Dear esteemed EESC committee members,

I have been actively following the progress of the Section for Transport, Energy, Infrastructure and the Information Society (TEN) public hearing on Electromagnetic Hypersensitivity with keen interest. I applaud the efforts that many of you have applied in developing a formal opinion on Electromagnetic hypersensitivity (TEN/559).

It is however unfortunate that Sir Richard Adams believes he needs to provide a counter proposal. A very small minority of dissenting and conflicted scientists behaved exactly the same when the IARC panel of scientists looked at classifying Radiofrequenicies (RF) as a group 2B carcinogen. He has labelled some of the contributors, as "activists" to demonise and discredit us in an attempt to make our understandings of our condition as well as our opinions on the state of science less valuable. These are common tactics that were employed by the Tobacco industry and their representatives in the past. Of course his view is understandable because unless people actually experience this condition first hand, it is hard for them to recognise and grasp that it is real. It is convenient to blame it on a psychological cause, a common practice for any ailment that challenges our understanding and cannot be adequately explained by medical or scientific researchers. It is also a sad state of affairs when we see science is becoming politicised and manipulated by unscrupulous individuals and entities who lack a social conscience in order to protect their own, or those they represent, self-interests and investments.

In Australia, those who are EHS and seek support from government departments (departments that should have an interest in protecting the health and wellbeing of it its populace) find themselves being stonewalled and ignored. I understand from my fellow sufferers in Europe that they experience the same unconscionable behaviour. The WHO statement that EHS is "*not a medical diagnosis*" is often used as an excuse for inaction. They do not appear to recognise the rest of WHO's definition of EHS which includes "*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*." The reason why at this time there "*is no scientific basis*" and why there is no medical diagnosis (at least from perspective of the WHO) is because there is uncertainty about the trigger event(s) and the underlying biological mechanisms that lead to symptoms, which the WHO claims are very real. This uncertainty has hampered the development of a clinical basis for the formal diagnosis and treatment of those who are EHS. This is further challenged by significant gaps in understanding within both the scientific and medical communities on EHS and the causes. The WHO says that "*approximately 10% of reported cases of EHS were considered severe*" and that "*EHS can be a disabling problem for the affected individual*." One needs to also take into consideration WHO's definition of health, which is qualified as "*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*." EHS challenges all 3 indicators yet we are being disregarded and discriminated against as we try to seek accommodation for our condition.

There appears to be blind trust in RF Standards and RF Guidelines that are not all in inclusive as they do not consider the vulnerable portion of the population, are based on providing protection against shock and burns from short term acute exposures only. RF Standards and Guidelines are not designed to fully consider chronic exposure to a variety of frequencies simultaneously (especially as their effects may be additive) and do not take into consideration the latest science especially as many RF standards have their heritage based on 1998 ICNIRP guidelines which are now almost 17 years old. Of course one can also argue that it has been known for more than 50 years that RF causes biological effects at athermal levels with the potential for serious health consequences. One only has to look at declassified/unclassified US scientific reports released as far back as 1971 that summarised the knowledge at the time to understand that exposure to radiofrequencies results in biological effects that can have health consequences.

Examples reports include:

- 1972 Naval Medical Research Institute – Bibliography of reported biological phenomena ('effects') and clinical manifestations attributed to microwave and radio frequencies - Glaser PhD.

- 1976 US Defence Intelligence Agency - Biological Effects of Electromagnetic Radiation (Radiowaves and Microwaves) Eurasian Communist Countries (U) – Dr R A Williams
- 1981 NASA – Electromagnetic Field interactions with the body: Observed effects and theories – Dr Raines PhD.
- 1988 USAF - Radiofrequency/microwave radiation biological effects and safety standards: A review – Bolen

I suggest those who consider EHS is a psychosomatic condition to read some key points I have extracted from the 1976 DIA report referenced above. Please pay particular attention to points (2) and (4) which describe symptoms observed in military personal exposed to RF that are also common with symptoms claimed by those who have been diagnosed as being EHS.

