Submission No 143

INQUIRY INTO PROPOSED ENERGY FROM WASTE FACILITIES

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Submission to the NSW Upper House Inquiry: Energy-from-Waste (EfW)

1. Introduction

My name is Garry O'Brien and I am a third generation farmer operating in the Parkes District of NSW. Farming brings with it many challenges in climate, markets and input costs and we are constantly working to mitigate to risks facing our family business.

Our land is not just the core of our enterprise, it is where we grew up, our history and what we hope to pass to the next generation should they choose to pursue a career in food and fibre production. Our livelihood, sustainability and ability to continue this enterprise for generations to come depends on the health of our soil, water and air.

Australian farmers continue to meet stringent residue limits and adhere to strong market assurance programs. In some cases the export standards we meet are much higher than the standards our export partners must meet domestically.

I am writing with deep concern about the proposed Energy from Waste (EfW) facility in Parkes, I am also aware of the other proposed sites in NSW that also face similar potential impacts.

Proponents have never laid claim to capturing 100% of the forever chemicals resulting from the incineration process. Small percentages over long periods of time, considering the likely long contract length for these developments, will potentially lead to residue build up in the surrounding environment ,land and water. Should this occur contamination would likely make its way into agricultural commodities and in turn the food chain.

Traceability is increasingly important in primary production as processors and consumers become more market aware. As evidenced by Eid in livestock, any residue detection, in any part of the global supply chain can be tracked back to its source in minutes. Any detection in the future would prove catastrophic for producers in the region with reduced or no market access, farmland devalued and businesses unable to continue.

Australia has a trusted global reputation and Government must ensure Precautionary Principle is adhered to in setting up these facilities in regional areas.

2. Terms of Reference (B) Spread and Quality of Emissions

The proposed Parkes EfW would use unsorted red bin waste, commercial waste and industrial waste, a variable and potentially hazardous mix. The red bin waste relies upon the correct disposal of waste by members of the public in NSW. As illustrated by the EPAs Red Lid Bin Audit Data, hazardous items that should not be in red bins do end up in them, this is reinforced by the regular incidences of truck fires across NSW with the cause often identified as batteries. Hazardous items such as these increase risk and unpredictability.

Even the most advanced "new technologies" cannot capture the smallest particles, which particularly in a respiratory sense, are often the most dangerous. These emissions have the ability to travel long distances before settling in soil, water, commodities and the built environment. Forever chemicals are likely to build up over time before reaching detectable levels.

Regional communities have a strong reliance on rainwater for domestic use. In our case it is the only option available to us. It is my belief that some of the pollutants leaving this facility will end up in rainwater tanks around the region contaminating residents drinking water.

Small amounts of pollutants being emitted over long periods pose a huge risk to the surrounding areas of primary production. While the land at Parkes has now been rezoned in readiness for this development it was originally rural land and used for agricultural production. Th Parkes site, while part of the Parkes Special Activation Precinct (SAP) in situated in the highly productive agricultural area of the Central West and is surrounded by farmland, in some cases families have operated these holdings for many generations. Toxins and pollutants carried on the wind or rain could settle in the soil, water, crops and pastures. Any contamination, real or perceived could result in irreparable damage to the regions reputation and flow on negative economic impacts.

3. Terms of Reference (D) Impacts on Human Health

The township of Parkes falls within 10km of the proposed EfW development. This is well within the radius of known reported impacts to human heath from EfW incineration. The train route for the bulk of the waste is in excess of 500kms- via Cootamundra. After having been freighted such a distance I believe Precautionary Principle should have been adhered to- as outlined in the NSW Energy from Waste

Infrastructure Plan- in selecting potential sites avoiding proximity to populations in major regional towns. This report states Energy from Waste in NSW must "adhere to the precautionary principle where there is a greater risk oh harm to human health due to proximity to high population areas (now and in the future)".

The rationale that Parkes has fewer people living and working around the site—hence supposedly better tolerating emissions—is discriminatory and reflects social inequity, undermining the precautionary principle's intent.

With the Parkes SAP being 4800 hectares in size – around 4 or 5 times the size of the town- it is possible the population of Parkes could in fact grow substantially during the life of this facilities operation. Having the EfW facility within 10kms of the whole town seems to contradict the principles laid out in this Plan.

