom from exposure to smart meters, the majority of people report multiple symptoms. Furthermore, whilst surveys highlight short-term adverse effects of EMF exposure, continual sleep deprivation can be the harbinger of much more serious health outcomes.

In some instances, the impact on people's health, as a result of exposure to smart meter emissions, has been profound, resulting in high personal costs (loss of career, loss of income, loss of place in society, loss of access to public facilities due to the development of sensitivities to EMF, loss of friends and family) for these people and their families as well as costs to the wider community. A number of our members and followers have been forced to move home (in order to relocate to an environment with lower EMF) and, in some cases, families have been split up (where one member is affected by exposure to emissions from smart meters). Some people have resorted to outlaying considerable sums of money, in the tens of thousands of dollars, on EMF-shielding products for their homes (particularly for bedrooms) in a bid to reduce emissions from smart meters; others are no longer able to access parts of their homes or gardens.

As of 30 August 2018, 244 EMF scientists from 41 nations had signed an International EMF Scientist Appeal calling for greater health protection on electromagnetic fields exposure (International EMF Scientist Appeal 2018). Smart meters receive specific mention in the appeal.

The appeal states that:

"Numerous recent scientific publications have shown that EMF affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans."

### **Access to, support and treatment available for individuals experiencing inadequate sleep and sleep disorders**

If the cause (or a contributor) of inadequate sleep and sleep disorders is exposure from EMF-emitting devices such as smart meters then, ostensibly, it should be a straight-forward matter of either switching off such devices or replacing the wireless connections with wired connections. Sadly, however, with the deployment and uptake of ever-increasing numbers of wireless devices, this is no longer a simple matter.

Unlike a toxic agent such as tobacco smoke, it's not possible to merely close a door or window to escape wireless pollution; although radiofrequency waves will bounce off and be deflected by smooth surfaces, and can be attenuated by materials such as metal mesh that have gaps smaller than the wave length of the particular frequency in question, radiofrequencies travel through both walls and air.

SSMA has had many reports of a previously safe environment being rendered intolerable due to the installation of a communicating smart meter on a neighbour's property, a WiFi router being placed in an adjoining property on the opposite side of a resident's bedroom wall in an apartment building, a telecommunications base station being erected in close proximity to a home, et cetera. Although exposure from RF during sleeping hours is thought to be the most critical time-period, akin to the impact of other toxic agents, exposure earlier in the day can also lead to a poor night's sleep.

Unfortunately, the majority of Australians have little awareness of EMF sources, prudent practices in relation to EMF exposure, and lack the equipment to measure EMF levels. It also can be extremely difficult for sufferers to access support. A number of people have become so sensitised that they are unable to tolerate the EMF levels that are now prevalent in many medical practitioner's offices.

Sufferers are further marginalised as many of them are no longer able to use technology that other people take for granted, such as mobile phones, and even computers (due to the low-level EMF which they emit), or because some of these individuals now live in temporary accommodation, such as tents in rural areas, in a bid to be in a low-EMF environment.

## **Education, training and professional development available to healthcare workers in the diagnosis, treatment and management of individuals experiencing inadequate sleep and sleep disorders**

Mainstream medical practitioners in Australia are not being given information, training or the tools that might help them isolate whether EMF exposure is the main causation of, or a contributor to, an individual's inadequate sleep or sleep disorders.

The European Academy for Environmental Medicine published a paper on the prevention, diagnosis and treatment of EMF-related health problems and illnesses in 2016. The Academy's EMF working group provides a comprehensive list of basic diagnostic tests in the paper, which it states should be followed by measurements of EMF exposure as a second step (Belyaev et al. 2016, pp. 15-20). The group has also provided a questionnaire to be given to patients, which is available online (Belyaev et al. 2016, Supplement 4).

Other jurisdictions have also instigated programs for patients who are suffering symptoms in response to electromagnetic radiation. Women's College Hospital's Environmental Health Clinic in Canada, which was established by Ontario's Ministry of Health and Long-Term Care, provides diagnosis and treatment strategies for individuals who are experiencing adverse effects in response to EMF exposure (Hamir 2016).

## **Workplace awareness, practices and assistance available to those who may be impacted by inadequate sleep or sleep disorders**

SSMA considers that awareness of the role of EMF in impacting sleep, although particularly critical to workplaces, needs to be extended to the entire population. In the words of a Canadian Parliamentary report, entitled *Radiofrequency Electromagnetic Radiation and the Health of Canadians*, that was presented by the Standing Committee on Health:

“The Committee agrees that the potential risks of exposure to RF fields are a serious public health issue that needs to be brought to the attention of Canadians so that they have the knowledge to use wireless devices responsibly and are able to make decisions about the use of wireless devices in a manner that protects their health and the health of their families” (House of Commons 2015, p. 22).

The public is increasingly becoming aware of the impact on sleep of inappropriate blue light exposure, such as from smartphones, tablets and TVs, prior to sleeping. However, employees, and Australians in general, need to be advised that other artificial electromagnetic fields, such as from smart meters, WiFi and mobile phones, should also be avoided, particularly whilst sleeping.

Humans, and all life on Earth, evolved in an electromagnetic mix that differs markedly from our current biosphere. It has become saturated – in an astoundingly short space of time –

with frequencies rarely found in nature. Is it any wonder that evolutionary adaption to this new paradigm has not been able to take place and, instead, the sleep and health of so many people is being affected?

## **Recommendations**

- Education and awareness campaigns need to be put in place to educate the public about potential links between EMF exposure and issues with sleep.
- Building regulations must be amended to prevent the installation of electricity smart meters, and any other type of infrastructure which emits EMF, on the outside of bedroom walls or near other areas where people spend extended periods of time.
- Policy should be instigated that ensures NO Australians are forced to accept a communicating smart meter – and that customers are not financially penalised for making this choice.
- Education, training and professional development for healthcare workers must include information about EMF sources, their potential effects on individuals, along with diagnosis and treatment strategies.

SSMA looks forward to healthcare workers, government and the general public developing a greater awareness of EMF issues and how these might be addressed in order to improve sleep.

Yours sincerely

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