

Mr Shane Breheny,  
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Powercor and Citipower  
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Melbourne, VIC 8001

**NMI:**

**31 May 2012**

Dear Mr Breheny,

I am responding to a letter that was sent to me on 2<sup>nd</sup> May 2012 from your company. A copy of this letter will also be forwarded to the Department of Primary Industries, the minister of Energy and Resources, the Hon. Michael O'Brien as well as my local member, Jill Hennessy. I hope that you provide me with the courtesy of making an effort to read all of my concerns. I have included an "executive summary" that distils my concerns into a set of numbered points. I provide further evidence and justification for these points in the body of my letter.

### **Executive Summary**

I would like to start my case by stating up front that I am not an uninformed person that is afraid of technology or progress, nor am I a conspiracy theorist. I embrace technological advances if it is proven to be beneficial to the community and it does not pose a health concern. I am an educated person, holding a Bachelor degree in Science (Monash University), majoring in Biochemistry and Microbiology. I have 20+ years of experience in Information Technology (I am a software architect) and I have a good understanding of the technology used in smart meters. I have two young children and I want them to grow up in an environment free from the concern that they are being exposed to "potentially carcinogenic" RF radiation.

I do not consent to having a smart meter installed on my property because of the following reasons:

1. I am hypersensitive to RF frequencies, particularly those around 1 Ghz and above. This is real and not imaginary. I understand that I am one of a small number of the population who have this condition (~5 to 10%). There appears to be no provisions in the government mandate that covers people such as me.
2. No choice regarding the frequency of exposure that will occur every day and night. I understand that I am already exposed 24x7 due to mobile towers installed in and around my neighbourhood (without my consent) but this does not mean I accept a smart meter on my property.
3. Your supporting documents are purposely misguiding people by only presenting part of the facts and not the full context (example provided within this letter – relating to number of times data is transmitting especially if a meshed network is used).
4. Wireless/RF safety – The World Health Organisation ("WHO") has classified wireless communication devices such as mobiles as class 2B – Potentially carcinogenic. Group 2B is a category used when "*a causal association is considered credible, but when chance, bias or confounding cannot be ruled out with reasonable confidence.*"
5. No definitive causal/proof linking wireless RF with cancer is not the same as proof of safety
6. Scientific studies are flawed and contradictory. Many studies are funded by the same industry that markets wireless devices. Research to date has not looked at the impact beyond 10 -15 years for pulsed microwaves. Cancers can take 20+ years to materialise.
7. Government standards are antiquated and focus only on the heat effects. There is no real consideration for non-heat effects of microwaves (please see the last pages of this letter for more information on this controversial subject). They also do not appear to take into consideration the level of RF saturation already present in today's environment.
8. Wireless communication is a >1 trillion dollar industry. It is significantly doubtful that we can expect to get truthful answers on wireless affects given the amount of investment and the value of the industry.
9. In my eyes, history seems to be repeating itself with the same confounding and contradictory arguments used for against wireless as a potential carcinogen that we saw 25-30 years ago when scientists debated the effects of smoking. Again conflict of interest prevailed i.e. Revenues of

large companies vs long term public health was a problem back then too and continues to be a problem today.

10. Security and privacy of the data being captured. What mechanisms, if any, will protect the community from those with criminal intentions?

### **What are the implications should I refuse?**

It is my understanding that the mandate to install a smart meter is vested with Powercor and not individuals such as myself. It is also my understanding of contract law that agreement between both parties is required, and, in the context of installing a smart meter, I do not consent.

If I continue to refuse to have one installed I would like to be advised in writing what the penalties are and/or consequences for not allowing a smart meter to be installed.

Will Powercor pay for RF shielding in my house if I have no option and am forced to accept a smart meter?

Will Powercor provide in writing a statement that they guarantee wireless emissions from a smart meter are safe?

If you wish to install a smart meter on my property it will need to use a land line to communicate back to base. I will not accept a smart meter that uses wireless as a method of communication.

I would expect that the government and power companies such as yours have a duty of care to ensure the health and safety of the community. I know your response will be to say that there is no scientific proof that wireless is unsafe and will site government wireless safety regulations, scientific studies etc. but I beg to differ. I have provided information throughout this letter that gives clear evidence that this is not the case or at the very least, is conflict with what the likes of ARPANSA are saying. I would rather err on the side of caution than take something that could ruin the health of my family and potentially the whole community in the not too distant future.

