

COMMENT ON AMA Position Statement.

No-one involved in acoustics or medicine could have avoided the recent Draft NHMRC Review and the subsequent AMA Position Statement on Wind Farms and Health irrespective of whether one was personally involved with wind turbine issues.

Noise impacts every organism in an ecosystem, the soundscape, whether it be close-in mortality impact or more distant behavioural change. Underwater the 1982 UN Commission for the Law Of the Sea (UNCLOS) clearly indicated that noise is energy and energy impacts on even single celled organisms and it may not be inconsequential irrespective of intensity. Impact of noise on terrestrial organisms, including humans, has been documented in the literature since at least the 1960's with an even greater focus of sub lethal sounds on behaviour change, the science of psychoacoustics.

Getting to current specifics the AMA Position Statement on Wind Farms and Health dramatically stands out from an 'out of organisation' perspective. The Position Statement format immediately lurches into a save the world political manifesto, then possibly a sales pitch for turbine manufacturers, and eventually settles down to make comments about wind farms and health impacts with no mention of the Draft NHMRC Review that preceded it within a close and probably not unrelated time frame.

The AMA Statement is supposed to be about Wind Turbines and Health. That direction is clearly not about the relative advantages of renewable energy of any form compared to any other power source. That is an entirely different argument and the people who write this in the name of the AMA should not have permitted medicine to be thrown out with the bathwater. The Australian people should not be sucked into a polarising argument that suggests that concerns about health is an anti-renewable power argument. In a large part, it is about noise pollution hence an environmental and health issue for all within the soundscape of that ecosystem.

A cursory assessment of other AMA Position Statements generally suggests that the normal formula for any other Position Statement is to indicate what the relevant medical problems are, then to explain the issues and then perhaps offer suggestions for mitigation or guidelines to approach the problem. This was clearly not the case for the AMA Position Statement on wind farms. Why is this one so different?

One would also have to question the AMA as to how many of their Position Statements have been established on literature provided by an assessment document such as the uncited Draft NHMRC Review, by definition not Final, Review. Why are there are no references to substantiate the Position Statement on Wind Farms and Health given that a thinly veiled political manifesto about climate change is not stand-alone science. The AMA Position Statement on Breastfeeding for instance has almost as many references as the Position Statement on Wind Farms and Health has text. Why absolutely nothing for wind farms and health?

Perhaps a guide for the AMA to consider on renewable energy infrastructure and health impacts would be to examine how the American Medical Association (American AMA) addressed such a problem. The American AMA took a stand on the advantages of developing renewable energy extraction systems over existing oil and gas systems, not from an environmental stance, but because the mortality of workers in renewable energy construction was at least an order of magnitude lower than with oil and gas construction. In their final, not Draft it should be stressed, position statement the American AMA took an appropriate health and welfare first approach to renewable energy, not the other way around as the AMA has done. This health first approach by the American medical community should have been instructive for the AMA if they were concerned about the specific health of individual Australians.

Perhaps an even more instructive guide for the AMA to have considered would be the results and background behind other medical association reviews on wind farms. The 2012 reviews for Oregon and Massachusetts medical authorities are noteworthy for their common ground need for research and

common acceptance that noise from turbines in general causes sleep disturbance with the capability of adversely affecting mood, cognitive functioning, and one's overall sense of health and well-being causing annoyance. However, their opposing conclusions with acknowledged annoyance capability concerning turbines make them compelling reads. How two groups charged with medical responsibility for members of their community could make such disparate conclusions makes one ask what planet one of the groups is based on. The early 2014 dismembering, a medical term perhaps, of the Massachusetts medical review by Paul Schomer the Head of the Acoustical Standards Division of the American Acoustical Society citing errors of acoustic data upon which to base medical conclusions and the near total ignoring and misquoting of relevant medical literature also makes compelling reading. It would not appear that AMA took any opportunity to consider what the world medical authorities are aware of.