Dioxins, PFAS, heavy metals and other pollutant particles know to be emitted from modern EfW facilities accumulate in soil, water, commodities as well as the human body over time. Neurological and respiratory illnesses, cancers, birth defects are all known to be part of the long-term health impacts of the pollutants and toxins known to be emitted from EfW facilities. Low level exposures over long periods of time are shown to have measurable health impacts on populations over time.

Regional areas are reliant upon rainwater for domestic purposes; in some cases there are no alternatives. Proponents have never claimed to capture 100% of the toxins and pollutants generated by this process and these chemical compounds would likely end up in the rainwater tanks around the region. Residents would then be forced to utilise contaminated water which exposes them to the risks of long-term exposure.

Any emitted toxin or pollutant would likely settle on the soil or ground water supply and water courses. Should residues reach detectable levels within primary produce on the agricultural land within extremely close proximity the human food chain becomes contaminated posing a human health risk far beyond the regional area the EfW facility is located in.

4. Terms of Reference (E) Impact on Agriculture

Parkes is a major food production region: The Parkes Special Activation Precinct is located within a prime agricultural zone. Despite this, the NSW Government has designated it as one of only four precincts where EfW facilities are permitted—without any transparent, publicly available risk assessments detailing likely short, medium or long- term impacts on adjoining primary production areas or specifying safe buffer distances.

NSW Chief Scientist & Engineer's Report on EfW: The Chief Scientist's report (May 2020) states:

"The authors make several recommendations, including design to world's best practice standards; adherence to upgrade and maintenance schedules and **avoidance of proximity to food production**. The first two can be addressed through the regulatory assessment and compliance process. The latter (exposure through food) should be addressed through the human health risk assessment (HHRA) that applicants are required to prepare"

However, this review did not address proximity to agricultural zones nor suggest site selection to avoid prime food producing areas**. In setting up just 4 potential EfW sites in the state of NSW the State Government should have addressed the risks posed to food production areas, food security and consumers.** As it stands we are reliant upon applicants to demonstrate safety as part of their HHRA.

The trusted global reputation of Australian produce, forged over many years is at risk: Australia's export-grade produce benefits from a trusted global reputation. EfW is known to emit residues and persistent "forever chemicals" that can contaminate the environment and in turn commodities.

Traceability is of ever increasing importance, as evidenced by electronic tags (Eid) in livestock. Australia adheres to stringent residue levels and increasingly detailed market assurance programs to maintain export markets. Any residue detection in any part of the global supply chain can be tracked back to its source in minutes. **Contamination—real or perceived—would jeopardize market access, devalue farmland, and put food security at risk.**

The recent amendment to Livestock Production Assurance (LPA) means producers must declare grazing under solar or wind infrastructure. This demonstrates how market assurance can be modified retrospectively. Market assurance programs have struggled to keep pace with the renewable rollout across the state. Given the chance of long-term contamination, real or perceived, to the environment I believe producers in the vicinity of EfW facilities could be adversely affected and financially impacted.

Should producers be required to declare their proximity to EfW facilities it could be likened to the zoning that was introduced of Ovine Johne's Disease in NSW in 1999. Whilst a necessary measure to control the disease, once zoning occurred it didn't matter whether producers had infected animals on their properties or not. Producers within the high prevalence zones were faced with reduced market access and competition for their stock and ultimately their ability to generate income was adversely affected.

Due to no genuine Government risk assessments or any consultation with any peak agricultural body on EfW, this radius and zoning would be imposed upon long standing producers retrospectively, after the commissioning of a plant.

Should detections of any of the persistent chemical compounds originating from an EfW facility be made in agricultural commodities the flow on negative economic impact across the impacted region could prove catastrophic.

Not only would primary producers be left with reduced or even no market access but the high value, highly sought after agricultural land within the region would be devalued substantially as its ability to generate income is diminished.

The network of industries supporting primary production is then also negatively impacted and placed under threat.

5. Terms of Reference (H) Methodology of Emission Monitoring

There is no requirement under current EfW proposals for large-scale environmental and commodity baseline testing. Without this, neither governments nor communities—particularly those outside the waste-generation zones—can have confidence in these facilities.

I believe that for any EfW facility to proceed large scale baseline testing of the environment and commodities should be mandated as standard practice across a region prior to commissioning and at regular intervals across the life of an EfW facility. This not only ensures adequate monitoring of emissions dispersing across the adjoining region but also provides assurances to producers, processors, consumers and the community across a region that there are no harmful long-term residues and exposures originating from EfW facilities. This would also move to avoid perception of emissions and contamination affecting market confidence or future investment within a region.