The UK and some states in the US have repealed or are in the process of repealing smart meter installation mandates that will make smart meter installation voluntary and in some cases allow householders to have installed smart meters uninstalled and replaced. I hope common sense prevails in Australia and that we follow suit.

### **Hyper Sensitive to EMF**

What provisions if any are made for people such as me who are hypersensitive to pulsed RF frequencies? Hypersensitivity is acknowledged by the World Health Organisation in their report that can be found here <http://www.who.int/mediacentre/factsheets/fs296/en/index.html>

An extract from the report detailed in the above URL:

#### **“What is EHS?**

EHS is characterized by a variety of non-specific symptoms, which afflicted individuals attribute to exposure to EMF. The symptoms most commonly experienced include dermatological symptoms (redness, tingling, and burning sensations) as well as neurasthenic symptoms (fatigue, tiredness, concentration difficulties, dizziness, nausea, heart palpitation, and digestive disturbances). The collection of symptoms is not part of any recognized syndrome”

### **Conclusion**

.....The symptoms are certainly real and can vary widely in their severity. Whatever its cause, EHS can be a disabling problem for the affected individual.... “

Studies have been conducted with many reporting that double blind tests show no linkage between the symptoms and EMF. The main problem is these studies trying to disprove electrosensitivity often suffer from the following deficiencies:

1. Insufficient population size and poor adherence of selection criteria as a result

2. Excluding subjects who had to drop out because of health reasons (they were made too ill to continue)
3. Not properly accounting for the time lags between initial exposure and onset of symptoms, e.g., some symptoms last for days. Other symptoms take time to appear.
4. Not taking into account the individualized nature of responses. It has been found in some studies that different people may react to different signal types and power density levels with different symptoms, just as people react to allergens differently.

## **The symptoms I experience are real and not psychological.**

### **Do I have Wireless/Microwave devices in my home?**

I expect that questions will be asked by your company and others such as do I own a microwave oven, cordless phone, baby monitor, wireless home network or other wireless devices. The answer is yes I do although not all of the above. I have a microwave oven which I rarely use but check semi-regularly for leaks. I have a cordless phone that operates on 900MHz frequency which I seem to be less sensitive to but still limit its usage. I have corded phones in my office and bedroom. I do not have a wireless network installed, instead I have wired connections in all living/bedrooms (this was a deliberate choice when I designed my house 5 years ago).

I recently had to get rid of a Nitendo Wii I had purchased for my children for Christmas as it was giving me headaches and sore hands from the wireless communication between the controllers and the main unit.

I have a mobile phone because my job requires it but I use it sparingly and ask people to call me on a landline if one is available, or, I will call them back when I have access to a normal phone. My mobile phone affects me far more severely and quicker than using a wireless network on a computer such as when I am on a customer's site and I have no other mechanism to receive my corporate emails. After receiving/sending mails I always disable my wireless card.

When wireless networking first became available I thought it was innovative and would allow me the freedom to go anywhere within my house and surf the net, check my emails without worrying about Ethernet cables and finding a socket etc. It was not long after using my wireless card in my laptop that I began to feel the effects and realised I was sensitive to it. Symptoms included headaches, pressure and pain in my chest, heart palpitations, increased intolerance, prickling feeling over my skin. It was at this time I decided that a wireless network was not for me.

Although I do have some wireless devices as mentioned above I have a personal choice of when I use them and how much exposure I am willing to put up with. However with a smart meter, my choice in this matter is compromised as I am exposed continuously and involuntarily.