If the AMA was to have made a general positive comment about the need for the best aspects of renewable power it would have been acceptable to most in the current environmental situation. However, health should be the prime responsibility of the AMA or at least I thought it should be. It is not appropriate for the AMA to focus on wind renewable power systems with no consideration of any prospect of collateral damage that the ethical medical community would normally call side effects for any other health issue.

Why isn't the AMA primarily focused on health issues for wind turbine sufferers? Bronzaft (2011) noted wind turbine industry input to US medicine interests regarding dismissal of the objections of sufferers, observations that were indeed prescient. The Draft NHMRC Review acknowledged Dr Bronzaft's (2011) paper on impact of low frequency sound on children before relegating it to "background" but it did not highlight the influence of the wind farm industry on sub components of the medical fraternity.

The above mentioned close association between medicine and wind turbine industry was clearly outlined in an ugly way recently in Victoria as explained in the Senate during early 2014. A wind farm corporation basically instructed your Victoria AMA members that the corporation was the medical expert on wind turbine noise issues and offered to instruct AMA members on the correct treatment of patients complaining about close sited wind turbine problems. So who is doing the medical direction on medicine in Victoria?

How many major population wide acceptances of drugs or technology have not had some kind of adverse impact or damage or side effect requiring some degree of withdrawal or mitigation? Examples include thalidomide (no AMA Position Statement it should be noted) and plenty of other drugs, tobacco, asbestos, 2-4-5-T herbicides, electromagnetic clusters that became known as cancer clusters, 'dead buildings' where acoustic resonances make habitation impossible for those predisposed to motion sickness, bright LED screens and the list goes on. Are wind turbines that squeaky clean that they are perfectly safe under any consideration for everyone? Are they really?

The AMA Position Statement on gambling (as an example) addresses its concerns towards that proportion of the population that is most at risk from gambling so why does AMA not address those people most at risk from wind turbines? Why should people reporting impacts from turbines be told to fall in line with those people that are not having issues? If a drug causes side effects in x% of a population it seems to be withdrawn immediately but if wind turbines generate y% impact within any defined z metre radius from a source then those impacted are told to suck it up and get on with life as they best can. Apparently that is an attitude from a doctors representative organisation namely *Trust me I am a doctor and a wind farm company has told me what to say.*

The AMA Policy Statement came hot on the heels of the Draft NHMRC Review. The AMA Position Statement seems to side with aspects of the Draft NHMRC Review that effectively and arrogantly indicates that the rest of the world's medical and acoustic capability was basically at 'background' status in their eyes and there was insufficient medical, acoustic and psychoacoustic data in the world

to suggest that noise from turbines did not generate some kind of side effect relevant to Australian conditions?

So how did the Adelaide University investigative group come up with a review of the literature for the NHMRC that gave them the capability to start relegating so many historical to current papers to that "background" status? The investigators outlined how their literature search was conducted using what most people would call keywords for a Google search though a tad more intricate. Anyone is quite capable of reconstructing this literature search and they are listed here without the minutiae of linking qualifiers.

The Draft NHMRC Review *Table 2 Search strategy and criteria for selecting evidence to inform Background* included the keywords noise/adverse effects, systematic, noise injury, clinical trial, controlled clinical trial, controlled study, longitudinal study, prospective study, randomized controlled trial, humans and English.

The NHMRC Review *Table 3 Search terms to identify evidence to inform the systematic review questions* included keywords wind, turbine, farm, tower, energy, technology, energy generating resources, electric power supplies, wind turbine syndrome and wind power.

So that's how the Draft NHMRC Review determined what literature was pre-filtered to be relevant to wind farms and health. It is somewhat of a miracle that anything indicating any mechanistic, direct or parallel evidence relating to wind turbines and health was stumbled upon only to then be relegated to "background" status. Despite this, the Draft NHMRC Review determined that there were findings that wind turbines were detrimental to human health using words such as quality of life, sleep deprivation etc. The Draft NHMRC Review findings did not say the concerns did not exist, which seems to be the position now adopted by the AMA.

