

Kylie Colum

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30th May 2024

AEMC
Level 15
60 Castlereagh Street
Sydney NSW 2000

Dear AEMC Team,

Accelerating smart meter deployment rule change

I am writing to express my views and concerns in relation to the draft determination and rule for accelerating smart meter deployment. I was recently informed the Australian Energy Market Commission (AEMC) had released its plans in draft form and seeking submissions until 30th May 2024.

As someone who is living in Perth, Western Australia and severely harmed and injured by this technology (Advanced Metering Infrastructure/ aka ‘smart meters’), -I felt compelled to submit my sincere concern and disappointment that other states are willing to put further residents in harm’s way. This is despite a significant number of adverse health complaints reported already here in Australia and worldwide that are being ignored, silenced and kicked into the gutter. I will go into more detail later (in attached documents) but basically, I have become hypersensitive to wireless devices (literally overnight) that is both crippling in causing shortness of breath, chest heaviness, sinus headache, highly agitated, fatigue, joint pain and even suicidal depending on extent of exposure. I have become a prisoner on my own property living in a tent to try and keep ‘some’ normality in my life. I see it as my duty as a former registered nurse/midwife, with a sound grasp of the medical literature, experience working in areas of evolving scientific technology (reproductive medicine), and as someone who has skin in the game to create an awareness. So, as I peruse the literature, I have been able relate it to my own situation as a plausible starting point – it is a shame the Australian Government, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and utility companies are not so willing to listen.

“Many people suffer from one or more of a wide variety of symptoms when exposed to weak non-ionising electromagnetic radiation, including that from cell phones and Wi-Fi. Those responsible for the radiation deny that these effects exist, saying that there is no plausible explanation” (Goldsworthy, 2010). “The number of studies showing adverse effects on living organisms induced by different types of man-made electromagnetic fields (EMFs) has increased tremendously. Hundreds of peer reviewed published studies show a variety of effects, the most important being DNA damage, which is linked to cancer, neurodegenerative diseases, reproductive declines etc. More specifically, the experiments investigating exposures from real-world devices and the epidemiology studies examining the effects of

living near mobile phone base stations were extracted from ODEB (ORSAA database) and the number of papers showing effects was compared with the number showing no effects. The results showed that two-thirds of the experimental and epidemiological papers found significant biological effects. (McCredden et al, 2022) Those studies that are far more effective in showing effects employ real-life Mobile Telephony (MT) exposures emitted by commercially available mobile phones” (Panagopoulos, 2019). According to McCredden et al (2022) “Health clinicians and policy makers must be assured that sound science is behind any claims that RF is an environmental stressor. The first section of this overview paper addresses this need, by summarizing the current scientific and medical evidence base that explores biological harm from everyday devices and wireless infrastructure in the built environment.” Please take the time to read this article as it incorporates and emphasises the important elements in looking at studies showing ‘effect’ or ‘no effect’, and the inadequacies of the radiofrequency/microwave standards used here in Australia.

Panagopoulos (2019) also explains the importance when looking at studies the difference of ‘real world devices’ versus simulator generators used. In Panagopoulos’ (2019) study, he also found the MT EMFs were significantly more bioactive even for much shorter exposure durations than the other EMFs. This is similar technology as applied to the mesh network of smart meters and similar frequency range – so these studies of cell phone technology can be extrapolated when discussing concerns related to smart meter roll outs. Panagopoulos (2019) also goes on to say, “it is important to note that except for the RF/microwave carrier frequency, Extremely Low Frequencies - ELFs (0–3000 Hz) are always present in all telecommunication EMFs in the form of pulsing and modulation. There is significant evidence indicating that the effects of telecommunication EMFs on living organisms are mainly due to the included ELFs [29,30,[85], [86], [87], [88], [89], [90], [91]]”. In his conclusion Panagopoulos (2019) makes some very important points:

- *“It comes that variability in the EMF exposure is an extremely important factor in order for the specific type of polarized EMF to be able to induce biological/health effects. It seems that the bioactive parameters of EMFs are: 1) Polarization (combined with coherence), 2) ELFs, 3) Intensity, 4) Variability (unexpected changes exceeding 20–30 % of average/normal intensity). Once the EMF is polarized, includes ELFs, and has adequate intensity, the parameter that makes the difference is variability. The extreme and unpredictable variability of the real-life MT signals that apparently seems to be the reason for the corresponding intense bioactivity, does not concern only the 2nd generation (GSM) MT signals tested in our experiments and in the present review, but all existing types of digital MT signals (2nd, 3rd, 4th generation), and all types of modern digital microwave telecommunication signals/EMFs (DECT phones, Wi-Fi routers, etc.), since they all operate under the same principles combining RF carrier signals with ELF pulsing and modulation of similar frequency bands, emitting variable information each moment which in turn makes the emission variable in intensity, frequency, waveform etc”*
- *“The importance of exposure variability shown in the present study implies the need to define EMF-exposures not only by frequency components and average intensity values, **but by reporting maximum and minimum intensity as well, frequency variations, pulsing or continuous wave, modulation, and - of course - polarization.** Moreover, in published reviews of experimental studies employing MT and other types of microwave telecommunication EMFs such as DECT phones, Wi-Fi etc, it must be explicitly reported whether the exposures were real from commercially available devices or simulated from generators, test phones, etc.” [my emphasis]*

- ***“...and human/animal exposure to microwave telecommunication EMFs should be drastically reduced by prudent use, and establishment of much stringer exposure limits by the responsible health authorities.” [my emphasis]***

This article by Panagopoulos et al (2015) explains why man-made electromagnetic radiation (EMR) is more bioactive than natural non ionising EMR. “Although all animals on Earth have adapted throughout evolution to exposures to EMFs from the sun and the earth, these fields are non-polarized (even though natural light may become partially polarized in a small average degree due to atmospheric scattering or reflections). Moreover, terrestrial electric and magnetic fields are mainly static, emitting very weak non-polarized ELF radiation due to slight variations in their intensities. However, larger variations on the order of 20% of their normal intensities due to solar activity with a periodicity of about 11 years result in increase of human/animal health incidents. Therefore, living organisms on Earth are adapted to natural (non-polarized or even partially polarized) EMFs since the beginning of life, **but not to variations in their normal intensities on the order of 20%**, and thus we would not expect them to adapt to man-made (totally polarized) EMFs/EMR. The present study explained how this difference in polarization results in corresponding differences in biological activity between natural and man-made EMFs.” Panagopoulos et al (2015) then go on to conclude “...increased biological activity does not necessarily result in observable biological/health effects, since there are adaptive mechanisms operating at cellular-tissue-organism levels in response to ever occurring changes. However, these mechanisms may not always be totally effective, especially when the organism is under additional stress or increased metabolic needs (e.g. sickness, childhood/development, old age, etc.). Then exposure to polarized (man-made) EMFs may considerably increase the probability for the initiation of adverse health effects.” This is why different vulnerabilities need to be kept in mind.

Here is a chart supplied by *The Bioinitiative Group* in listing ‘Reported Biological Effects from Radiofrequency Radiation at Low-Intensity Exposure (Cell Tower, Wi-Fi, Wireless Laptop and ‘Smart’ Meter RF Intensities)’ : <https://bioinitiative.org/wp-content/uploads/pdfs/BioInitiativeReport-RF-Color-Charts.pdf>.

Oceania Radiofrequency Scientific Advisory Association (ORSAA) has a user-friendly database to explore all these studies. As explained above there are some important parameters to consider when looking at studies showing effects and no effects, and in particular industry funded studies are more likely to state a ‘no effect’ – be sure they are not misrepresenting the data and explore the setup of the study. Many of the important studies I have reviewed in relation to biological effects and electro hypersensitivity can be cited within the references of the following journal article: ‘*Wireless technology is an environmental stressor requiring new understanding and approaches in health care.*’ By *McCredden et al* (2022) Available online: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9809975/>

This article by Nyberg et al (2023), discusses many of the issues at hand from organisations and bodies worldwide continuously ignoring the science and acceptance of serious harms related to inadequate standards. Whilst this continues the unsuspecting public are adversely affected. Nyberg et al (2023) state in their concluding remarks “*in spite of being provided with increasing evidence of the negative effects on human health, no measures have been taken to reduce exposure or to educate people on the risks. On the contrary, ambient exposure has increased [103]. Protests and comments by scientific*

experts and several organisations including non-governmental organization (NGOs) have been ignored. Instead, the EU has heeded only the opinions of a handful of experts, associated with WHO, ICNIRP, and SCHEER, with conflicts of interest due to ties with industry. Therefore, any opinion these “experts” may give on wireless EMF and human health is compromised. It is urgent that unbiased evaluations of risks be made by experts with no conflicts of interest. In spite of thousands of scientific reports proving harmful effects of wireless EMF, all seven appeals sent to the EU since 2017 have been neglected. These reviews have requested immediate action from the EU on its mandated responsibilities, i.e., to protect humans and the environment instead of promoting industry interests.”

I am not sure how long these organisations including the wireless industry can continue to get away with such misrepresentation of the data, ignoring the science and anecdotes of harm. In the 2021 court case *FCC versus CHD & EHTrust*, -the general public can only hope the ‘house of cards’ is starting to fall with the court’s ruling in this case. “According to the Court’s decision, the FCC failed to provide evidence to support its decision in regard to the non-cancer health effects and that it also failed to respond to the extensive evidence that was filed with the FCC (via the docket which is also called “record”) that shows that the current radiofrequency emissions guidelines may cause negative health effects unrelated to cancer. The court stated that, the FCC’s failure, undermines the Commission’s conclusions regarding the adequacy of its testing procedures, particularly as they relate to children, and its conclusions regarding the implications of long-term exposure to RF radiation, exposure to RF pulsation or modulation, and the effects of wireless technologies that were developed since 1996. The court also found that the FCC 2019 decision was arbitrary and capricious in its failure to respond to comments concerning environmental harm caused by RF radiation.” We can only hope that ARPANSA will be scrutinised much the same as they too adopt these similar standards based on only recognising a thermal mechanism of harm based on 6 minute or 30-minute averaged exposures.

In addition, I have chosen this Nyberg et al (2023) article as it too examines the problems with smart meters as well as other important issues on this whole subject. “Signals from smart meters [86] have been shown to be harmful for health [87]. A single smart meter emitting intensities below the ICNIRP limits can create sleep, heart, immune system and reproduction problems, and lead to DNA damage, oxidative stress and cancer [88].”

The exorbitant number of pulses and transmissions coming from these meters and transmitting poles is very hard to fathom – I don’t believe the public have been fully informed about these meters. I go into more detail in my own documents on this subject (attached). Once again is this fair that approximately 85,000 pulses of wireless radiation are emitted 24/7. - (my case in WA with Western Power). Location of smart meters near living and sleeping spaces are never taken into consideration and the effect of constructive interference amplifying the emissions by the utility companies. Please keep this in mind.

- Is this a fair swap for collection of data that an analogue meter only required reading once every second month?
- Who needs such intricate data collection?
- These meters alone consume electricity. “Earlier (5G) Appeals have provided recommendations for alternative and accessible technologies such as the use of appropriately wired^[1] cable and fiber connections (as proposed in the ERPS/STOA

report [63]). Such innovations are readily available and provide far superior speed, reliability, health protection and data security. Wired internet speeds are 100 times faster than typical wireless connections [77], and **much more energy efficient**" (Nyberg et al, 2023). [my emphasis] If our government and utility companies are sincerely concerned about climate change – then wired solutions are far superior.

- As a result of the increased consumption of energy, the harm to people and the environment, and the potential misuse of data – does this not infringe on promises of reduced energy consumption?
- Australian government, utility companies and wireless industry continue to prioritise wireless technologies despite the increases in energy burden and the existence of safe wired energy saving alternatives.
- Also, a precedence to economics instead of health and environmental protection.
- Removing perfectly functioning electricity meters. In Western Australia ours have gone to landfill, where are your functioning meters going?

‘This issue has been so politicized.

