

Stop Smart Meters NZ

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Introduction

The website www.stopsmartmeters.org.nz has been running since late 2012 in order to provide New Zealanders with an accurate source of information about the health, privacy and other issues with the new “smart” or “advanced” electronic meters being introduced to measure electricity use. (Smart water meters are also currently being trialled in NZ in Tairua on the Coromandel Peninsula.)

These “smart” meters use radiofrequency radiation (RFR) in the microwave range to transmit data about electricity (or water) use.

A Contact Form on the website allows members of the public to ask questions about smart meters or to report smart meter-related problem and/or request help with resolving the problem. (Reports are received in confidence and information is posted on the site only with the written permission of the person concerned; most people who have allowed their email to be posted have chosen to do this anonymously.)

This document summarises some of the problems that the ongoing smart meter roll out has caused for New Zealanders in the hope that our experience across the Tasman will help inform the policy of the Tasmanian government vis-à-vis so-called smart meters.

In brief, based on the New Zealand experience, any government which has a goal of “making energy work for people” should eschew the use of smart meters. The following pages will provide evidence for this assertion.

Problems with smart meters reported in NZ to www.stopsmartmeters.org.nz

1) Health issues

i) Potential to cause cancer

The RFR used by smart meters is classified as a possible carcinogen (class 2B - the same as lead and DDT) by the International Agency for Research on Cancer (IARC). (See: <http://microwavenews.com/short-takes-archive/iarc-publishes-rf-cancer-review>). Smart meters are therefore a potential cancer hazard. The level of RFR produced by electricity smart meters can be very high; in fact at close range the meters may produce RFR that comes very close to or may even exceed the legal NZ standard (NS2772.2:1999) for RFR in some situations. (For information about RFR produced by smart meters in NZ please see these links:

<http://www.stopsmartmeters.org.nz/government-and-electricity-industry-positions/is-this-the-reason-network-tasman-ltd-has-been-reluctant-to-answer-the-questions-about-the-radiofrequency-radiation-produced-by-its-smart-meters/>

www.stopsmartmeters.org.nz/uncategorized/how-much-radiation-does-the-smart-meter-at-your-home-produce/

www.stopsmartmeters.org.nz/uncategorized/does-the-modem-for-this-smart-meter-produce-more-radiation-than-is-legal-in-nz/)

As you will see from the data presented at the link above, some smart meters in NZ expose people in the vicinity to more RFR than the 60,000 microwatts per square metre that was shown to cause DNA damage in one laboratory experiment. (See:

http://www.researchgate.net/publication/222479539_DNA_damage_in_Molt-4_T-lymphoblastoid_cells_exposed_to_cellular_telephone_radiofrequency_fields_in_vitro)

i) Other health effects: Smart meter related symptoms

In addition to the possible increased risk of cancer caused by exposure to the RFR produced by these meters, smart meters have been reported to cause a variety of symptoms in the short term ranging from mild to debilitating.

(<http://www.mainecoalitiontostopsmartmeters.org/wp-content/uploads/2013/01/Exhibit-10-Smart-Meter-Health-Effects-Report-Survey2.pdf>)

Recent peer-reviewed research supports the survey results. The PubMed abstract for the study may be read here:

<http://www.ncbi.nlm.nih.gov/pubmed/25478801>

The full article may be purchased from this link obtained by purchasing an individual copy for \$15 US from: <https://www.scribd.com/doc/249193352/Self-Reporting-of-Symptom-Development-From-Exposure-to-Radiofrequency-Fields-of-Wireless-Smart-Meters-in-Victoria-Australia-A-Case-Series>

There are a variety of smart meters on the NZ market. Some of these use the Vodafone GSM network and others which use a RF mesh network.

Smart meters of a variety of makes and models have been reported to me via the Contact Form on www.stopsmartmeters.org.nz to cause a variety of symptoms, including headaches, sleeping difficulties and heart palpitations and joint pain, among others.

People vary in their sensitivity to EMR and not everyone suffers symptoms. Of the people who do experience symptoms, some people suffer only low-grade symptoms but it may take a long time for them to identify the cause as the fact that smart meters can cause symptoms is not well known by either the NZ public or health professionals and many people do not know that a smart meter has been installed at their home. (In some cases, companies do not inform customers that a smart meter has been installed.)

An example of relatively mild symptoms may be read at this link:

<http://www.stopsmartmeters.org.nz/latest-news/headaches-disappear-after-smart-meter-replaced/>

An example of more severe symptoms (in someone who had a history of adverse reactions to EMR) is here: <http://www.stopsmartmeters.org.nz/uncategorized/unpleasant-symptoms-after-smart-meter-installation/>

I have also received reports that smart meters have triggered similar symptoms in people who have not previously suffered from symptoms during or following exposure to sources of electromagnetic radiation (EMR).