However, if medical, psychoacoustic or acoustic type keywords relevant to turbine impact on definable proportions of the population of close sited humans would have also been included such as stress, annoyance, heart (with qualifiers), disease, misophonia (the selective sound sensitivity syndrome which has not issue being accepted as a current psychiatric disorder), psychoacoustic (integrating the pulsing sounds that annoy people), headaches, nausea, dizziness, nosebleeds and sleep disturbances/deprivation etc then the result would have been totally different. The inclusion of the keyword English may have stifled acceptance of even more relevant information usually in English. Keywords about language such as Dutch, German, Swedish, Danish, Polish, Japanese and Korean would also have been more instructive.

It should be noted that while the Draft NHMRC Review authors apparently went out of their way to not encounter many research articles dealing with wind turbine induced annoyance leading to stress the Draft NHMRC Review still concluded that there was no "consistent direct evidence" associating wind farms with health outcomes and the Draft NHMRC Review and called for fresh scientific study proposals that sufferers and environmental NGOs were calling for anyway. Not finding 'consistent direct evidence' should in no way be confused with **no direct evidence** and that I would assume will be pointed out to Draft NHMRC Review and the Government in the near future. That nuance seemed to have escaped the AMA Position Statement.

Amazingly enough many of those medical symptoms of close wind turbine impact are accepted unerringly by wind farm advocates for sufferers around the world from comparable psychoacoustic noise combinations yet absolutely nothing is said of that. Pulsed, low amplitude impacts from electric trains and from The Hum, a probably earth sourced electromagnetic 40-80 Hz sound that has increased in prevalence over the past 40 years depending on locality, are all capable of causing medically accepted impacts comparable to wind turbines **but only wind turbine impacts are questioned**. Effectively low frequency pulsed, amplitude modulated sounds from a variety of sources

impact human health but if from close sited wind turbines they will not. That inconsistency cannot be overlooked and is scientifically and intellectually dishonest in the extreme.

The Draft NHMRC Review included many documents that were completed as reviews and were assigned “Background” status and were duly buried. However, if the Draft NHMRC Review was really serious about obtaining information about the impacts of turbine noise they would have considered the original research articles specifically referenced in the reviews with journal titles including the keywords research, brain, hearing, health, sleep deprivation etc. Potentially such a more thorough approach may have found the information that was required. Accidental? I doubt it!

One can only assume in the absence of any alternative that the AMA based its Position Statement on the Draft NHMRC Review where it would appear that the Terms Of Reference switch mechanism for the Draft NHMRC Review was on the DONT FIND ANYTHING SETTING. **Quod Erat Demonstrandum.**

The Draft NHMRC Review is now under review from public comments. One can only hope that the literature so carefully avoided for consideration by keywords and literature cut-off date techniques will be included and the information will force revision.

- One can only hope that the AMA will suddenly discover the available scientific literature and maintain the NHMRC, NGO and sufferers calls for further research.
- One can only hope that the AMA, having discovered the available data really out there, will then dramatically revise its position statement to reflect health issues for people in close proximity to wind farms.
- One can only hope that we never have any future AMA Position Statement presented without any cited evidence and at best only based on a Draft Review. It should be science driven and not have to be focused back to reality by the hope of a percentage of the people who are severely impacted.

It is a real world and the financial reality of what drives renewable power enthusiasm is very evident. However, I wish to reiterate my point that health and wind turbine issues should be focused on appropriate siting of turbines relative to non willing participants and not about the broader issue of renewable power debate.

Non willing participants with wind turbine proximity do have health rights and they would exclude turbines with universally acknowledged annoyance capability at minimum being jammed as close as possible to non-willing participant to maximise RET profits to industry.

- Industry should prove they have a safe product.
- It should not be up to non-willing participants to prove that the product is not safe.
- That would be an expected and normal situation for any product involving ecosystem, including human, health.

From an acoustic perspective not being associated with turbines in any way except knowing people who are,

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