There are two major casualties, the truth and public health.’ (Dr Neil Cherry)

As I cannot spend much time inside the house (as a direct complication of this rollout) to write this submission, I am attaching some supporting documents (attached to the email) that I have written (last year – 2023) to my local State MP and *Energy and Water Ombudsman WA* in which I was trying to get some remediation and seek justice in my individual case. In these documents I outline the injustices, cruelty, and harm and what I see is a complete disaster from a Public Health perspective. These documents are not an exhaustive list of the references available as they only formed a basic debriefing to the people involved in my case and were not to overwhelm. However, there is enough information included to support the harm that is being done -just by the mere number of personal anecdotes. What is your number of people you are willing to put in harm's way? The worst part is that — as EMF scientist Dr. Magda Havas informs — most electro-sensitives are not aware of their conditions and **"are living a life compromised by increasingly poor health as a consequence of their exposure."** Even worse the medical professionals do not even know to attribute the patient's symptoms or deterioration to EMF's – my father's GP was one of those. I sit on the shoulders of thousands of scientists, researchers and many more who also are sincerely concerned by such a smart meter roll out, and the unnecessary and unscrupulous use of wireless radiation-pollution. I am also relying on their assistance to provide their submissions with all the scientific evidence of adverse biological effects and re-emphasising the irrelevance of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) standards -that you all seem to adopt despite them only being informative and protective against thermal heating. What needs to be remembered people are being harmed despite the standards. I am happy to provide any further information to clarify my personal injury and with all the scientific evidence that ARPANSA seeks to ignore. Please take the time to review the documents as listed below and attached to this submission. I believe with others (Flydal & Nordhagen, 2022 and Anderson, 2021) the digital meters alone are causing considerable harm once identical meters are on 'the grid' causing excessive electrical line noise (aka dirty electricity) along with the switch mode power supply (SMPS) of the meter itself. This has been found and confirmed by electrical engineers - which could be attributed to these meters having inefficient filters or totally

lacking. Despite the unnecessary use of wireless radiation pollution, the digital meters themselves need investigating and confirming they are working safely and cleanly on the grid.

The documents attached include:

- **‘Public Health Warning: Western Power Advanced Metering Infrastructure (AMI) Rollout in WA.’** This was a letter of concern to my local State MP here in WA. There is a good number of documents I have listed and the work of others in the reference list that need to be taken seriously. Many of these documents were part of other author’s submissions to their local energy boards (Dart et al, 2013), Australian Senate Inquiry 2001 (submission by Dr Cherry, 2000) and others forming their testimonials or literature for court cases such as in Norway (Conrad & Friedman, 2013; Flydal & Nordhagen, 2023). Also, within my documents I explain the concerns with the smart meters in relation to the constant chronic pulsing/modulated radiofrequency/microwave radiation (RF/MW) happening 24/7. The switch mode power supply (SWPS) as part of the digital meter causing dirty electricity/electrical line noise and contaminating the whole house wiring with an extremely low frequency (ELF) component. In addition, the Federal Communications Commission (FCC)-USA (Australian equivalent of ARPANSA), in their 2021 court case versus Children’s Health Defense & Environmental Health Trust, admitted there are neurological effects from non-thermal RF emissions and its admission applies to frequencies in the kilohertz range created by the SMPS. Western Power refuse to review these findings of extremely high levels of dirty electricity or to even check the efficiency of the filters/lack of within the brand of digital meter that West Australian’s have no choice over. These are just some of the fights and injustices being experienced every day here in Australia where these utility companies have become untouchable and a law within themselves. *(All the citations I have used on this cover letter can be found in this document)*
- **‘My background and personal experience with AMI rollout in Western Australia’** - gives a basic timeline of events.
- **‘2023/01037 - Complaint to the Energy and Water Ombudsman about Western Power’** this gives my experience with Western Power and illustrates the complete injustices, cruelty that is happening because of these rollouts and that there is not an ounce of consideration of the ‘individual’ harms that are occurring. This shows utility companies overriding medical advice, and refusal to investigate the harms and learn why it may be happening to ‘some’ individuals. Switching out meters without consent or notification, -and when someone has a known sensitivity to such devices. Western Power and the WA State Govt need investigating.
- **‘2023/01037 – Outcome Letter from Energy and Water Ombudsman Investigating Officer to Complaint to the Energy and Water Ombudsman about Western Power’**

What has happened to me is unacceptable and would never have happened if a health impact study had been done, or if the 142 health complaints in a 12-month period in Victoria, Australia had been thoroughly investigated following their mandated roll out (Lamech,2014). If the AEMC is considering continuing with a smart meter deployment, how is it that Lamech’s 2014 study titled *“Self-reporting of symptom development from exposure to radiofrequency fields of wireless smart meters in Victoria,*

Australia: a case series.” is being ignored along with the thousands of other adverse health effects from such rollouts happening worldwide. Dr Lamech (2014) also recommends in her concluding remarks, “until more knowledge is accumulated and until this type of wireless technology can be proven safe, the author believes that communities should use a cautionary approach, asking for a moratorium on deployment of wireless smart meters and smart grids and for the use of safer technologies for smart meters, such as hardwiring, fiber optics, or other nonharmful methods of data transmission, including reading of meters by meter readers.” In addition, Lamech (2014) interestingly found, “the vast majority of Victorian cases did not state that they had been sufferers of electromagnetic hypersensitivity syndrome (EHS) prior to exposure to the wireless meters, which points to the possibility that **smart meters may have unique characteristics that lower people’s threshold for symptom development.**” [my emphasis]

A group of medical physicians (Dart et al) in Eugene, USA back in 2013, completed a report to the staff and directors at the *Eugene Water and Electric Board* as they were concerned for their patients in this community if such a rollout was to occur. It was titled “*BIOLOGICAL AND HEALTH EFFECTS OF MICROWAVE RADIO FREQUENCY TRANSMISSIONS: A REVIEW OF THE RESEARCH LITERATURE*,” June 2013. This report covers a vast amount of the literature up until this time showing the significant number of biological effects in relation to radiofrequency/ microwave radiation (RF/MW).

As more people become aware of the dangers and harms caused through wireless radiation and start attributing it to their symptoms and chronic ill health -they will begin demanding changes. It is time we start demanding safer use of the technology and start reinventing wires. The rollout of AMI meters is an unnecessary and reckless exercise that will in time prove to be a disaster. What we look at now as “quick and cheap” will come to be viewed as “quick and dirty” in the future. There is nothing green about a smart meter rollout – in fact it can be viewed as a source of pollution – but importantly it is causing considerable harm. The WHO’s International Agency for Research on Cancer (IARC) classified RF-EMR as a Group 2B possible human carcinogen in May 2011, and since this time many independent scientists believe there is enough evidence to confirm as a known carcinogen. It is hard to prove causes of cancer and is a late sign of oxidative stress/damage, however smart meters are causing immediate reactions in many cases.

“The science of the invisible (e.g. electron transfer) is vastly different from the science of the visible (e.g. machines). Without any understanding of complex biology, telecommunications engineers are creating infrastructure and signalling systems that are disrupting the basic processes on which life exists. The ARPANSA and ICNIRP assurances of safety are feebly based on Newtonian physics. They sound plausible to the lay person, but they are of no relevance to what is actually occurring.” (ORSAA)

Thank you for your time in this matter. My life has been destroyed from this rollout and I don’t want this happening to anyone else. Please AEMC team – start working with independent scientists to sort out this problem. There are some simple solutions that can be fixed – we should as a minimum be looking for wired connections and keeping wireless radiation ‘As Low As Reasonably Achievable’ (ALARA) or very simply bring back the meter readers or self-read – not rocket science. Before we think about wired connections – the AMI/digital meter itself needs addressing - as this too could be a big cause of the current problems. We address problems and make buildings easily accessible for our wheelchair bound. We need to start addressing the same for our EHS (electromagnetic

hypersensitivity) – and once again wired solutions. Currently people like me are discriminated from participating in society by the unscrupulous use of wireless radiation. At a Federal level the ARPANSA standards need challenging – I am certain my condition would never have happened if these were in place; and the rollout of wireless smart meters would never have been allowed.

Finally, I will leave you with this excerpt from Conrad's (2013) testimony:

"I am writing here about real people and real suffering. Presently more and more people are developing EHS worldwide at an alarming and unprecedented rate (O. Hallberg & G. Oberfeld, Electromagnetic Biology and Medicine: 189–191, 2006, attached as Exhibit E). The total number is already huge - we shouldn't have to wait until the numbers grow even larger to get help - the number of people already affected is enough to require doing something about it. These people will have no place left to go, and no careers. Smart meters are an experiment carried out by utilities and others mostly for their own profit, without prior safety testing, and it appears to be a classic example of technology creating far more problems than it solves, problems of all kinds that will persist and increase. It will be like swallowing an endless string. There will be no end to health problems, health costs and financial costs. Smart meters as they are today extremely flawed - an overly complex system being propagated worldwide without any human impact study. There are far smarter ways to implement a smart grid. If a technology is not carefully and properly designed to serve human beings, then human beings end up being slaves to (and in this case, injured by) the technology."

This is a problem that will not go away until it is appropriately investigated.

The more denial now, the more the repercussions later.

Do no harm; do the right thing and listen to the people.

Yours sincerely,

Kylie Colum

The Honourable XXXXXXXXXX (MLC)
XXXXXXXXXX
Member for East Metropolitan Region
Level 1, Sterling House, 8 Parliament Place
West Perth WA 6005

21st November 2023

Re: Public Health Warning: Western Power Advanced Metering Infrastructure (AMI) Rollout in WA.

Dear Honourable XXXX,

I wish to express my sincere concern regarding Western Power's rollout of the Advanced Metering Infrastructure (AMI) here in this State of Western Australia. This has been happening over the past few years. AMI meters are also loosely termed 'smart meters' but over time I hope to convince there is nothing smart about these meters at all. In fact, they are causing considerable adverse health effects to parts of our population, and many of the unsuspecting public would be unaware to attribute their symptoms or worsening of health conditions to such a supposed 'innocent' meter. The timing of the rollout here in WA during Covid has possibly attributed to many people being unsuspecting of their adverse health effects but instead blamed it on their 'Covid' symptoms or the vaccination itself. There are some similarities and crossover. All of these can cause symptoms of cardiac irregularities, shortness of breath, flu-like symptoms, tinnitus, nervous system disorders including brain fog and fatigue to name just a few. What is even more difficult is majority of the medical profession is completely unaware of the harms related to chronic low exposure non-ionising radiation, commonly used in the wireless communications industry which include cell phones, smart meters, modem routers, cell towers, small antennas etc. The medical profession has been misled by the ARPANSA standards that are supposed to protect ALL the public and would never consider these effects to their patients change in mental and physical health as being a contributing or causal factor. ARPANSA: Australian Radiation Protection and Nuclear Safety Agency. In addition, the standards only address/recognise thermal mechanisms of harm, based on 6 minute and 30-minute exposures – we are currently being exposed 24/7. Despite over a hundred health complaints registered in a 12-month period following a smart meter installation, ARPANSA still claim, **'[T]here is no established scientific evidence that the low-level RF EME exposure from smart meters causes any health effects.'**

My reason for this letter is not to challenge ARPANSA (at this stage) – but to issue a warning regarding an evolving public health nightmare related to the WA Western Power AMI meter rollout. I don't want to be an alarmist, but I also come from a unique situation of someone who has been directly affected/harmed by this technology on my house and in the neighbourhood. I will go into more detail later but basically, I have become hypersensitive to wireless devices (literally overnight) that is both crippling in causing shortness of breath, chest heaviness, sinus headache, highly agitated, fatigue, joint pain and even suicidal depending on extent of exposure. I have become a prisoner on my own property living in a tent to try and keep 'some' normality in my life. I see it as my duty as a former registered nurse/midwife, with a sound grasp of the medical literature, experience working in areas of evolving

scientific technology (reproductive medicine), and as someone who has skin in the game to create an awareness. So, as I peruse the literature, I can relate it to my own situation as a plausible starting point. I am also someone who is curious and determined to find the root cause. The root cause for me in this matter is how this roll out was allowed to happen, and why are Western Power so determined to remove every analogue meter off houses, -whatever the health consequences maybe. It must be more than economic costs related to meter readers – where most people could read their own. What has happened to me is unacceptable and would never have happened if a health impact study had been done, or if the 142 health complaints in a 12-month period in Victoria, Australia had been thoroughly investigated following their mandated roll out (Lamech,2014).