(1) "Animal experiments reported in open literature have demonstrated the use of low level microwave signals to produce death by heart seizure or by neurological pathologies resulting from breaching of the blood-brain barrier". (page viii)

(2) "*Personnel* (military) *exposed to microwave radiation below thermal levels experience more neurological, cardiovascular, and haemodynamic disturbances than do their unexposed counterparts*." (page 6)

(3) "Some of the cardiac and circulatory effects attributed to exposure include bradycardia, hypotension, and changes in EKG indices." = High and low blood pressure (page 6)

*(4) "Subjects (military personnel) exposed to microwave exhibited a variety of neurasthenic disorders against a background of angiodystonia (*abnormal changes in the tonicity of the blood vessels*). The most common subjective complaints were headache, fatigue, perspiring, dizziness, menstrual disorders, irritability, agitation, tension, drowsiness, sleeplessness, depression, anxiety, forgetfulness and lack of concentration."* (page 8)

(5) "Long term non-thermal microwave irradiation of male mice evoked diffuse changes in the testes. Subsequent mating of the animals resulted in reduction in the size of the litters" (page 13)

Direct testing on Humans is limited in testing scope for both legal and moral reasons and so there is a heavy reliance on epidemiological based studies to find the answers. Ironically, this essentially means that the general public is participating in a non-consensual experiment to determine whether RF is safe or not.

A major deficiency in the research being conducted so far is that there are very few studies with a long term focus. The majority of studies are not representative of real life exposures, being too short in duration, limited to testing one frequency for a fraction of the amount time the public are being exposed to continuously. Researchers are looking for consistency in results which is difficult to achieve when one considers we are subtly different in our genetic makeup, health status, body shape and we live in diverse environment conditions. There is however significant evidence with 1000's of studies showing RF can cause biological effects with the propensity to cause harm.

When it comes to research on EHS there are some serious limitations and concerns. To get a better understanding of the state of science on this contentious issue, and, to determine whether researchers have a good understanding of EHS to develop sensible and realistic testing protocols, I recently performed a review of 84 Electromagnetic Hypersensitivity related studies that have been conducted over the last 20 years which can be categorised as follows:

- 21 Neutral Studies with neither a negative or positive findings
- 25 Negative studies
- 38 Positive studies

I have written a separate comprehensive report covering my findings which I intend to publish at a later date, so I will only summarise my findings of the main issues below:

- Many studies reviewed neither validates EHS is related to Electromagnetic Radiation(EMR) or disputes this
- Many survey based studies are not designed to establish a causal association between exposure to EMR and symptoms of ill health. Instead they provide data points that could be used in future studies
- Many surveys were performed against healthy individuals and so they provide no insight into EHS
- Some studies suggests that there are psychological issues but do not determine whether this developed after a person became EHS or is the underlying cause of EHS
- Many of the negative studies are poorly executed and hint at psychological reasons without providing any real compelling evidence to support their claim
- Cognitive behavioural therapy (CBT) is put forward as a potential solution to treat EHS sufferers but has been disqualified by others "*as not resolving the incidence and severity of the symptoms*"
- Many studies do not always consider delayed effects and delayed recovery times
- A large number of provocation test studies look to see if the test subject can accurately perceive RF emissions greater than chance. Signal perception is irrelevant when comes to trying to determine whether EMR is causing symptoms especially as many symptoms can have a delayed onset. There are effect windows that can be in the order of several days that need to be considered when it comes to evaluating EMR effects.
- Not all testing environments are shielded and so are often contaminated by other EMR sources (fluorescent lights, electricity, nearby mobile phones, base stations, WiFi etc.
- No consideration of EMR exposure of test subject travelling to/from the test facility
- Many studies rely on a subjective provocation style test without including any objective biological tests
- There appears to be a disconnect between the medical profession and international scientific bodies over EHS and the likely cause. An overwhelming percentage of general practitioners (up to 96%) to some degree, or totally, believe in a health-relevant role of environmental electromagnetic fields. (Huss A. et al. October 2006)

Often media portrays EHS people as elderly and/or people who are afraid of technology. When in reality it effects a large cross-section of the community with the average age being in the 40's plus. Many of these sufferers are in fact early adopters of technology who had no preconceived ideas about the safety of these devices and may have accumulated over time higher exposures than the average population. Recently, there are more and more newspaper articles of EHS people whose lives have been severely disrupted by the ever increasing EMR pollution in their environments yet nothing is done to address their plight. As a society we don't to want to accept the possibility that these technologies are harming people because it would jeopardise technological advancement (military and commercial), corporate profits and government income.

In Australia, I am working with a group of professionals including doctors and scientists who are EHS, people who can be described as being credible and highly intelligent individuals who are trying to educate researchers and government officials about EHS. I do hope something good can come out of the EESC that we can use to help others without it being turned into another industry corrupted whitewash.

Without prejudice,

Steve Weller
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"*An activist is someone who cannot help but fight for something. That person is not usually motivated by a need for power, or money, or fame, but in fact driven slightly mad by some injustice, some cruelty, some unfairness - So much so that he or she is compelled by some moral engine to act to make it better*."- Eve Ensler