Of special concern is that smart meters appear to trigger the development of electrohypersensitivity (EHS) - also known as electrosensitivity (ES) or electromagnetic sensitivity (EMS). This is a debilitating condition which can cause extreme pain for many sufferers and necessitate people having to isolate themselves in shielded housing or other low EMR environments as they can react adversely to RFR from cell phone towers, neighbours' DECT cordless phones and home wi-fi routers and municipal wi-fi routers etc. Employment may not be sustainable as use of computers and/or cell phones or being in wi-fi hot zones may trigger symptoms. For more information on EHS please see these links:

<http://www.es-uk.info/info/recognising.asp>

<http://www.scribd.com/doc/87308119/Guideline-of-the-Austrian-Medical-Association-for-the-diagnosis-and-treatment-of-EMF-related-health-problems-and-illnesses-EMF-syndrome>

ii) Other health issues

Companies' reluctance to remove smart meters even when adverse health effects have been reported

Compounding the problems faced by people who have had smart meters installed in their homes is the fact that electricity companies in NZ have been extremely loathe to remove smart meters – even when their customers have reported severe-smart meter related symptoms. (The NZ regulations mean that the electricity retailer is legally responsible for contracting with a Metering Equipment Provider which is responsible for ensuring that the meter at any home or business is property certified, accurate etc.) The upshot of this system is that an electricity retailer has to agree to remove a smart meter; a householder cannot hire an electrician to remove it without the electricity retailer's permission as this would entail the risk of having their electricity supply cut off. In cases which have been reported to me, it has taken some companies many months to remove the smart meter even when people have reported severe and worsening symptoms to the company. This is obviously an unacceptable situation but it is currently legal in NZ.

NB: In cases in which smart meters are replaced, customers usually have to pay between \$100-200 per meter for this service – even if they had never requested that a smart meter be installed in the first place.

Lack of information necessary for informed consent prior to smart meter installations

Adding to this problem is the fact that electricity companies do not give customers any meaningful information about the health risks of smart meters **before** they are installed to allow people who do not want to risk the exposure to EMR to refuse a smart meter.

What information that is given regarding health effects from smart meters is generally very broad statements to the effect that smart meters EMR emissions comply with NZ RFR regulations. While this is generally true (if smart meters are installed according to the manufacturer's specifications, which is not always the case, please see this link <http://decisions.dotnous.com/EGC/abstract.aspx?case=960>) any statement to the effect that smart meters are "safe" due to their compliance with NZ's NS2772.1:1999 is misleading given that the standard provides **only** for protection against thermal injury (burns), shocks and sudden death and is not designed to protect against other possible effects such as DNA damage cancer or other symptoms such as headaches, etc.

The agency to which customers are supposed to turn to help if they have a dispute with an electricity or gas company has unfortunately upheld the electricity's industry's policy of

failing to supply information about smart meters' health effects prior to their installation. See: <http://decisions.dotnous.com/EGC/abstract.aspx?case=981>

No official monitoring of adverse effects from smart meters

In NZ, in the case of many conditions of public health significance (for example infectious diseases such as measles, whooping cough and TB, sexually transmitted infections and food-borne illnesses etc.) doctors have a legal duty to report cases of these health problems. Statistics are kept that allow authorities to evaluate the effectiveness of prevention and control measures for these conditions. However, while smart meters are a new technology and produce a type of electromagnetic radiation (RFR in the microwave range) that has been known for decades to cause a variety of unpleasant symptoms the NZ Ministry of Health has not made any provision for the collection or analysis of reports of smart meter-related illness.

Fires

There was a spate of fires cause by smart meters in Christchurch in 2010. (See: <http://www.3news.co.nz/nznews/fireprone-meter-boxes-causing-concern-2010060317%20#axzz3Rgt5qUbq>). It is unfortunately impossible to know how many fires in NZ homes and businesses have been caused by smart meters as the NZ Fire Service statistics do not specify whether the meter was a smart meter or another type of meter. (See: <http://www.stopsmartmeters.org.nz/latest-news/are-smart-meters-causing-fires-in-new-zealand/>).

I have also received reports of problems with malfunctioning of electrical equipment following smart meter installations such as the ones described at this link: <http://www.stopsmartmeters.org.nz/uncategorized/smart-meters-causing-electrical-problems/>

Financial issues for consumers

Electricity prices in NZ are already high and rising faster than inflation. Many companies in the electricity industry here are making large profits. (See: <https://www.consumer.org.nz/articles/electricity-prices>)

I have received quite a few complaints through www.stopsmartmeters.org.nz relating to increased bills (despite no change in electricity consumption) after smart meter installations. (One example of someone who went public on this issue is here www.stopsmartmeters.org.nz/uncategorized/huge-bill-increase-after-smart-meter-installed/) NB: This lady did not complain to www.stopsmartmeters.org.nz; I am simply

using her case as an independently documented example as I have not had permission to publish details of the other outrageous bill increases that I have recently received.