In Victoria, Australia – they were the first to roll out and mandate this technology in 2006. No health impact studies were completed. Within a 12-month period there were 142 adverse health complaints reported to a confidential health register on an Australian website. This would only be the tip of the iceberg of complaints as many people would have been unaware of a new meter installed, wouldn't have attributed their symptoms to an electricity meter, and this website was not well known – you would have had to be perusing the computer trying to get answers for your new set of symptoms. Dr Lamech, a Melbourne medical practitioner in 2014 published a case series titled: 'Self-Reporting of Symptom Development From Exposure to Radiofrequency Fields of Wireless Smart Meters in Victoria, Australia': [Self-Reporting-of-Symptom-Development-From-Exposure-to-RF-of-Wireless-Smart-Meters-in-Victoria-Australia-EHS-Study-by-Federica-Lamech-2014.pdf](#)

- Conclusions: review of some key studies, both recent and old (1971), reveals that the participants' symptoms were the same as those reported by people exposed to radiofrequency fields emitted by devices other than smart meters. Interestingly, the vast majority of Victorian cases did not state that they had been sufferers of electromagnetic hypersensitivity syndrome (EHS) prior to exposure to the wireless meters, which points to the possibility that smart meters may have unique characteristics that lower people's threshold for symptom development.
- Dr Lamech also recommends in her concluding remarks, "Until more knowledge is accumulated and until this type of wireless technology can be proven safe, the author believes that communities should use a cautionary approach, asking for a moratorium on deployment of wireless smart meters and smart grids and for the use of safer technologies for smart meters, such as hardwiring, fiber optics, or other nonharmful methods of data transmission, including reading of meters by meter readers."

Yes, this is a case series, but it also highlights a clear signal of harm that should never had been ignored. It should have been enough to stall a WA roll out without no health impact study completed. Dr Lamech proposed a hypothesis, and it should have been tested to prove it is safe. What is also important is these types of studies are about real people, in real world situations and not under laboratory conditions. The onus should be on Western Power and the WA State Government to prove the safety of an AMI meter WA roll out, -including impacts on individual health from a Public Health perspective. This is already starting to be another case of late lessons from early warnings. I encourage you to read her study (if you haven't yet) as it also gives a fair overview of what this is all about and introduce you to some of the terminology to quickly get you up to speed. It also provides a much better explanation than I can give currently - like always the references are just as important. Very little research has been done explicitly on AMI meters and health effects – other than reports from the industry and certain authorities. Such studies mostly demonstrate that the emissions are well below the limits, so they therefore conclude that this "cannot represent a health problem". In

addition, we are putting reliance on utility companies and engineers who have **no** understanding of the health implications of such strategies.

I have read the Western Power smart meter information which is all based on circular reasoning claims. The economic claims have been heavily disputed even by the media! A basic public campaign on how to use less electricity would have been more cost effective, than disposing of thousands of perfectly functioning analogue meters to landfill-that almost last forever. How to use less electricity is not rocket science. Claims of improved accuracy is also a proven myth. Safety claims are based on the ARPANSA standards – need I say more. Regarding the AMI/digital meter itself – they may be complying with standards in the laboratory but testing by electrical engineers in other countries shows they don't necessarily comply once identical meters are used on the grid. Regardless of what Western Power claim there is a big difference between the old traditional nonelectrical/mechanical analogue meter and the new AMI digital meter. The significant difference is an analogue meter does not have a switch mode power supply (SMPS) and does not consume electricity. These AMI meters may not be compatible to our grid or current house wiring that was previously not affected by the analogue meter-it is believed the analogue can be more forgiving. No-one can give me an answer on the latter – and I believe it needs important consideration before more lives are harmed. Electricity can be extremely beneficial, but it also needs to be used carefully as to not cause harm. All electricians are aware of this as part of their apprenticeship.

There are many issues at hand, but I see two significant key mechanisms of harm directly related to these AMI meters:

1. **AMI meter rollout along with the transmitter/receivers emitting radiofrequency/microwave (RF/MW) radiation unscrupulously and unnecessarily leading to chronic low exposure.** This is inadvertently raising background ambient levels in individual houses, and in the neighbourhood. Individuals can make their own choices re-wireless use in the house, but Western Power has no right to assume every household exposes themselves to this source. We have communities full of varying levels of vulnerabilities including children, pregnant mothers, elderly, and those with chronic conditions. The utility companies make you believe that there is only transmission of data six times per day – that might be the case, but in addition these meters are constantly chattering with each other, sending out beacon signals 24/7. An *EME Survey Project* completed for Western Power in May 2021 by Total Radiation Solutions shows that around **85,000** pulses were recorded in a 24-hour period. These are often short millisecond bursts constantly being emitted. This is all happening even when we are sleeping. We are exposed 24/7 whether you like it or not! This is extremely significant for sleep disruption and interfering with melatonin production which leads to a downstream of many chronic health conditions.

Here is an excerpt (direct quote) from a document completed by a group of medical physicians in Eugene, USA, (2013) pg 7:

“This power density of 300+ to 400+ μ W/m² was greater than the signal strength of the cell phone tower at 29th and Amazon, measured from about 200 meters away. So, filling a neighborhood with a mesh network of the Elster smart meters would be similar to placing every house in that neighborhood closer than 200 meters from a cell phone tower, each house constantly being pinged by the chatter of multiple beacon signals from the mesh. This was disconcerting, since recent research has shown that people living within 500 meters of a cell phone tower have increased incidence of

headache, concentration difficulties, and sleep disorders, and a significantly increased risk of some types of cancer. (Khurana et al., 2010) (Levitt and Lai, 2010) (Yakymenko et al., 2011) (Altpeter et al., 2006) (Abdel-Rassoul et al., 2007) When you put these facts together, it is not so surprising that the installation of mesh smart meter networks in residential neighborhoods in California last year was followed by a surge of anecdotal evidence regarding headaches, insomnia, and other health complaints.” As a side note: I measure at any time over 1000uW/m² outside my bedroom and along the street.

Here is the document (from the above quote), completed by a group of medical physicians in Eugene, USA who were concerned about the rollout of AMI in their community. It is well worth a read to summarise some of the legitimate concerns we all have. They also completed a literature review in the process. It is 10 yrs. old but still relevant and well referenced:

<https://apps.fcc.gov/els/GetAtt.html?id=171436&x=>

- 2. Electrical line noise aka: dirty electricity, electrical pollution, high voltage noise and the switch mode power supply (SMPS).** According to Dr Milham and Stetzer (2013), “Dirty electricity, also called electrical pollution, is high-frequency voltage transients riding along the 50 or 60 Hz electricity provided by the electric utilities. It is generated by arcing, by sparking and by any device that interrupts current flow, especially switching power supplies. It has been associated with cancer, diabetes, and attention deficit hyperactivity disorder in humans. Epidemiological evidence also links dirty electricity to most of the diseases of civilization including cancer, cardiovascular disease, diabetes and suicide, beginning at the turn of the twentieth century.”

Dirty electricity is an under recognised term and controversial regarding mechanisms of harm. The literature on the switch mode power supply of the AMI/digital meters says it produces unintended consequences of radiofrequencies radiating from the house wiring – this is an important health concern. The SMPS is common amongst some electrical equipment in the house but can usually be isolated and filtered cheaply if needed. However, a SMPS as part of the AMI/digital meter are located just where the house's wiring network spreads out into the house, causes this noise to spread out effectively in the building, so that, in principle, you live inside a three-dimensional antenna that emits electromagnetic pulses in step with the noise. The noise will be amplified when several meters are installed in the same transformer circuit, which is the normal situation. (Flydal & Nordhagen, 2022)

Direct quote (Flydal & Nordhagen, 2022: 1), *“It is well documented that very low frequencies consisting of “bursts” or “pulses” or “spikes” or “peaks” found in such “dirty electricity”, may affect biology, e.g. by impacting metabolism and alter the brain’s sleep pattern, by opening cell wall calcium channels (VGCCs) resulting in increased production of oxidants (ROS), and by creating extra signalling in the nervous system. Such effects happen even at very weak pulses, as long as they reach the “right” frequencies, i.e., pulse rhythms that charged dipoled proteins or other elements in the body naturally respond to. Experience tells that some individuals are far more sensitive to such impacts and react acutely, others only after some time, or never. The measurement test results in this new report may therefore explain why some people experience health problems from new smart meters - even when they have been exempted and removed from the new meters' radio transmitters, even though others do not react at all.”*

Here are the 2 documents/articles discussing dirty electricity for easy perusal or read later, I will also put in the reference list. I have also included another paper by Martin Pall, discussing voltage-gated calcium channel mechanism which was also cited in the 2nd document.

- <http://www.sammilham.com/Milham-Stetzer-2013-Dirty-electricity,-chronic-stress,-neurotransmitters-and-disease.pdf>
- <https://ehtrust.org/wp-content/uploads/EMF-Consult-Smart-meters-dirty-electricity-w-intro-EFlydal-ENordhagen-2022.03>
- Pall, M. 2013. Electromagnetic fields act *via* activation of voltage-gated calcium channels to produce beneficial or adverse effects. *Journal of Cellular and Molecular Medicine*.
<https://onlinelibrary.wiley.com/doi/10.1111/jcmm.12088>

I am not sure which of these mechanisms may have contributed to my initial reaction and sensitisation or was it a combination of both. I believe both deserve attention to eliminate all problems contributing to chronic ill health.

Here is an excerpt from the *Western Power EME Survey Report* May 2021 (pg 8) that was mentioned in key mechanism number one. This was completed by Total Radiation Solutions (ph: 08 9381 7199) a Perth based company – they are approachable if you have any questions related to the testing. I have no doubt with the testing – but once again complying with the ARPANSA standards is irrelevant when people in Australia and worldwide are being harmed at low exposure levels. It would have been more worthwhile to complete a health impact study – a bit late now. Anyway, here is the excerpt on how smart meters work and a link to the full document:

[Western Power Smart Meter RF Survey\[4749\].pdf](#)

“How Do Smart Meters Work? Smart Meters that are installed in WA are linked through a Mesh Radio Network. This network has some similar features to a mobile phone cellular network. The Mesh Radio Network operates in the Industrial, Scientific and Medical (ISM) band – 915 to 928 MHz. Equipment operating in this band is required to employ Frequency Hopping Spread Spectrum (FHSS) techniques – in other words, it switches between different specific frequencies within the band to avoid interference with other nearby equipment operating in the same band. To retrieve information, WP initiates contact with the smart meters at given periods through the day. These so-called “Polling Periods” occur every 4 hours for Mesh Radio Networks. Different types of proprietary software or “communication protocols” are employed to retrieve and analyse this available data; some protocols are more complex than others, allowing more or less sophisticated analysis of electricity usage and of the efficiency of the distribution network. In addition to allowing the Western Power Network Controller to initiate the Polling Periods, the Mesh Radio networks also “chatter”, that is, the smart meters communicate with each other within the “mesh” to maintain a constant link to the controller. The meters can be linked through a “hub” meter, the identity of which can change depending on where the most effective communication link or signal to the main network access point is operating at any one time. In other words, the mesh is a dynamic, self-healing network.”

The 900 MHz frequency range as used by the radio mesh smart meters (as noted above) may also be an issue. Besides the constant pulsing of smart meter emissions there is the issue of the 900 MHz

frequency range used. In 1976, James Lin concluded that 918 MHz energy constitutes a greater health hazard to the human brain than 2450 MHz energy for a similar incident power density. In addition, studies of diathermy applications consistently show that electromagnetic energy at frequencies near and below 900 MHz is best suited for deep penetration into brain tissue. So, the possibility exists that in situations where people are in close proximity to an active smart meter, the combination of the frequent transmission bursts at around 900 MHz constitutes a new and unique human exposure situation that may have unintended biological effects, especially on sleep. (*find ref Maisch 2023*)

As I stated earlier, I am one of these people who has been harmed and injured from the AMI meter (communication device removed) on my house because of this roll out. My case is not an isolated case but mirrors the experience of many others here in Australia and worldwide (see Lamech, 2014; Conrad & Friedman, 2013). There is something unique about these meters that is tipping people from healthy one day to debilitating symptoms the next, and leading to what is commonly known as electromagnetic hypersensitivity (EHS) aka 'microwave syndrome'. I appreciate that not everyone may be experiencing these effects, but it is extremely well documented that chronic low exposure low intensity pulsed/modulated/radiofrequency/microwave (RF/MW) signals along with the extremely low frequency (ELF) component of the carrier wave is extremely bioactive to the human body (Panagopoulos et al 2021). Remember we are bio electrical/chemical beings. Everyone's experience maybe different depending on the location of the meter on the house, neighbour's meter, and the transmitter/receivers sitting on every lamp post in the street and this is not taken into consideration by Western Power.