6. Terms of Reference (i) Alternative Solutions

I do not believe EfW to be a truly circular solution to the waste crisis, more of a circuit breaker to deal with our residual waste.

There is a lot of energy and a great deal of cost involved in producing the plastics that would be incinerated under this plan and all this energy is gone in seconds. Governments need to focus on waste avoidance and reduction. The types of packaging need to be looked at. Processors and manufacturers use plastics as they are the most cost effective solution available to them and there is no real incentive to

look at more costly, environmentally friendly options. Introducing waste levies to use problematic materials encourages innovation and change.

The repair and reuse of items has been lost to todays society. Many car parts for example have shifted from being repairable. Car radiators and exhausts for example, once repair shops were everywhere. Now they are scarce, the attitude now is you through it out and put a new one in. A massive global shift is needed here and is a long-term target.

Recycling has been a great innovation but there is still more that can be done here. Transforming waste materials into new products is the ultimate part of the solution. It should be noted financially incentivising bottle and can return is a large part of this areas success to date.

Composting has been a revelation with soil improvement products being made from the contents of FOGO. This has not yet been fully developed with lots of expansion planned within this system.

Anaerobic digestion has the potential of producing energy whilst organic waste returns nutrients to the soil.

7. Terms of Reference (J) Other Matters

In conducting this inquiry I hope the committee questions what criteria**,** outside the availability of a major rail link, was assessed in selecting just 4 potential EfW sites across the state of NSW. What were the characteristics that made these 4 sites the most suitable locations.

-Beyond the availability of the major railway for transporting urban waste, as far as I am aware there is no publicly documented evidence that criteria such as risk to food production, cumulative environmental impacts, or community health were factored into the selection of the four EfW precincts.

The Inquiry should demand disclosure of all site-selection criteria and associated reports and require robust risk assessments—especially regarding agriculture, environmental health, and socio-economic impacts.

-Transporting waste from major urban centres to regional areas such as Parkes (over ~500 km via rail, through Cootamundra) raises concerns about emissions from freight logistics. **If the process is considered safe, why not implement EfW facilities closer to where the waste is generated—aligning with international models and reducing transport-related carbon emissions?**

Moreover, once waste is transported such long distances, why are EfW facilities still placed close to regional townships? In Parkes' case, nearly the entire town lies within a

10 km radius—a distance at which many experts cite significant public health and environmental risks.

-The EfW site in Parkes lies within a NSW Government Special Activation Precinct, intended to host industries such as feedlots, abattoirs and food-production systems.

Given the concerns—real or perceived—around residues from EfW facilities, such developments may deter investment in these complementary industries, undermining the purpose of the activation precinct and increasing investment risk.

-The long-term EfW contracts required to attract developers lock Government into ongoing incineration capacity, which reduces incentives for waste reduction, packaging innovation, and recycling improvement.

This outcome contradicts waste-hierarchy principles advocating avoidance, reduction, reuse, and recycling ahead of energy recovery.

Recommendations to the Committee

1. Commission independent risk assessments for EfW sites, focused on proximity to primary production and food safety.
2. Mandate large-scale baseline and ongoing monitoring (50–100 km radius) for chemical emissions from EfW, with public reporting.
3. Require disclosure of site-selection criteria and internal assessments used to designate the four EfW precincts.
4. Evaluate transport emissions and logistics, considering alternative, urban-based EfW solutions.
5. Apply a genuine precautionary principle by treating EfW as "guilty until proven safe" for impact areas like Parkes.
6. Review market assurance frameworks to prevent retrospective burdens on primary producers near EfW sites.
7. Reconsider EfW's place in the waste-management hierarchy to avoid premature infrastructure lock-in.

Closing Statement

Australian farming's global reputation is built on safety and quality. The NSW Government must not compromise this through poorly assessed, poorly located EfW facilities. Without rigorous scientific assessment, public transparency, and meaningful precaution.

Risks to health, food security, community trust, and industry viability are too great.

References (as cited above)

- NSW Energy from Waste Infrastructure Plan 2021 Energy from Waste Infrastructure Plan
- Chief Scientist's report EfW 2020 FINAL-Report_EFW-with-additional-advice.pdf
- EPA Red Lid Bin Audit Data 2020 Domestic kerbside residual waste in NSW - Results of the 2011 – 2019 audits(March 2020)