### **Misinformation or incomplete facts**

1. Measurement of smart meter radiation on both sides of the power meter does not specify where the measurement inside was taken and from what distance. Was it directly behind the meter and what about when the angle changes such as when it approaches the vertical? My bedroom is located directly above my power box.
2. The outside reading is much higher than the inside reading however with housing density ever increasing, people such as myself have neighbours whose power meters are located close to property borders. In my particular case, my neighbour has 2 smart meters and they are located extremely close to my bedroom. This would mean I would potentially have 4 smart meters within 2-3 meters of my bedroom all communicating.
3. Your staff indicate that smart meters gather data every 30 minutes and sending it every 4 hours, also, the duration of forwarding the data is very short (sub second?) This almost sounds acceptable however what is not mentioned is that the smart meters are likely to be set up in a grid fashion (meshed). This means my meter could be used to potential pass data from other meters (this is important information that appears to be excluded from your brochures and not mentioned directly by your support staff). To maintain a meshed network also requires the meter to send network health messages as well. If a grid network is being established then saying 6

transmissions a day is a significant distortion of the facts. We will be exposed to pulsed wireless almost continuously 24x7 adding to the RF fog that is already surrounding us.

## **Security and Privacy of Information**

I have a privacy issue with respect to the data that is captured as well as security concerns in how the technology can be misused by those with malicious intent.

What measures will be put in place to protect the data that is harvested? By studying patterns of power usage over time personnel who have access to this data can determine whether the house is currently occupied. This information could be passed to those with criminal intentions to break in and rob residences. Such data was not available in the past before the smart meter rollout.

By creating a meshed network grid with smart meters you also have made our electrical supply systems and devices connected to them more vulnerable to sabotage/ attacks by hackers, terrorists and or foreign powers. Having encrypted communication may not be enough if the security key is known or compromised. Please refer to this report for examples of potential attack scenarios <http://www.syssec-project.eu/media/page-media/3/costache-ec2nd11.pdf>

## **Safety of wireless communication is questionable**

The problem today is many scientists and government regulatory bodies appear to be only interested in the heat effects on cells caused by RF energy as indicated by the various standards and testing techniques that are well documented. Research has shown that temperature rises are negligible and therefore impact to cell health is not anticipated. Physicists also state that the energies involved are too low to break even a hydrogen bond and as such damage to cells is not predicted. However, a large number of scientists neglect to look at the non-thermal effect RF energy has on cells.

There are many studies showing that wireless RF frequencies do indeed impact health. I have included a few details below but this is just a small sample of a much larger sample available. Simply pointing me to government websites such as ARPANSA and pro wireless research that indicates there is no conclusive evidence does not give me any comfort. This feeling is exacerbated by the fact that more often than not there is a clear conflict of interest between the government and the industry particularly when the government makes money from license fees for RF bands i.e. Australian Telcos pay a combined \$1.4 billion for continued access to the mobile phone spectrum. Conflict of interest is also noted in many research projects on the safety of wireless as many are sponsored by the Industry.

Independent studies showing biological effects, or hinting at possible health effects, have to face a barrage of industry criticism. Such studies are typically dismissed as anomalies among an "overwhelming" body of evidence showing no health risks.

"Industry arguments may be simple, but they're effective when talking to a public ill-equipped to challenge the information."

Source: Dr. Jerry Phillips, a well-known cell phone researcher in the U.S. with dozens of peer-reviewed papers published under his name.

This is essentially the same set of tactics that were used by the Tobacco industry for lung cancer studies in respect to smoking of cigarettes. It is important, therefore, not only to consider the conclusions of a study, but also its sources of funding.

Some reports and findings that indicate all is not well with Wireless are listed below:

<http://www.icems.eu/docs/Salford.pdf>

[http://www.emrpolicy.org/news/headlines/2009\\_aava-report\\_english.pdf](http://www.emrpolicy.org/news/headlines/2009_aava-report_english.pdf)

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(05\)73057-9/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(05)73057-9/fulltext)

## **Some Examples of Effects Found in Research, and Corresponding Epidemiological Findings**

Please see the BioInitiative report (2007) <http://www.bioinitiative.org/freeaccess/report/index.htm>, Pathophysiology Issue on EMFs (Aug 2009).

<http://www.ntia.doc.gov/legacy/broadbandgrants/comments/71B9.pdf>, and the Environmental Reviews (2010). [http://www.magdahavas.com/wordpress/wp-content/uploads/2010/11/Blake\\_Levit-Henry\\_Lai.pdf](http://www.magdahavas.com/wordpress/wp-content/uploads/2010/11/Blake_Levit-Henry_Lai.pdf) an article by Levitt/Lai to get an idea of the volume of scientific research which has been done on the topic of wireless radiation and health.

The following table summarizes the scientific research and related epidemiological findings.