I am also someone who does not use wireless devices of any sort in the house, -any possible wireless device is disabled or completely off and this has been the case for many years. Yes, I do use technology, but all my devices are hardwired by use of ethernet cable etc. Maybe I am the 'canary in the coalmine' – and my body is alerting to a current danger of exposure that my ancestors have not evolved with – food for thought; or can it be explained by the 'boiling frog effect' analogy? It explains part of the health effects but not the overnight sudden sensitisation. I am suspecting it was the constantly pulsed/modulated RF/MW radiation that I sustained (penetrating my bedroom wall>head) that first night following rollout of AMI meters in my street. I don't remember the correct wireless terminology but these RF/MW signals with increasing technology carry a lot of information along the wave that can be highly bioactive/irritative to our bodies -Western Power rollout uses 4G technology. Once you read more of the literature – you will understand why. Could this be problematic? I was a healthy person – what if this was someone with a serious medical condition – particularly neurological illnesses?

If ARPANSA was resourced with 'true' scientists, then they would be questioning and finding out as much information from people like me – as to why these health effects are occurring. I sent an email to them to register my health complaint, I was not asking for medical advice – this was done as recommended, to merely provide information that may prove helpful, ie is there a common theme and more importantly to prevent this from happening to others. The reply was an unsigned letter/template - although not written, - implied I was psychosomatic. Unfortunately learning more would be an inconvenient truth and they could no longer be industry friendly. ARPANSA needs to be challenged at a Federal level.

Here is an excerpt/direct quote from Steven Weller's submission (2019) that supports my experience with this agency:

"Their (ARPANSA) website disclaimer gives the public no confidence in their fact sheets or technical documents. They lack critical expertise in medical matters and have not fully

disclosed the risks that are associated with Radiofrequency exposure to the public. They clearly lack qualifications to provide a medical opinion on any of the many bioeffects that are being found in well conducted peer reviewed scientific research. Letters from the concerned public presenting compelling scientific evidence to ARPANSA are typically deflected with template responses that don't deal directly with the evidence at hand. ARPANSA has also been shown to have misrepresented the science and the balance of evidence in its technical series report TR-164. It has not adequately dealt with the risks identified by independent researchers and dismisses or diminishes important findings without any plausible justification."

As per personal communication, "the ARPANSA RF standard limits do not protect against lower-level chronic pulsing radiofrequency exposures such as from smart meters, especially when the smart meter is situated near bedroom areas, giving extended exposures over many hours. Therefore, inclusion of other possible biological effects unrelated to heating has not been considered in the actual setting of maximum exposure limits for radiofrequency exposures. Considering this, any assurance of smart meter safety based on these standards is not at all relevant. Maintaining an unquestioning reliance on these standards could be considered as condoning unethical human experimentation if we consider people's personal anecdotes." (email: 21st October, 2023-Maisch ref - need to confirm full ref)

Western Power need investigating along with the Western Australian State Government in their role in neglecting their duty of care and accountability and causing harm to the wider community. People with vulnerabilities to wireless radiation are being discriminated against and given no choice in the matter. Not an ounce of consideration has been given to the vulnerable in the community. Then there are people like me who had a known reaction to a smart meter in a workplace etc, had not consented to a new installation and they still went ahead with the replacement – just minus the communication device. I hope you understand that when these are rolled out in the community – there is no opting out – because we all still get exposed, -for example if your bedroom faces your neighbour's smart meter. How different would this be in continuously contaminating a person's house with 'peanut dust' who has a known peanut allergy leading to anaphylaxis? **Is this fair that people's properties are been made unliveable and now homeless?** Is it even ethical? This is the reality of what is happening in your community unless they have already been lucky enough to flee to a 'safe' zone. Please keep this in mind as you continue reading.

Here in Western Australia – no options are given for an alternative replacement meter. This is highly discriminatory against people with sensitivities or any vulnerabilities. For people in my position – even going off-grid with solar panels is not recommended because solar inverters can be highly problematic in my condition – otherwise I would do this – as I am so disgusted with WP. They are also removing perfectly functioning analogue meters despite people not consenting to this procedure. From my research – an AMI meter is not essential for this new grid, – so there is no reason to be replacing meters in working order. It is an utter waste. As per Metering Code WA (2012) **3.16 (3B)** *"The network operator must not install a Type 5 metering installation or Type 6 metering installation on or after 1 January 2022. {Note: The effect of clause 3.16(3B) is that the network operator may no longer install Type 5 metering installations or Type 6 metering installations after 1 January 2022. **However, subject to clause 3.18A, it is not required to replace existing Type 5 or Type 6 metering installations.**"* Western Power removed our meter on 29th September 2021 without our consent and they had knowledge of my current sensitivity – having only recently (April 2021) recovered at that time from a workplace with a smart meter and 4G small antenna across the road. So, when I phoned them the

following day after having a severe reaction - even at that stage they were still allowed to replace back with an analogue meter as per the Metering Code. Even when I continued to phone over those next few weeks with no replies despite promising someone would phone back, – it could still have been achievable and okay as per the Metering Code. **Despite all this, why are there no allowances and importantly choice for the consumers?**

What is even more disgusting, they have done no investigation to check the new meter is working appropriately on the grid and delivering safe and clean electricity – all they did was check the communication device had been removed. When they confirmed that it was indeed removed, that should have prompted them to look for other causes including faults and emissions from neighbours and the transmitter pole. RF/MW radiation penetrating my bedroom walls and constructive interference may have been confirmed. Instead, I have had to endure a deterioration in my health due to their neglect and inaction. I did not have a RF or EMI meter at this time to measure (bought in Aug 2023). Who is doing these checks and checking for constructive interference happening between houses and causing amplified levels of RF/MW radiation. Even when they were informed of dirty electricity measured with the *Trifield Alpha Labs electrical line meter* (mVpp) and excessive levels of line noise (measuring greater than 1500mVpp) entering our house from the grid; – signifying interference from the grid with ALL appliances and electricals OFF - most professionals consider this dangerous/unhealthy levels. These levels are from when I first started measuring a few months back (August 2023). It was like our house has been penalised for using minimal electricity and our house was treated like a sewerage dump. Over the course of the day as more electricals and lights was put on in our house– I could get readings down to 80mVpp and even down to 60mVpp – which are acceptable levels, -at this time I can easily tolerate this part of the house. The other side of the house where all the bedrooms have RF/MW radiation penetrating the walls (over half the house is unliveable), -I get short of breath and symptomatic if spending any lengthy period time in these areas.

Even when WP were informed of significantly high electrical line noise being measured -they still ignored and sent back – no reply emails claiming AMI/digital meters comply with the metering code and ARPANSA. I find this very difficult when receiving these replies when at the time they had not set foot back on our premises to check. These no-reply emails disallow a continuation of the conversation and the complaint at hand not being addressed appropriately; – it is a closed shop and is indicative of a culture of employees who are being heavily scripted of what they are allowed to say. Instead, you must go through the online complaints line, and start all over again. Even when I requested the complaint to be escalated within WP – my case was reviewed by the ‘Financial Revenue Officer’ – replying with the same script. Phone numbers provided are continuously engaged all day/everyday since trying again from August 2023. That is either suspicious or a sign of significant proportion of disgruntled people with concerns trying to be addressed. I could understand *Synergy* being engaged dealing with payments but not WP complaints line. In fact, you can get through easily with *Synergy*. Currently going through the *Energy and Water Ombudsman of WA* and have received an email reply (15/11/23) requesting any additional information I can support my case -which I have completed 21/11/23. Western Power have no remedy for what they have done – and have no concern they are disabling a proportion of our population and contributing to the growing numbers of chronic diseases. Since when am I not allowed to return a ‘faulty device’ and particularly one causing harm.

I have also tried the **Health Department of WA** – x2 phone calls and could only leave a message – to this day no reply; I was only seeking information whether any health registers were being kept related to electro hypersensitivity, and any awareness of any adverse health complaints being reported related to wireless radiation and smart meters. Who is collecting this information in WA? Hopefully,

parliamentary privilege may achieve some answers to some legitimate questions. Western Power is a Western Australian State Government owned corporation.

Landis and Gyr (company who makes the AMI meter used by *WP-Landis and Gyr E350 U3400 2021*): can only leave a message on the phone – x3 unanswered; emails x2– no reply. For Landis and Gyr, I was wanting to find out customer information related to these AMI/digital meters; concerns related to electrical pollution/dirty electricity these meters are possibly causing on the house wiring; and about the switch mode power supply. **(SMPS)** – is a known contributor to dirty electricity because of the constant on/off-on/off to convert the higher voltage coming from the power lines and then converting down to run the meter itself – this is a well-known documented phenomenon – and another possible cause of oxidative stress leading to ill health. The SMPS can lead to ‘unintended RF’s’ to radiate on the whole house wiring. In the USA – electrical engineers have found this brand of meters may comply with standards in the laboratory when tested individually but when the engineers tested them working on the grid – it is known to cause considerable dirty electricity. It is the extremely low frequency (ELF) component radiating out from the house wiring that is known to be problematic and leading to ill health. So, it has been found in the real-world experience – these meters do not necessarily comply. Some household electrical equipment are known contributors of dirty electricity that can lower the longevity of the equipment – but these can usually be isolated and be filtered easily. These Landis & Gyr digital AMI meters sit at the entry of our house wiring – and tends to contaminate the whole house wiring. What I also wanted to find out is whether these meters have a filter, so we receive ‘clean/safe’ usable electricity. Different brands have better filters and known to deliver cleaner electricity (smooth sine wave) – are they using a cheap brand? **This needs to be investigated – the WA public are given no options in choice of meter and have a right to know?** These meters also consume electricity as they are constantly powering/working the SMPS – there is nothing clean and green about these meters. The traditional non-electrical mechanical meter (analogue) was grounded, lasted for years, and do not have a SMPS. These new AMI meters even with the communication device removed are proving to be just as problematic in causing health effects as the wireless AMI. These new meters at most only last for 5 to 10 years as opposed to an analogue meter lasting over 40 years.

- “Within the frequency range 150kHz - 30MHz (CISPR 32), the analogue and digital electricity meters are at the reference zero level with approx. 18dBµV. Both the Kamstrup and Aidon smart meters have a quasi-peak (QP) of 49dBµV. This is a 31dBµV difference which corresponds to approx. 35 times stronger conducted voltage noise. The reason for this difference in conducted voltage noise seems to be that the older analogue meters do not have electronics that use switch-mode power supplies (SMPS) and that the older digital meters that use switch-mode power supplies use better filter technology to filter out the voltage noise. Newer smart meters have built-in power supplies and data processors that create more voltage noise, while having less efficient noise filters.” (Flydal & Nordhagen,2022)
- Constructive interference occurs when several identical current meters are connected in the same transformer circuit. (Flydal & Nordhagen, 2022)
- “... (9) non-transmitting digital meters also use SMPS, and therefore they too create RF, even though they do not contain a transmitting RF antenna for communications. These radio frequencies are transmitted on the residence’s electrical distribution system and conduct over the internal wiring, thereby turning the home into a whole-house antenna... (14) Other RF frequencies besides the RFs from the transmitting antennas, also enter the house electric system. In my testing I have witnessed and

analyzed smart meters' effects on the incoming electrical power voltage waveform. These frequencies are a byproduct of the AC/DC conversion process which is done by the Switch Mode Power Supply (SMPS). The conversion process is necessary because utility service employs alternating current whereas the electrical components in smart meters use direct current." Anderson, Eric. 2021. Engineer Report -Smart Meters Operation & RF Emissions. IN THE SUPREME COURT OF PENNSYLVANIA MIDDLE DISTRICT. Expert Opinion. <https://ehtrust.org/wp-content/uploads/Smartmeters-SUPREME-COURT-OF-PENNSYLVANIA-MIDDLE-DISTRIC.pdf>

It is also unacceptable that we should have constantly pulsing/fluctuating levels of RF/MW radiation in our sleep areas coming from the neighbourhood AMI meters and transmitters on the light poles. I am proof that the ARPANSA standards do nothing to protect ALL the public. In fact, I would argue that others and I have been harmed by this wireless radiation due to the complete inadequacies of this standard. If we had appropriate standards – this rollout would never have been allowed to happen. This complaint is not just about 'me' – it is about protecting and warning the unsuspecting public – I am just the collateral damage. How is it that Western Power can place transmitters emitting frequent RF/MW radiation on almost every lamp post in our streets when a public consultation would need to occur before any small antennas are placed in streets by the telecommunications? This same level that our community is being chronically exposed to is no different to studies done on communities living near transmitters/cell towers showing considerable health effects including headaches, sleep disruption, cancers including leukaemia's etc (Cherry, 2002). Personally, even with the installation of the smart meters, I was completely unsuspecting that in addition there were transmitters in the street and one outside our house – until I got my RF meter (Safe and Sound Pro 11). Now I know why I was so short of breath when trying to take my dog for a walk. Once again how has this been allowed?

