

**Submission
No 43**

**INQUIRY INTO INQUIRY INTO PFAS CONTAMINATION
IN WATERWAYS AND DRINKING WATER SUPPLIES
THROUGHOUT NEW SOUTH WALES**

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Select Committee on PFAS Contamination in Waterways and Drinking Water Supplies Throughout New South Wales

Dear Panel Chair and Commissioners,

Contamination from renewable energy componentry is an issue that is being swept under the carpet. It's time governments stopped putting renewable targets ahead of the nation's public health and food security.

The long-term problem of toxic contamination finding its way into soil profiles and waterways from wind/solar componentry and BESS is acknowledged worldwide as a **'ticking time-bomb'**.

Toxic PFAS, a *'Forever chemical'* imbedded in lithium-ion batteries presents a dangerous source of chemical pollution that recent research carried out by Dr Jennifer Guelfo of Texas Tech University and Dr Lee Ferguson of Duke University found in a peer reviewed co-authored paper published in various science journals July this year, threatens the environment and human health. They found alarming levels of the chemicals in the environment near battery manufacturing plants in the US, Belgium and France, and discovered that waste from batteries disposed of in landfills was developing as a major pollution source.

'Forever chemicals' are a class of man-made compounds most often used to make products resistant to water, stains and heat. They are called *'forever*

chemicals' because they do not naturally break down and have been found to accumulate in humans. The chemicals are linked to cancer, birth defects, liver disease, plummeting sperm counts and a range of other serious health problems.

The Guelfo/Ferguson paper notes that few end-of-life standards for battery waste exist, and the vast majority end up in landfills where it can leach into waterways and soil profiles. Detection of the chemicals in snow far from manufacturing plants or landfills suggest the chemicals easily move through the atmosphere.

The study noted previous research that as little as 5 per cent of lithium batteries are recycled. That could yield a projected 8 million tons of battery waste by 2040, if battery recycling is not dramatically scaled up with demand.

Another particularly toxic '*Forever chemical*' is Bisphenol A (BPA), recognized by the World Health Organisation (WHO) as an endocrine disrupter that has been linked to about 80 diseases including cancer and reproductive disorders and can be lethal for young children.

All epoxy resins contain BPA or similar bisphenol components. Epoxy resins are used in almost every part of our daily life (BPA *in a confined state*) such as paints, plastic drink bottles, flooring etc and in the manufacture of wind turbine blades. Epoxy resins are also used in the manufacture of wind turbine blades. The blades, however, wear and then shed a fine dust of BPA throughout their life. This dust is spread wide and far by wind and if only one gram of it gets into dam or town storage waters, 10 million litres of water is polluted and then rendered unusable. This dust (BPA *in an unconfined state*) from eroding blades has already covered large areas of our planet in proximity to wind farms and BPA is leaching into soils and waterways. Furthermore, the process is accelerated when the blades are cut up, dumped (on-site) and buried.

The wind industry openly admit that any wind turbine will emit in excess of 60kg of microplastics containing '*forever chemicals*' per year into the atmosphere which will find their way into soil profiles and waterways. That is the equivalent

of about 50 tonne of pure unadulterated BPA pollutants over 20 years finding their way into water catchments from a typical 100 turbine wind farm.

As an accredited LPA livestock producer selling beef into the Grass-Fed domestic and export markets, I am fully aware of the strict compliance requirements of the rules and regulations set down by Meat Standards Australia in regard to feed containing chemical residues within a Withholding Period when harvested, and any livestock still within a Withholding Period or Export Slaughter Interval (ESI) as set by SAFEMEAT following treatment with any veterinary drug or chemical, and their slaughter interval for export.

To meet these criteria a National Vendor Declaration (NVD) must accompany all livestock movements and there is an obligation that I must be absolutely satisfied that I have correctly completed all parts of the NVD and that I understand that any misleading or unverified statements may result in prosecution, heavy fines or loss of my LPA accreditation thereby precluding me from trading.

Australia's reputation for clean green '*food and fibre*' has been built over generations on the back of good practice and strict governance. A priceless reputation second to none and envied by our competitors. Export destinations like the US, Japan, Korea, China and Europe are very aware of the dangers of BPA in foods and packaging. If they were to get a whiff that our beef or lamb could be contaminated with heavy metals or other '*forever chemicals*' like PFAS, our brand, built over generations would be destroyed overnight.

International public health advocates are sounding alarm bells about the need to find alternatives to the toxic chemicals and heavy metals imbedded in renewable energy componentry. Accordingly, there needs to be a far greater focus on the toxic contamination risks arising from wind/solar farms and BESS potentially causing leaching of '*Forever chemicals*' and heavy metals such as cadmium, cobalt, lead, lithium-copper, mercury, and nickel into our agricultural land, water resources and atmosphere, and also a greater focus on the associated Occupational Health & Safety risks, the impact on Intergenerational Equity for our children and grandchildren and the potential elevated stock toxicity levels as a measure to protect crops, livestock and producers, thereby ensuring food security for future generations.

The energy transition has not been properly thought through and it has far too many '*unintended consequences*' for it to be fit for purpose as presently there is no satisfactory waste management plan for where the hundreds of millions of toxic solar panels, hundreds of thousands of poisonous wind turbine blades, and millions of tons of dangerous batteries will eventually end up.

This nation cannot afford to let public health and food security be undermined by a hasty energy transition, and until such time as environmental, property, and food chain protection plans have been established, I call on the NSW government to apply the '*precautionary principle*' and initiate a moratorium on all wind/solar farm and BESS applications.

Ian McDonald, Grazier