The introduction of smart meters could potentially lead to the imposition of compulsory Time of Use (ToU) pricing in NZ which could have very detrimental effects on low income families. (About 20% of NZ children live in households that are impoverished.)

Unfortunately, the NZ government appears to believe that Time of Use pricing is a good thing, even though it will cause further hardship to the most vulnerable families; please see this link for details: <http://www.stopsmartmeters.org.nz/government-and-electricity-industry-positions/the-advantages-of-smart-meters/>

Some consumers in areas where smart meters are being installed in NZ are already paying higher prices for electricity to finance the installation of these meters. For example, please see this link: <http://www.stopsmartmeters.org.nz/uncategorized/south-canterbury-alpine-energy-to-begin-smart-meter-roll-out/>

Privacy issues

Smart meters transmit data about electricity use at regular intervals. (This data may be variously sent to the electricity retailer, lines company and/or meter owner.) Companies that have access to the data sent by smart meters are able to “de-aggregate” the data and build up a detailed profile of energy use in a household, and consequently people’s activities in the privacy of their own home.

It is easy to determine patterns of occupancy in a household. (See this link for details: <http://smartgridawareness.org/2014/10/08/occupancy-monitoring-using-smart-meters/>) and unauthorised access to this data potentially compromises home security.

Some NZ electricity retailers claim to own the data collected by smart meters in their customers’ homes and the right to supply it to third parties. (See: <http://www.stopsmartmeters.org.nz/government-and-electricity-industry-positions/network-tasman-there-are-no-privacy-concerns-with-smart-meters-yeah-right/>)

Most customers are probably unaware of this.

Some smart meters are in areas where the wireless signals that they send cannot be received by the electricity retailer, or other company that is responsible for collection of the data. In this case, meter readers continue to call at people’s homes. Due to the fact that smart meters can store an enormous amount of data (for example one meter on the NZ market – GE Intellix SM110 – can store up to 200 days of data at 30 minutes intervals – see: http://www.gedigitalenergy.com/products/brochures/GE_SM110.pdf) it is likely that very detailed data can be transferred to the device held by the meter reader by the smart meter, via the optical port on the meter thereby compromising people’s privacy.

<http://www.stopsmartmeters.org.nz/government-and-electricity-industry-positions/network-tasman-there-are-no-privacy-concerns-with-smart-meters-yeah-right/>

This also means that removal of a smart meter's modem may not be sufficient to protect people's privacy.

If data from smart meters is sold to third parties without customers' informed consent this is a significant privacy concern, in my opinion.

The Privacy Commissioner in NZ has recently received several complaints regarding smart meters and privacy and while these complaints were not upheld, the Commissioner is keeping a watching brief on this issue. (See: <https://www.privacy.org.nz/news-and-publications/case-notes-and-court-decisions/case-note-251185-2015-nz-privcmr-3-use-of-smart-meters-by-utility-companies/>)

The other difficulty with privacy and smart meters is that as electricity is an essential service, people may agree to the use of their data under duress as they cannot afford to be without mains electricity.

Installation (or attempted installation) of smart meters under false pretences and/or duress

Another issue frequently reported to me via the Contact Form on www.stopsmartmeters.org.nz is that smart meters are being installed under false pretences and/or duress.

(I have already discussed the fact that electricity companies in NZ are failing to disclose to their customers that there are health risks with the EMR from smart meters so that customers who do not want to have the additional EMR exposure that the installation of a smart meter entails can choose not to have a smart meter installed.)

Installation of smart meters without disclosure that the meter is a smart meter

I have had New Zealanders reported to me that they have not been informed that the new meter that was going to be (or was) installed at their home was a smart meter. (In cases like this, the customer has simply been informed that their meter will be "replaced" or "upgraded" or words to that effect.) You can see a letter from a major NZ company at this link: <http://www.stopsmartmeters.org.nz/wp-content/uploads/2012/10/Mercury-Energy-smart-meter-letter-May-20111.jpg>

NB: The customer who received the letter above had a technician come to their home to try to install a smart meter even though the company had been informed that a smart meter

was not wanted. Only the fact that the meter was inside the home (so entry could be refused) prevented an unwanted smart meter installation.

Companies are misleading customers into believing that a smart meter is a government requirement

In addition to these practices, I have received many reports from New Zealanders that a representative of their electricity company (a variety of electricity companies have been specified; this practice appears to be widespread in the industry) has stated to them that a smart meter is “compulsory” or a “government requirement” or words to that effect in what appears to be an attempt to get customers to accept smart meters.