Let's also keep in mind the WHO's International Agency for Research on Cancer (IARC) classified RF-EMR as a Group 2B possible human carcinogen in May 2011, and since have been further studies notably the National Toxicology Program and a study from the Ramazzini Institute, Italy that many scientists believe is enough to classify as a known carcinogen.

Documentation on adverse and beneficial health effects dates to at least the 1950's in military research by both the United States and Russia. The evidence in Australia goes back to a report completed by Dr Stan Barnett from the CSIRO in the 1990's, and back to a Federal Senate Inquiry in 2001, in which the implications of biological effects on human health were addressed. This citation was taken from Oceania Radiofrequency Scientific Advisory Association Inc (ORSAA) website on the Senate Inquiry 2001: "... For these reasons the Committee Chair recommends a rigorous precautionary approach in all areas of the deployment of wireless technology, that radiofrequency (RF) emissions be kept As Low As Reasonably Achievable (ALARA), and that the expired interim exposure Standard not be adapted to the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines". **Nearly all the recommendations were not implemented by the government of the day.**

I do have a lot more to say – believe it or not. There are some simple solutions that can be fixed – we should as a minimum be looking for wired connections and keeping wireless radiation ALARA, or very simply bring back the meter readers or self-read – not rocket science. Before we think about wired connections – the AMI/digital meter itself needs addressing - as this too could be a big cause of the current problems. We address problems and make buildings easily accessible for our wheelchair

bound. We need to start addressing the same for our EHS – and once again wired solutions. Currently people like me are discriminated from participating in society by the unscrupulous use of wireless radiation. At a Federal level the ARPANSA standards need challenging – I am certain my condition would never have happened if these were in place; and the rollout of wireless smart meters would never have been allowed.

I hope this has helped at least raise an awareness and to approach this in your own medical profession. How many patients today in medical centres are being misdiagnosed and medicated, and then sent back home to their own toxic environment.

Thank you.

Here is a few other articles and documents that you may find helpful in this subject matter at this point (if not already perused):

- Wireless technology is an environmental stressor requiring new understanding and approaches in health care. McCredden, J., Cook, N., Weller, S., and Leach, V. 2022. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9809975/>

In conclusion, there is an extensive evidence base revealing that significant stress to human biological systems is being imposed by exposure to everyday wireless communication devices and supporting infrastructure. This evidence is compelling enough to warrant an update in medical education and practice.

- ELECTROMAGNETIC HYPERSENSITIVITY (EHS): A PERSONAL CASE STUDY
A briefing on EHS for Health Professionals, Research Scientists, Government Officials and concerned members of the Public. 27th Nov 2013. <https://www.eesc.europa.eu/sites/default/files/resources/docs/a-personal-ehs-case-study---australia.pdf>
There is a lot of similarities to my case in this well written case study.
- Smart meter health concerns: Just a nocebo effect or an emerging public health nightmare? Maisch, D. 2012. [Don Maisch from ACNEM Journal Sept 2012.pdf](#)
- Smart meters, dirty electricity, pulses and health. 2023. Flydal, E. And Nordhagen, E. [FlydalNordhagen2023SmartMetersDirtyElectricityPulsesAndHealth v1 4 2.pdf](#)

This is written by Norwegians in preparation for a court case: the law may be different, but the science is the same. 242-page book/document but can easily go to subjects of interest. *“It is reasonable to assume that as a result of the AMS meters, a significant number of Norwegians are tipped over from healthy to ill without any idea of what the cause might be, and that similar situations appeared in other countries with the*

introduction of AMS meters. It is our hope that this book should reach them, as well as the ones who introduce such meters. There, you readers have an important mission!”

Further references that will be helpful:

Oceania Radiofrequency Scientific Advisory Association (ORSAA): has an excellent database of references – clearly showing studies of effects and no effects. <https://www.orsaa.org/>

Bio Initiative Report 2012: <https://bioinitiative.org/>

Pall, M. Microwave frequency electromagnetic fields (EMFs) produce widespread neuropsychiatric effects including depression. *Journal of Chemical Neuroanatomy*. Vol 75; part B Sept 2016.

<https://www.sciencedirect.com/science/article/pii/S0891061815000599>

Pall, Martin. 5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them. 2018 [Microsoft Word - EU-EMF2018-6-11US3.doc \(einarflydal.com\)](https://www.einarflydal.com/microsoft-word-eu-emf2018-6-11us3.doc)

Panagopoulos, DJ, Karabarbounis, A, Yakymenko, I, Chrousos, GP. 2021. Human made electromagnetic fields: ion forced oscillation and voltage gated ion channel dysfunction, oxidative stress and DNA damage. *Int J Oncol* 2021; 59:1–16. <https://www.spandidos-publications.com/10.3892/ijo.2021.5272>

“Thus, a complete picture is provided of how human-made EMF exposure may indeed lead to DNA damage and related pathologies, including cancer. Moreover, it is suggested that the non-thermal biological effects attributed to RF EMFs are actually due to their ELF components... The long-existing experimental and epidemiological findings connecting exposure to human-made EMFs and DNA damage, infertility and cancer, are now explained by the presented complete mechanism. The present study should provide a basis for further research and encourage health authorities to take measures for the protection of life on Earth against unrestricted use of human-made EMFs.”

Cantu, J et al. Analysis of global DNA methylation changes in human keratinocytes immediately following exposure to a 900 MHz radiofrequency field. *Bio Electro Magnetism* vol 44 issue 3-4, April-May 2023. Abstract: <https://doi.org/10.1002/bem.22439>

- <https://microwavenews.com/news-center/how-money-and-power-dominate-rf-research>

‘On April 1, Lai sent me a copy of a [study](#) that had just been posted by *Bioelectromagnetics*, the same journal that had published his original DNA paper. It caught my attention. My first thought was that this paper would give the 5G lobby a bad case of heartburn. It showed epigenetic effects in human skin cells after a single, one-hour exposure to very weak 900 MHz radiation —a frequency commonly used in wireless communications... There’s nothing “scientifically new” here, Lai told me when I asked for his opinion. But, he stressed, the paper shows some “serious effects” after low-level exposure. He was referring to changes in DNA methylation, an epigenetic effect for which there is a rich literature. Ten years ago, in a highly cited [review](#), a group at UCLA described DNA

methylation as “a major epigenetic factor influencing gene activities.” They went on to point out that improper methylation of a single gene can have “drastic consequences.”

RF Cancer Promotion: Animal Study Makes Waves. Germany’s Alex Lerchl does a U- turn.

Microwave News: A report on non-ionising radiation. March 2015.

<https://microwavenews.com/news-center/rf-animal-cancer-promotion>

- The RF–cancer story took a remarkable turn a few days ago. A new animal study challenged many of the assumptions which lie at the heart of claims that RF radiation —whether from cell phones, cell towers or Wi-Fi— are safe.
- The new study, from Germany, a replication of an earlier experiment, also from Germany, found that weak cell phone signals can promote the growth of tumors in mice. It used radiation levels that do not cause heating and are well below current safety standards. **Complicating matters even further, lower doses were often found to be more effective tumor promoters than higher levels; in effect, turning the conventional concept of a linear dose-response on its head.**

Stein, Y and Udasin, I.G. Electromagnetic hypersensitivity (EHS, microwave syndrome) – Review of mechanisms. 2020. *Environmental Research, Vol 186.*

<https://doi.org/10.1016/j.envres.2020.109445>

References and further reading:

Anderson, Eric. 2021. *Engineer Report: Smart Meters Operation & RF Emissions.* Smartmeters-SUPREME-COURT-OF-PENNSYLVANIA-MIDDLE-DISTRICT. Avail online. Last accessed 19th May 2024: <https://ehitrust.org/wp-content/uploads/Smartmeters-SUPREME-COURT-OF-PENNSYLVANIA-MIDDLE-DISTRIC.pdf>

Australian Radiation Protection and Nuclear Safety Agency. [Smart meters and health | ARPANSA](#)

Cherry, N. 2000. Evidence of Health Effects of Electromagnetic Radiation, To the Australian Senate Inquiry into Electromagnetic Radiation. Sept 2000. Available online: <https://protectpro.net/wp-content/uploads/2020/07/Dr-Neil-Cherry-Australian-Senate-2002-webloc.pdf>

Conrad R. and Friedman, E. (2013) Biologic, EXHIBIT D – Smart Meter Health Effects Survey and Report.

[Exhibit-10-Smart-Meter-Health-Effects-Report-Survey2.pdf \(mainecoalitionstopsmartmeters.org\)](#)

Conrad, R. 2013. Pre filed Testimonial Exhibit 9.

<https://www.mainecoalitionstopsmartmeters.org/wp-content/uploads/2013/01/Exhibit-9-Conrad-Web.pdf> (Discusses his own EHS and smart meter health effects survey)

Dart P., Cordes K., Elliott A., Knackstedt J., Morgan J., Wible P., & Baker S. (2013). BIOLOGICAL AND HEALTH EFFECTS OF MICROWAVE RADIO FREQUENCY TRANSMISSIONS A REVIEW OF THE RESEARCH LITERATURE A REPORT TO THE STAFF AND DIRECTORS OF THE EUGENE WATER AND ELECTRIC BOARD. Avail online: <https://apps.fcc.gov/els/GetAtt.html?id=171436&x=>

ELECTRICITY INDUSTRY(METERING) CODE 2012, Government Gazette, WA, 7th December 2012.
Retrieved from: https://www.wa.gov.au/system/files/2023-09/metering_code_-_consolidated_version_-_1_october_2023_0.pdf

ELECTROMAGNETIC HYPERSENSITIVITY (EHS): A PERSONAL CASE STUDY

A briefing on EHS for Health Professionals, Research Scientists, Government Officials and concerned members of the Public. 27th Nov 2013.
<https://www.eesc.europa.eu/sites/default/files/resources/docs/a-personal-ehs-case-study---australia.pdf>

Environmental Health Trust: <https://ehtrust.org/worlds-largest-animal-study-on-cell-tower-radiation-confirms-cancer-link/>

Flydal, E. & Nordhagen, E. 2020. Self-referencing authorships behind the ICNIRP 2020 radiation protection guidelines *Reviews on Environmental Health* 38;3
<https://www.degruyter.com/document/doi/10.1515/reveh-2022-0037/html>

Flydal, E. and Nordhagen, E. 2022. "Dirty power" from new electricity meters: Key to a health problem? 2022. <https://ehtrust.org/wp-content/uploads/EMF-Consult-Smart-meters-dirty-electricity-w-intro-EFlydal-ENordhagen-2022.03.28-v.1.2.pdf>

Flydal E. & Nordhagen, E. 2023. *Smart meters, dirty electricity, pulses and health, Foreningen for EMF-reform*. Online: https://einarflydal.com/sdm_downloads/download-smartmeters-dirty-electricity-pulses-and-health-pdf/ ISBN: 978-82-692792-2-1 (This can be downloaded for free-242 pages).