Topics	Scientific Research	Epidemiological Studies and Possibly Related Symptoms
Genetic	<ul style="list-style-type: none"> <li>— <b>DNA breaks:</b> Shown by ~11 studies in total including           <ul style="list-style-type: none"> <li>* Lai/Singh at the U. of Washington</li> <li>* The 7-nation REFLEX project, and</li> <li>* The U. of Vienna.</li> </ul> </li> <li>Increased microwave-induced free radical activity found by Lai/Singh and 23 other papers may be partly responsible.</li> <li>—<b>Effects on gene expression</b></li> </ul>	<ul style="list-style-type: none"> <li>— <b>Increased cancer incidence</b> around           <ul style="list-style-type: none"> <li>* Radio/TV towers (Michelozzi 2002, Cherry 2000, Dolk 1997, Hocking 1996).</li> <li>* Mobile phone base stations (Eger 2004, Wolf and Wolf 2004)</li> <li>* Electricity towers (Ahlbom et al, 2000, Greenland et al, 2000, Michael Kundi)</li> <li>* Dirty electricity (Milham and Morgan)</li> </ul> </li> <li>— <b>Infertility</b> in insects and humans (possibly as a result of DNA breaks and apoptosis involving the gametes)</li> <li>— Development problems in the young</li> </ul>
Neurological	<ul style="list-style-type: none"> <li>(1) Impacts EEG</li> <li>(2) Changes to neurotransmitter levels</li> <li>(3) The blood-brain barrier is opened, allowing toxins to cross into the brain (Allan Frey, Leif Salford, Oscar and Hawkins, and Albert and Kerns)</li> <li>(4) Neuronal death (Leif Salford) and memory loss in rats (Henry Lai, Lukas H. Margaritis)</li> <li>(5) Calcium efflux in brain tissue (C.F. Blackman, Ross Adey)</li> <li>(6) Demyelination of rat neurons (J.C. Lin)</li> <li>(7) Increase of brain glucose metabolism after 50 minutes of cell phone exposure (Volkow et al, 2011)</li> <li>(8) Stress proteins (Martin Blank)</li> </ul>	<ul style="list-style-type: none"> <li>— Increased symptoms near cell towers, according to investigations in multiple nations, including Headaches, Sleeping problems, Memory loss and difficulty concentrating; (Santini, Navarro, A. Bortkiewicz, Abdel-Rassoul, etc.)</li> <li>— Heat shock proteins found in Alzheimer's and Parkinson's patients (may also be related to neuronal death)</li> </ul>
Cardiological	<ul style="list-style-type: none"> <li>— A double-blind study showed that EHS individuals experience Tachycardia from DECT cordless phones (Magda Havas)</li> <li>— Calcium efflux in animals' hearts (Schwartz et al)</li> <li>— Blood cells clump in rouleaux formation, as predicted by mathematical modelling (Bo Sernelius)</li> </ul>	<ul style="list-style-type: none"> <li>— Arrhythmia, as shown in double-blind study by Magda Havas</li> <li>— High Blood Pressure, as shown in a double-blind study</li> </ul>
Immunological	<ul style="list-style-type: none"> <li>— Increased production of histamines and mast cell count, involved in allergic reactions, has been observed.</li> <li>— Morphologically altered immune cells</li> </ul>	<ul style="list-style-type: none"> <li>— Studies on increased allergies found in mobile phone users</li> <li>— Studies on Electrohypersensitivity (Olle Johansson)</li> </ul>
Endocrine	<ul style="list-style-type: none"> <li>— Decrease in ACTH, cortisol, thyroid hormones, after long-term exposure (Emad F. Eskander et al, 2011)</li> <li>— Decrease in serotonin and nightly melatonin, but increase in daytime melatonin from telecom mast (Kempten West)</li> </ul>	<ul style="list-style-type: none"> <li>— Increase in "depressive mood disturbances, lethargy and listlessness, appetite disturbances, inner agitation" near telecom mast (Kempten West)</li> </ul>
Animals	Impact on magnetite	<ul style="list-style-type: none"> <li>— Affects animal navigation (birds, bees, etc.).</li> <li>— Landau University study in Germany on DECT cordless stations and bee colony collapse</li> </ul>