In actual fact, in NZ, there is no law or regulation that requires any company to install smart meter or for a customer to accept one. The relevant regulations do specify that meters must be certified and metering stock that was installed prior to October 1999 has its interim certification expire on April 1 2015. However, this does not mean that these meters need to be removed and replaced with smart meters; those meters that are in good condition could be recertified or, if they have passed their useful lifespan, electricity retailers could arrange with a Metering Equipment Provider for the meter to be replaced with a modern electronic meter that is not a smart meter or an analogue meter such as a purely electromechanical Ferraris meter. However, most companies are choosing to replace older meter stock with smart meters.

(At least two NZ companies involved in smart meter roll outs have included statements to the effect that smart meters are a government requirement on their websites. See: <http://www.stopsmartmeters.org.nz/uncategorized/shame-on-you-wel-networks-ltd/> and <http://www.stopsmartmeters.org.nz/uncategorized/in-the-nelson-or-tasman-area-smart-meters-are-not-a-government-requirement/>)

This is obviously deceptive and unethical.

Of the two companies above, Network Tasman removed the misleading statement from its website after publicity was given to the misleading statement by www.stopsmartmeters.org.nz and networked around the Nelson-Tasman area by local people who are concerned about the smart meter issue.

As of 14 February 2014, the misleading statement remains on WEL Networks Ltd website. WEL Networks has boasted over a 99% acceptance rate for the smart meters that it terms “smart boxes”. This misleading statement is quite likely to be contributing to the high acceptance rate given that most New Zealanders are honest and law abiding and would therefore accept the statement at face value.

Threats to cut off customers' electricity

As detailed above, there is no law or regulation that states that New Zealanders have to accept a smart meter. I have however received reports from customers that they have been told by a representative of an electricity company that their power could be cut off if they refuse to have a smart meter installed. This sort of intimidation is again obviously unethical. (I am not aware of any cases in NZ in which people have had their power cut off for refusing smart meters but this threat may well ensure that many people who would not otherwise accept a smart meter do allow the installation, albeit under duress.)

Use of Terms and Conditions to try to force smart meters on customers who do not want one

Some of the major electricity companies in NZ have standard Terms and Conditions (T&Cs) for domestic customers which contain words to the effect that customers must allow access to their meter box and/or accept the installation of a smart meter and/or other remote meter reading device or they will be in breach of the (T&Cs) and could therefore have their power cut off. (For links to just two of the companies in NZ which have such T&Cs, please see this link <http://www.stopsmartmeters.org.nz/latest-news/smart-meter-installed-without-permission-headaches-result-smart-meter-removed-headaches-disappear/>)

Given that electricity is an essential service, people should not have to choose between having a smart meter (and the attendant health risks) and having no mains electricity. However, the Electricity and Gas Complaints Commissioner Scheme (an industry-financed body to which consumers are supposed to appeal in cases of disputes with an electricity or gas company) does not seem to be concerned that these Terms and Conditions are inherently unfair and failed to uphold a complaint from a customer who did not want a smart meter installed at his home due to concern about the potential health effects.

<http://decisions.dotnous.com/EGC/abstract.aspx?case=1331>

Bullying of customers who have pre-existing health issues

Another cause for concern is reports that I have received (not all of which are posted on the website; reports are only posted with their authors' written permission) in which companies have tried to bully customers who have serious health problems into accepting smart meters. (The two links below refer to the same customer; one gives more detail of the actual exchange between the electricity company staff and the customer than the other.)

<http://www.stopsmartmeters.org.nz/government-and-electricity-industry-positions/is-your-electricity-company-bullying-you/>

<http://www.stopsmartmeters.org.nz/government-and-electricity-industry-positions/company-tries-to-bully-chronically-ill-woman/>

Conclusion

The reports that I have received through www.stopsmartmeters.org.nz (and the cases reported in New Zealand media and to agencies such as the Electricity and Gas Complaints Commissioner Scheme) show that the introduction of smart meters to New Zealand has caused harm to many individuals and families in a variety of ways, including by causing house fires, increased financial stress, unpleasant and dangerous health problems and emotional distress due to intimidation by power companies.

As I have illustrated in this document, the agency to which New Zealanders are supposed to turn for help in relation to unethical behaviour by electricity companies (the industry-financed Electricity and Gas Complaints Commissioner Scheme) has in some cases sided with the industry rather than consumers who are concerned about health effects from smart meters.

The Electricity Authority which regulates the NZ electricity market is aware of complaints from consumers who have been harmed by smart meters but has stated that it does not regulate contracts between consumers and electricity retailers.

The current regulations in NZ allow companies to install smart meters in their customers' homes and make it extremely difficult for people to get these meters removed, even in cases where they are causing health problems.

I hope that the government of Tasmania fulfils its stated goal of "making energy work for people" by eschewing the use of smart meters, given the health, privacy and financial and other risks implicit in the use of this unnecessary technology.