Goldsworthy, A. (2010). Andrew Goldsworthy Witness Statement April 2010. Available online: <https://stopsmartmeters.com.au/wpcontent/uploads/2011/10/andrewgoldsworthywitnessstatement.pdf>

Hecht, K & Balzer, H. 1997. Biological Effects of Electromagnetic Fields on Humans in the Frequency Range of 0 -3GHz [EMF1997_BALZER_HECHT_ENG.pdf \(einarflydal.com\)](https://einarflydal.com/EMF1997_BALZER_HECHT_ENG.pdf)

Lamech F. 2014. Self-reporting of symptom development from exposure to radiofrequency fields of wireless smart meters in Victoria, Australia: a case series. *Altern Ther Health Med*. Nov-Dec;20(6):28-39. PMID: 25478801. [Self-Reporting-of-Symptom-Development-From-Exposure-to-RF-of-Wireless-Smart-Meters-in-Victoria-Australia-EHS-Study-by-Federica-Lamech-2014.pdf](https://einarflydal.com/Self-Reporting-of-Symptom-Development-From-Exposure-to-RF-of-Wireless-Smart-Meters-in-Victoria-Australia-EHS-Study-by-Federica-Lamech-2014.pdf)

Leach, V. & Bromwich, D. 2018. WHY THE PRECAUTIONARY APPROACH IS NEEDED FOR NON-IONISING RADIATION DEVICES. *Radiation Protection in Australasia*. Vol. 35, No. 1, [why the precautionary approach is needed for non-ionising radiation devicesarps journal vol 35 no 1 pages 13 to 21.pdf \(orsaa.org\)](https://orsaa.org/why_the_precautionary_approach_is_needed_for_non-ionising_radiation_devicesarps_journal_vol_35_no_1_pages_13_to_21.pdf)

Lin, J.C. 1976. Interaction of Two Cross-Polarized Electromagnetic Waves with Mammalian Cranial Structures. in *IEEE Transactions on Biomedical Engineering*, vol. BME-23, no. 5, pp. 371-375, Sept. doi: 10.1109/TBME.1976.324646. <https://ieeexplore.ieee.org/document/4121067>

Maisch, D. 2012. Smart meter health concerns: Just a nocebo effect or an emerging public health nightmare? [Don Maisch from ACNEM Journal Sept 2012.pdf](https://www.acnem.com.au/Don-Maisch-from-ACNEM-Journal-Sept-2012.pdf)

Maisch, D. 2023. A proposed compulsory roll-out of smart meters in Australia by 2025 ignores a possible public health hazard with meter placement in buildings. (personal email communication 21st October, 2023-unpublished)

McCredden, J., Cook, N., Weller, S., & Leach, V. 2022. Wireless technology is an environmental stressor requiring new understanding and approaches in health care. *Frontiers in Health*
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9809975/>

Milham, S. and Stetzer, D. 2013. Dirty electricity, chronic stress, neurotransmitters and disease.
<http://www.sammilham.com/Milham-Stetzer-2013-Dirty-electricity,-chronic-stress,-neurotransmitters-and-disease.>

Nyberg, R., McCredden, J., and Hardell, L. 2023. The European Union assessments of radiofrequency radiation health risks - another hard nut to crack (Review). *Reviews on Environmental Health*. Avail online: <https://doi.org/10.1515/reveh-2023-0046>

Oceania Radiofrequency Scientific Advisory Association Inc. (ORSAA) <https://www.orsaa.org/>
ORSAA is a not-for-profit organisation composed of scientists and professionals from various academic disciplines who are investigating the scientific research that relates to the effects of artificial electromagnetic radiation (EMR) on humans, animals and the environment. As the name indicates, ORSAA has a special focus on radiofrequency electromagnetic radiation (RF-EMR) that includes high frequency microwaves widely used for wireless communication and surveillance technologies. However, ORSAA's interest in biological effects research extends to extremely low frequency (ELF) fields such as those utilized for domestic electrification (power frequencies).

ORSAA follow up documents to the 5G Parliamentary Hearing [orsaa_questions_on_notice-2.pdf](#)

Pall, M. 2013. Electromagnetic fields act *via* activation of voltage-gated calcium channels to produce beneficial or adverse effects. *Journal of Cellular and Molecular Medicine*.
<https://onlinelibrary.wiley.com/doi/10.1111/jcmm.12088>

Panagopoulos, D.J., Johansson, O., and Carlo, G.L. 2015. Polarization: A Key Difference between Man-made and Natural Electromagnetic Fields, in regard to Biological Activity. *Sci. Rep. 5, 14914*; doi: 10.1038/srep14914 (2015).

Panagopoulos, D. 2019. Comparing DNA damage induced by mobile telephony and other types of man-made electromagnetic fields. *Mutation Research - Reviews in Mutation Research; Vol 781, Jul-Sept. Available online: https://doi.org/10.1016/j.mrrev.2019.03.003*

Physician's Health Initiative for Radiation and Environment <https://phiremedical.org/>

Studies that show WiFi and Devices Health Effects: <https://phiremedical.org/wp-content/uploads/2020/03/WiFi-and-Device-Studies-Final-1.pdf>

<https://phiremedical.org/resources/videos-for-doctors-and-scientists/> (worth viewing)

<https://phiremedical.org/wp-content/uploads/2020/11/Press-Release-2020-Non-Ionising-Radiation-Consensus-Statement.pdf>

<https://icbe-emf.org/wp-content/uploads/2023/08/E-Mallery-Blythe-ICBE-at-RSM-cut-down.pdf>

United States Court of Appeals for the District of Columbia Circuit. *Environmental Health Trust et al. vs Federal Communications Commission and United States of America, Ruling 20-1025, consolidated with 20-1138, On Petitions for Review of an Order of the Federal Communications Commission.* (2021). Available online

at: [https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/\\$file/20-1025-1910111.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/$file/20-1025-1910111.pdf) (accessed 20th November, 2023).

Weller, S. Inquiry into the deployment, adoption and application of 5G in Australia Submission 530. 24th Nov 2019.

https://www.orsaa.org/uploads/6/7/7/9/67791943/steven_weller_submission_toi_5g_inquiry_sub530.pdf

WESTERN POWER SMART METER RADIOFREQUENCY ELECTROMAGNETIC ENERGY SURVEY PROJECT, Perth Western Australia, *Total Radiation Solutions*, May 2021. [Western Power Smart Meter RF Survey\[4749\].pdf](#)

Some further sources:

Adlkofer, F. 2016. Electro sensitivity: as experienced by an electrosensitive person and assessed by scientists. Access online: <https://www.elettrosensibili.it/2016/03/26/electrosensitivity-as-experienced-by-an-electrosensitive-person-and-assessed-by-scientists/>

Becker, R., & Marino, A. 1982. Electromagnetism and Life. [ELECTROMAGNETISM AND LIFE Becker and Marino 1982.pdf](#)

Benson, S. 2014. Joining the Dots: An overview of adverse public health trends since 1998 A correlation of research into Electromagnetic Radiation that shows harm resulting from exposure to wireless technology, with the exponential rise in illnesses since 1998. Online: : [Sarah Benson 2014-Joining-the-Dots-now.pdf](#)

Cherry, N. 2002. Cardiac effects of natural and artificial EMR. <https://ehtrust.org/wp-content/uploads/Cherry-2002-.pdf>

CSIRO - June 1994 BIOLOGICAL EFFECTS AND SAFETY OF EMR. Access online: <https://electricwords.emfacts.com/csiro/chapter2.html>

“It is evident that, at least in the world of EMR, science has become a business, as evidenced by the growing number of environmental and epidemiological consultants. This is prevalent in the USA but also exists in the UK. The danger with this approach is that there is a tendency to adjust the research to fit the needs of the industry providing the funding.”

Maisch, D. 2020. The Australian RF Debate. Chapter 5. Access online: <https://www.emfacts.com/papers/>

Physicians for safe technology. Smart meter radiation health effects. <https://mdsafetech.org/smart-meters/>

Weller, S. 2015. EHS Access online: [PowerPoint Presentation \(wordpress.com\)](#)

Energy and Water Ombudsman Western Australia

Shayne Wykes

Investigating Officer

Level 2, Albert Facey House

469 Wellington Street

PERTH WA 6000

RE: 2023/01037 - Complaint to the Energy and Water Ombudsman about Western Power

Dear Shayne,

Thank you for your email on 15th November 2023 and allowing me an opportunity to submit any further information that may not have been provided to yourselves when first filed with your office, back in early August 2023. I do not have a copy of what I submitted to your office initially – and was done quickly as my mother had already wasted time trying to phone Western Power all day – and had filed a report to your office to get things moving. I have since purchased radio frequency/microwave (RF/MW), electrical field, magnetic field, and electromagnetic interference (EMI) meters. Western Power and Synergy were both informed of these measurements during our communications towards the end of August 2023. I will also make some points as clear as I can about the injustice of this whole case.

Whatever the outcome – I hope you will see how there are some significant problems that have occurred that violate the rights of many Western Australians. Do you know this has caused many people to now become homeless due their houses now being made unliveable? That itself is an injustice but unfortunately reflects a poor culture that has been brewing in WA for at least over a decade that I am aware. I don't know your background and that is none of my business, but I hope you have the decency for a moment to reflect – what if this happened to you or one of your family members. There will be many questions I ask in this email that you may not be able to answer, but I hope you can lead me to the right people who can help improve an awareness of this Public Health nightmare that is now evolving. I understand you have limitations in judicating this case but as I will highlight time and time again, - this nightmare could have been avoided through basic documentation, respect, and basic human decency. Although my angst is against Western Power through their actions and inactions, I am also not naïve that at the very least this was all signed off by the Western Australian Government, and Federal with ARPANSA, -with no health impact study ever being completed in Australia.

Before I go any further, here are the points that need to be made clear and the measurements that have been done in the last few months for your perusal.

1. April 2020: letter emailed to WP: advising **we did not consent to a new meter installation**. Sent in response to their letter we had received stating AMI rollout happening in our street.

2. Despite the above letter – a few weeks later (approx. April/May 2020) a WP technician was on our property and going to switch over the meter – he was informed once again **we did not consent** and let him know a letter had in fact already been sent. He kindly left our property.
3. 29th September 2021 – Unfortunately we were not so lucky on this day. **No notification was given that WP were coming** – not even a common courtesy to seek permission to enter our property or of a power interruption for the morning. **We had not altered our decision of non-consent and had not been given notice of this happening at this time.** In fact, they had no reason to be on our property that day. Once again, the technician was informed that we were not participating in the new meter installation, and **we did not consent** to a new meter installation. Also informing him -our reason in relation to a known sensitivity to novel wireless devices – this was heavily emphasized. He acknowledged this and stated he understood and all okay. In the meantime, he said he needed to check over our current analogue meter. This in fact was a lie and, in the time, we left him to supposedly do his maintenance - he had switched over the meter to an AMI (communication device removed). Apparently, the communication device is the only reason for people’s adverse health complaints. We were not happy about his deceit – that I will be honest, as you can imagine all has gone downhill very quickly. This technician tried to reassure that he had removed the card and all will be okay – and yet by this stage in Australia and worldwide it was known that meters were causing sensitisation even with the card removed (I have only recently come across this information but has been known for nearly a decade). I knew very little about these meters at this time – but I had a recent reaction to one in my workplace and was informed under my circumstances to stay away from novel devices and do not let one on your house. Anyway, he was given the benefit of the doubt and that was a BIG mistake in retrospect. I wish at the time I knew more about these meters than just the problems with the communication device. The WA public have not been given all the information about these meters – no-one has been ‘fully informed’.
4. This would never have happened if our initial request for not consenting to a new installation had been respected. **Three times they were informed that we did not consent.** This is the important detail of the complaint – but it just continued to get worse. I am also in receipt of a letter that was sent by another Perth resident – clearly stating their reasons, “... **‘[I] ask that you do not replace the existing meter at the above address at this time for the following reasons.’** The resident’s father then goes on to explain the seriousness of her condition and measures taken to keep her safe, offering WP to phone if any questions. Then concluding, **‘[F]or medical reasons I again request that you do not replace the existing electricity meter at xxxxxxxxxx, at this time.’** This letter was ignored, and WP went ahead with the switch over, they later went and removed the communication device the following day after the father phoned. This lady was left in agony until this was done. These rollouts lack any consideration for these extremely sensitive people. They are locking people out of society. My case is

bad – hers is a ‘shocker’ for what she is now enduring with this in her street, as she has still been heavily affected by the neighbour’s meter – she can never go outside. **At this time 29th September 2021 – as per the Metering Code WA (2012) – WP were not obliged to replace existing analogue meters that were functioning.**

5. As you know... – early hours of the morning I woke up in extreme pain – like every nerve in my body was on fire, tachycardic and later in the morning extremely short of breath – like I had been winded. At start of business hours – phoned WP and reported my adverse health effect and demanded analogue meter to be put back on. They said, they needed to speak with the account holder – my father was not home at the time, so we called back when he got home, -only to be told that they will get someone to phone and discuss the problem, -they then said they would get someone to phone back with questions. In the meantime, the technician from the previous day was back on my doorstep - I thought he had been advised to come and replace – that was not so – a coincidence, nonetheless. Apparently, he had forgotten to put a sticker on the meter. Informed him what had happened - he said he couldn’t do anything until he had been given authority from his supervisor. Very odd - when all this was done without our consent in the first place and done under a false guise. WP – never did phone back, despite 2 more calls to them. At this stage I never had any problems getting through on the phone but was never put through to someone who would deal with this situation. I had slept from then on in my parent’s caravan with no problems, unfortunately now sold and living in a tent. At this point I have now been unable to work as my situation has worsened since the tent offers no protection. My sensitivity to all devices has heightened and almost have no tolerance to wireless radiation without residual effects– extended exposure I even become suicidal. This is how dramatically someone’s life can change by someone who thinks they know your body better – this is disgusting. They have completely ignored how serious these adverse health effects can be for some individuals. **I am not asking them to understand these effects– I am asking them to treat my family and myself decently with respect and acknowledge everyone’s vulnerabilities- they themselves do not have medical expertise to override this decision.** This in fact can be deemed negligent or even considered misconduct- especially through their lack of consideration and ignoring that harm is continuing. Apart from a technician checking that the device had indeed been removed – that is the closest they have come in checking the meter for any problems causing ill health, ie did we have a faulty meter? As per Metering Code WA (2012) **3.16 (3B)** *“The network operator must not install a Type 5 metering installation or Type 6 metering installation on or after 1 January 2022. {Note: The effect of clause 3.16(3B) is that the network operator may no longer install Type 5 metering installations or Type 6 metering installations after 1 January 2022.”* So even at this time they were still allowed to put back the traditional analogue meter. This metering code alone is highly discriminatory for people like me now with sensitivities without offering options of meters – this part I understand needs to be addressed at a government

level. Any informed person would see how problematic this will be in the future. There is already a growing level of environmental intolerance to this unscrupulous use of wireless radiation. For over 2 years now I have lived isolated on my property with over half of it out of bounds and over half the house is unliveable. I could not understand why I was so short of breath even going for a walk and feeling even worse -until I had bought the RF/MW meter (Aug,2023) – out of curiosity I took measurements whilst I was out – nothing like making the invisible, visible. Yes, it is below the ARPANSA RF standards, but these levels are unacceptable, and it is clear to see why everyone has been so sick over the past 2 years – was it really COVID for all of them? Many of their symptoms are the same as mine – yet I have not had ‘supposed’ COVID. I recover no problems if I am very careful and don’t leave my property, and don’t spend any significant in time in problematic areas in the house. Prior to all this I would run at least 10 kms most nights of the week – I have always been a highly active person.

6. Since August 2023 – due to my worsening condition when exposed and my father’s health has also deteriorated very quickly in this time with no explanation – where he was active every day. My mother started the complaint process again – which is where we are at today. Except now you can never phone WP – continuously engaged every day – I wonder why? Complaints online – limited space – and replies are a no-reply system – which in itself is highly inappropriate and unprofessional. This was when we first filed our complaint with your office - but we had to give WP a chance to resolve the situation. Contacted Synergy and got through easily. Synergy saw no reason under my circumstances why an analogue electricity meter could not be put back on our property – it was left with them to liaise with Western Power and in fact during that conversation they had put my mother (joint account holder) on hold whilst they phoned Western Power. I believe Synergy phoned my mother the next week to update and let us know what is happening – no further progress at that stage - but had stated they were confident they would be able to do the exchange and would phone back in a week. They never phoned back from this point onwards and my mother had to initiate the calls each time, –each time no further progress and they were starting to get cagey whilst before this time they were very obliging, considerate, and helpful etc – this kept happening over a few weeks until they finally informed that Western Power would not do the exchange. I can’t remember the exact time frame – but around 2 days later we received an email from Western Power in response to our online complaint submitted at time of Synergy contact (when unable to get through on the phone to WP). Basically, the email asserted that my reaction would not have been the result of the AMI meter (card removed) or my father’s quick deterioration in health was in any way related to the meter. My father’s deterioration started within weeks of installation, but my reaction happened that same night so easy to put cause and effect, or at very least highly correlated. I have had experience with a TomTom Runner Watch about 5yrs prior where I reacted with inappropriate tachycardia when connected to WiFi/satellite

– stopped wearing watch for runs once I realised it only happened when connected to WiFi/Satellite – this was reproducible every time. At this point I was never aware of sensitivities to electromagnetic fields (EMF's). However, through my health profession and study I became aware and implemented a precautionary approach – since about 2018 – our house had been free of wireless, and any existing wireless devices were disabled. All computer connections were wired via ethernet cabling etc. All devices are off at night. This was our personal health choice to keep our own exposures to a minimum, particularly nighttime. From my experience with my watch, I knew there was something in this advice I had been given. Personally, it did improve my general wellbeing – slept better and hadn't realised I had become impatient/edgy – this went away with this basic implementation, and I returned to my general calm nature/persona- therefore I had been unaware these wireless devices and cell phones were in fact problematic -at least for me. I had also worked in reproductive medicine for over a decade at this time – we also advised our male patients not to put your cell phones in your pockets etc – we knew this from laboratory studies showing increase sperm DNA damage and changes in sperm parameters. When you know better you do better. **Therefore, it is unfair for WP to assume everyone exposes themselves to radiofrequency/microwave (RF/MW) and wireless radiation in the home.** Our choice of what happens in our house has been neglected.

7. Western Power were kind enough to send through a link to the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) standards and the Metering Code WA (2012). As if this was to suggest that all was above board because they comply with the Standards and the Code – I have never doubted this fact- they are merely set to allow this technology to be rolled out unimpeded. However, any well-read 'informed' person and anyone who understands the complexity of the human body, and that we are bioelectrical beings, would realise there are many inadequacies to the ARPANSA standard itself, that only recognises a thermal mechanism as a cause of biological effects. It is acknowledged that even in a worst-case scenario smart meter emissions are far below the allowable standard limits for exposure. This was found in an October 2011 AMI Meter Electromagnetic Field Survey conducted by EMC Technologies in Melbourne which found that exposure levels were well below the general public limit set by ARPANSA. A 2015 Victorian smart meter measurement survey and our own Western Power EME Project 2021 conducted by Total Radiation Solutions -also used the ARPANSA limits as a reference point. However, claims that compliance with the ARPANSA radiofrequency standard assures the impossibility of any health effects do not stand up to scrutiny. The standard exposure limits only assure protection from acute exposure situations (short-term exposure) where actual excessive internal body heating can cause significant biological damage. In addition, the ARPANSA RF standard limits do not protect against **lower-level chronic pulsing radiofrequency exposures such as from smart meters**, especially when the AMI meter is situated near bedroom areas, giving extended exposures

over many hours. Therefore, inclusion of other possible biological effects unrelated to heating has not been considered in the actual setting of maximum exposure limits for radiofrequency exposures. Considering this, any assurance of AMI meter safety based on these standards is not at all relevant. **Maintaining an unquestioning reliance on these standards could be considered as condoning unethical human experimentation if we consider other people's anecdotes and my experience.** We are being exposed 24/7 depending on where your bedroom is located. My experience is proof, the ARPANSA RF standards do not protect ALL people as they claim. Which is why this case must be considered on an individual basis.

8. Studies have consistently shown that the man-made pulsing/modulated electromagnetic field (EMF) is a major element in the creation and/or aggravation of effects from RF exposure. It is possibly more important than the radiation levels. This is well documented in the literature including the work by Professor Martin Pall, the team of Dimitrius Panagopoulos and is supported by hundreds of scientists worldwide. What must be remembered is amongst ARPANSA members of staff – there is **no** medical expertise. Even if the standards were relevant, there will always be exceptions to the rule, and this must always be considered and respected – we are all individuals, and each have our own vulnerabilities/limitations. Just like some people experience anaphylaxis with peanuts – these reactions are real and extremely serious.
9. My RF, electric/magnetic and EMI meters arrived by 22nd August 2023 and started testing. Both WP and Synergy were informed of my measurements. My bedroom: – with RF (Safe and Sound Pro 11) meter positioned on my pillow where I would have slept that first night I had a reaction, **-showed constant pulses/peaking of RF radiation that does not stop and happening 24/7.** This is unacceptable for a sleep area – the literature is vast on sleep disruption and a field that is constantly pulsing/modulated is highly bioactive. It explains my reaction that night – especially for someone who usually has a wireless free house. This was coming from the neighbour's smart meter, and the WP transmitter on the lamp pole. This was also happening in the main bedroom where my elderly parents' sleep. As per Western Power Smart Meter Radiofrequency Electromagnetic Energy Survey Project done in Perth Western Australia May 2021 by Total Radiation Solutions, shows around 85,000 pulses in a 24-hour period. Do you think this fair to have this amount of pulsing at your head particularly during restorative sleep. This number of pulses also includes the 'polling period' that happens 4hrly. It is extraordinary how they can get away with this – there is no consideration of these meters/transmitters constantly polluting the houses and the environment and importantly sleep areas -cannot be emphasised enough. Where is the justice to when I have had to endure this for over 2 years and live in tent because WP wouldn't have the foggiest that they are contaminating people's rooms and causing 'real' adverse health effects – this is why this whole roll out is a disaster and needs to be fixed. They cannot be allowed to get away with this. "Besides the constant pulsing of AMI meter emissions there is the issue of the 900 MHz

frequency range used. In 1976, Lin concluded that 918 MHz energy constitutes a greater health hazard to the human brain than 2450 MHz energy for a similar incident power density. In addition, studies of diathermy applications consistently show that electromagnetic energy at frequencies near and below 900 MHz is best suited for deep penetration into brain tissue. So, the possibility exists that in situations where people are in close proximity to an active AMI meter, the combination of the frequent transmission 'bursts' at around 900 MHz constitutes a new and unique human exposure situation that may have unintended biological effects, especially on sleep. **In addition, we are putting reliance on utility companies and engineers who have no understanding of the health implications of such strategies.**

10. Who is measuring for '**constructive interference**' in and around housing. When I contacted Total Radiation Solutions who completed the Western Power Survey Project in May 2021 -stated he hadn't been asked to complete and test for this occurring in neighbourhoods by any of the utility companies. All down the side of our house – between the 2 houses (our neighbours) there are amplified levels as if been trapped between the 2 houses. There are 'hotspots' all along the walls and a significant hotspot right on my bedroom wall where my bed is. We live in a 'way' street. Is this constructive interference occurring with the transmitter and the neighbour's AMI meter and amplifying the levels now penetrating my bedroom wall? **Once again this is unacceptable and needs rectifying to allow our house to be liveable again.** How is this allowed to happen?
11. Line noise/'dirty electricity'/electrical pollution. Measured with an EMI meter (Trifield Alpha Labs) – usually to detect problematic electrical equipment in the house and filter accordingly. August 2023: **With ALL electricals off in the house – I can measure surging of levels first thing in the morning of over 1500mVpp** (this meter max measure 2000mVpp – and was maxing out)– it seems to alter depending if neighbours have air conditioner on etc. This is indicative of interference coming from the grid. **Why has this not been rectified?** WP have been informed of this... With no electricals on – our house has been treated like a sewerage dump. As appliances are turned on – the levels go down – if anything it should be the other way round. As the levels go down – it is only then I can tolerate being in some parts of the house not affected by RF. Dirty electricity is a known cause of ill health. The levels can get down to 180-200mVpp for most of the day – I can tolerate these levels – in the early evening I can even achieve levels of 60-80mVpp when most electricals are on in the house. Currently (20/11/23), and the case for the past few weeks, the levels don't fluctuate at all but are constantly high at over 600-800mV and is never coming down at all. So, with everything OFF, I still also get levels above 600mV and even if electricals are turned on doesn't alter.
12. Regarding the above readings – is this a faulty meter? Are these AMI meters not compatible on the grid in a real-life situation? Why has WP not addressed this situation – this could relieve a lot of adverse health effects that people may be experiencing besides the chronic RF exposure. As stated, since that first night –

when these levels are now continuously high there is no relief to seek protection in the house during the day – even in areas not affected by RF – which is only a couple of areas. The dirty electricity is especially noted in the mornings – chest heaviness, shortness of breath, nauseating at times and fatigue when inside too long - the levels now don't come down at all. Is it the effect of solar panels in the street along with all these identical meters - the grid cannot cope, and WP has worsened this situation by using these meters. WP – keep blaming solar panels in the street – but my problem never started until the new meter installation on my house and the neighbours, so if it was a problem then – it wasn't noticeable with debilitating symptoms.

13. According to Dr Milham and Stetzer (2013), “Dirty electricity, also called electrical pollution, is high-frequency voltage transients riding along the 50 or 60 Hz electricity provided by the electric utilities. It is generated by arcing, by sparking and by any device that interrupts current flow, especially switching power supplies. It has been associated with cancer, diabetes, and attention deficit hyperactivity disorder in humans. Epidemiological evidence also links dirty electricity to most of the diseases of civilization including cancer, cardiovascular disease, diabetes and suicide, beginning at the turn of the twentieth century.” The literature on the switch mode power supply (SMPS) of the AMI/digital meters says it produces unintended consequences of radiofrequencies radiating from the house wiring – this is an important health concern. In addition, the Federal Communications Commission (FCC)-USA (Australian equivalent of ARPANSA), in their 2021 court case versus Children’s Health Defense, admitted there are neurological effects from non-thermal RF emissions and its admission applies to frequencies in the kilohertz range created by the SMPS. The symptoms the FCC recites are like those reported by those who assert adverse effects from AMI meters including tingling, shock, pain, or altered behaviour due to excitation of tissue in the body’s peripheral nervous system. The SMPS is common amongst some electrical equipment in the house but can usually be isolated and filtered cheaply if needed. However, a SMPS as part of the AMI/digital meter are located just where the house's wiring network spreads out into the house, causes this noise to spread out effectively in the building, so that, in principle, you live inside a three-dimensional antenna that emits electromagnetic pulses in step with the noise. **The noise will be amplified when several meters are installed in the same transformer circuit, which is the normal situation** (Flydal & Nordhagen, 2022). In the USA, – electrical engineers have found this brand of meters (Landis and Gyr) may comply with standards in the laboratory when tested individually, but when the engineers tested them working on the grid – it is known to cause considerable dirty electricity. It is the extremely low frequency (ELF) component radiating out from the house wiring that is known to be problematic and leading to ill health. So, it has been found in the real-world experience – these meters do not necessarily comply. These new AMI meters were also tested in Norway and found similar problems with these meters related to the SMPS, this was **not seen in analogue meters** or even the older designs of digital meters. **Once again, this**

needs to be investigated that these meters do comply on the grid. Until this is proven, WP cannot continue to simply claim they comply without testing appropriately – this would take the use of an oscilloscope etc. They simply can't make claims from behind their computers without checking each house in my street. Are the meters by Landis and Gyr – do they have filters to filter out dirty electricity; and/or are they cheap and not working efficiently? Are WP and the WA State Govt causing harm by using cheap versions of meters, cutting corners, and inadvertently causing harm to vulnerable individuals. Property owners should not be expected to spend more than \$10,000 to clean up the dirty electricity that WP has created from this switch over. How many people are experiencing unusual symptoms that cannot be explained by their Drs?

Direct quote (Flydal & Nordhagen, 2022: 1), "It is well documented that very low frequencies consisting of "bursts" or "pulses" or "spikes" or "peaks" found in such "dirty electricity", may affect biology, e.g. by impacting metabolism and alter the brain's sleep pattern, by opening cell wall calcium channels (VGCCs) resulting in increased production of oxidants (ROS), and by creating extra signalling in the nervous system. Such effects happen even at very weak pulses, as long as they reach the "right" frequencies, i.e., pulse rhythms that charged di-poled proteins or other elements in the body naturally respond to. Experience tells that some individuals are far more sensitive to such impacts others and react acutely, others only after some time, or never. **The measurement test results in this new report may therefore explain why some people experience health problems from new smart meters - even when they have been exempted and card removed from the new meters' radio transmitters, even though others do not react at all.**"

14. These next few points are some excerpts from some studies completed:
 - a) In Victoria, Australia – they were the first to roll out and mandate this technology in 2006. No health impact studies were completed. **Within a 12-month period there were 142 adverse health complaints reported to a confidential health and legal register on an Australian website.** This would only be the tip of the iceberg of complaints as many people would have been unaware of a new meter installed, wouldn't have attributed their symptoms to an electricity meter, and this website was not well known – you would have had to be perusing the computer trying to get answers for your new set of symptoms. Dr Lamech, a Melbourne medical practitioner in 2014 published a case series titled: 'Self-Reporting of Symptom Development From Exposure to Radiofrequency Fields of Wireless Smart Meters in Victoria, Australia'. Some concluding remarks made by Dr Lamech (2014) include:
 - i. "Conclusions: Review of some key studies, both recent and old (1971), reveals that the participants' symptoms were the same as those reported by people exposed to radiofrequency fields emitted by devices other than smart meters. Interestingly, the vast majority of Victorian cases did not state that they had been sufferers of electromagnetic

hypersensitivity syndrome (EHS) prior to exposure to the wireless meters, which points to the possibility that smart meters may have unique characteristics that lower people's threshold for symptom development."

- ii. Dr Lamech also recommends in her concluding remarks, "Until more knowledge is accumulated and until this type of wireless technology can be **proven safe**, the author believes that communities should use a cautionary approach, asking for a moratorium on deployment of wireless smart meters and smart grids and for the use of safer technologies for smart meters, such as hard wiring, fiber optics, or other nonharmful methods of data transmission, including reading of meters by meter readers." [my emphasis]
- iii. "With regard to smart meters, 2 unique features should be considered: (1) exposure may be involuntary and (2) exposure can be universal. In Victoria, smart meters were mandated, thereby removing the individual's choice **to avoid exposure in his or her own home, and involuntary exposure also occurred to meters in neighboring homes.** Each smart meter in the mesh networks transmits an unknown and variable number of burst transmissions per day, which typically reach into many thousands in number."
- iv. "The author of the current study offers the hypothesis that some people can develop symptoms from exposure to the radiofrequency fields of wireless smart meters. **This hypothesis cannot be disproven without further assessment of the affected individuals and the electromagnetic fields in which they live.**" [my emphasis]

The report by Dr Lamech (2014) had already gained support from the American Academy of Environmental Medicine (AAEM) with the following public statement: "It is a well-documented 92-case series that is scientifically valid. It clearly demonstrates adverse health effects in the human population from smart meter emissions." I highly recommend you read Dr Lamech's paper, -you should be asking – why has this study been ignored, no health impact studies to investigate this unique phenomenon and better alternatives to keep the community at large not exposed to chronic levels of RF energy. Therefore, ARPANSA along with WP have no basis for their claims of safety. If you read their claims, they are worded very carefully ie nowhere is it written – that there is 'proven safety'. All they say, is 'no established evidence'. Once again neither of these bodies have any medical expertise.

b) Here is an excerpt (direct quote) from a document completed by a group of medical physicians concerned about an AMI rollout in their community in Eugene, USA, (2013) pg 7:

<https://apps.fcc.gov/els/GetAtt.html?id=171436&x=>

“This power density of 300+ to 400+ $\mu\text{W}/\text{m}^2$ was greater than the signal strength of the cell phone tower at 29th and Amazon, measured from about 200 meters away. So, filling a neighborhood with a mesh network of the Elster smart meters would be similar to placing every house in that neighborhood closer than 200 meters from a cell phone tower, each house constantly being pinged by the chatter of multiple beacon signals from the mesh. This was disconcerting, since recent research has shown that people living within 500 meters of a cell phone tower have increased incidence of headache, concentration difficulties, and sleep disorders, and a significantly increased risk of some types of cancer. (Khurana et al., 2010) (Levitt and Lai, 2010) (Yakymenko et al., 2011) (Altpeter et al., 2006) (Abdel-Rassoul et al., 2007) When you put these facts together, it is not so surprising that the installation of mesh smart meter networks in residential neighborhoods in California last year was followed by a surge of anecdotal evidence regarding headaches, insomnia, and other health complaints.” As a side note, I measure over 1000+ $\mu\text{W}/\text{m}^2$ along my street and at front of house.

Surveys in Victoria and the US indicate public health concerns related to the use of smart meters can have an adverse impact on health. Clearly, further research is needed and should have been done in WA.

I am sincerely sorry that this is long – but I had to do it in portions and thus kept adding to it as I came back to it each day. I know as part of your work these references may be meaningless in your process and I have kept them minimal – but I also felt compelled that cases like my own are being ignored and kicked into the gutter- and if there is one more person that I can make aware of this nightmare that it is causing for significant suffering for at least ‘some’ individuals- my job is done. As a former health professional, I have always advocated on behalf of my patients – and gone to lengths to ensure they are well informed so they can make the right decision for themselves. In the medical profession – consent is extremely important, a procedure does not go ahead without it, and consent also means ‘fully informed’ with all the evidence including pros/cons. Another important note to be considered – as stated previously, WP have no medical expertise and no authority to override and make choices for consumers that could otherwise have serious health consequences – as in my situation. What must be remembered even after the installation of the new meter – I advised WP it was causing harm on a number of occasions – that should have been investigated to find out why. In the meantime, when someone says something is causing harm and they are asking to you to stop – that needs to be respected, to continue can constitute an assault – that is serious. It is not for them to decide whether it is or not.

In addition, since taking measurements, and finding neighbour’s smart meter and WP’s transmitter was in fact transmitting onto our bedroom walls, making these areas unliveable and out of bounds – this in fact it could be considered under the common law as a nuisance. The common law of nuisance is based on the premise that everyone has a right to enjoy their residence or property. Anything that interferes with this right may be a nuisance. These

transmissions coming from the transmitter and from the neighbour's smart meter needs to be remedied. I should not be having to live in a tent and avoid these areas that is WP's equipment is causing.

I understand that you must make judgements on my case as per these standards and codes before you, – and I realise that may not be easy. I am not here to challenge on this basis – that needs to be at a government level, as how the West Australian AMI meter roll out was allowed with no investigation into the Victorian health complaints. However, putting this aside, I am of the opinion WP's conduct in dealing with our situation back in Sept/Oct 2021 through to now, has been negligent, inconsiderate, cruel, and importantly violated my rights and my family. I know my situation in WA is not an isolated case. How do we get to the bottom of these smart meter health complaints if no-one is willing to investigate and ask the right questions – that is part of the scientific method – be curious.

Moving forward – wireless radiation needs to be kept 'As Low As Reasonably Achievable' which was the recommendation of the Committee Chair at the 2001 Senate Inquiry. "... For these reasons the Committee Chair recommends a rigorous precautionary approach in all areas of the deployment of wireless technology, that radiofrequency (RF) emissions be kept As Low As Reasonably Achievable (ALARA), and that the expired interim exposure Standard not be adapted to the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines". Unfortunately, nearly all the recommendations of the day were not implemented.

The AMI meters as produced by Landis and Gyr need investigating as suggested in my discussion. Checking for appropriate filters, are they compatible on the grid and on current house wiring; and ensuring they are working as they should once installed – not just claiming they do. Until all this can be rectified people like me who have now developed a severe sensitivity as a result of this rollout need to be given the option of an analogue meter. Analogues are usually grounded, don't consume energy, and don't have a SMPS that may cause dirty electricity.

Please let's stop harming people, and importantly take action. At least for some of us, we want our homes and neighbourhoods back. Let's not forget, I may be the canary in the coalmine – alerting you all of a dangerous exposure.

Thank you for your time in investigating this matter.

Yours faithfully,

Kylie Colum.

Flydal, E and Nordhagen, E. 2022 "Dirty power" from new electricity meters: Key to a health problem? 2022. <https://ehtrust.org/wp-content/uploads/EMF-Consult-Smart-meters-dirty-electricity-w-intro-EFlydal-ENordhagen-2022.03.28-v.1.2.pdf>

Lamech F. Self-reporting of symptom development from exposure to radiofrequency fields of wireless smart meters in Victoria, Australia: a case series. *Altern Ther Health Med.* (2014) Nov-Dec;20(6):28-39. PMID: 25478801. [Self-Reporting-of-Symptom-Development-From-Exposure-to-RF-of-Wireless-Smart-Meters-in-Victoria-Australia-EHS-Study-by-Federica-Lamech-2014.pdf](#)

Lin, J.C. Interaction of Two Cross-Polarized Electromagnetic Waves with Mammalian Cranial Structures. in *IEEE Transactions on Biomedical Engineering*, vol. BME-23, no. 5, pp. 371-375, Sept. 1976, doi: 10.1109/TBME.1976.324646. <https://ieeexplore.ieee.org/document/4121067>
WESTERN POWER SMART METER RADIOFREQUENCY ELECTROMAGNETIC ENERGY SURVEY PROJECT, Perth Western Australia, *Total Radiation Solutions*, May 2021. [Western Power Smart Meter RF Survey\[4749\].pdf](#)

Milham, S. and Stetzer, D. Dirty electricity, chronic stress, neurotransmitters and disease. 2013 <http://www.sammilham.com/Milham-Stetzer-2013-Dirty-electricity,-chronic-stress,-neurotransmitters-and-disease>

<https://www.orsaa.org/resources.html> they have an extensive database on all the literature regarding biological effects of non-ionising radiation.