

**Submission  
No 661**

**INQUIRY INTO PROPOSED ENERGY FROM WASTE  
FACILITIES**

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# **Submission to the Select Committee on Proposed Energy from Waste Facilities: The Case for a Legislative Ban on Waste Incinerators in NSW**

*Prepared for the NSW Parliamentary Inquiry into Proposed Energy from Waste Facilities (Terms of Reference dated 3 September 2025)*

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## **Introduction**

As a fourth generation resident of Parkes I wish to provide the following submission to the Select Committee on Proposed Energy from Waste Facilities. I live, work and invest in Parkes. I have children and other extended family who also live, study, and work in and around Parkes. I have direct experience with the local community and economy and a vested interest in the health and wellness of the Parkes community and environment.

The undeniable evidence on toxins released by waste incineration, such as dioxins, furans, heavy metals, and ultrafine particulates, shows clear and well-established health and environmental impacts. These substances are linked to increased rates of cancer, reproductive disorders, and contamination of water, soil, and agricultural products. The risks are not theoretical; they have been repeatedly documented in communities near similar facilities internationally. Claims that modern technology can reduce to insignificant or eliminate these dangers are contradicted by independent research and real-world outcomes.

The existing evidence confirms that, for the Parkes area, the introduction of a waste-to-energy incinerator would directly and negatively affect public health, agricultural productivity, soils and water security. Based on settled scientific consensus, this project must not proceed.

This submission argues, based on scientific evidence and experience from both Australia and abroad, that NSW must apply the precautionary principle and move to a full legislative ban on waste incinerators. This recommendation arises from the irrefutable evidence of risks from this activity to the environment, agriculture, and future generations health and wellbeing.

The precautionary principle is enshrined in New South Wales and Commonwealth environmental law. Under the Environmental Planning and Assessment Act 1979 (NSW), and the Protection of the Environment Administration Act 1991, the precautionary principle directs that: lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation where there are serious or irreversible threats.<sup>1,2,3.</sup>

This mandate has been clarified in case law, including the NSW Land and Environment Court and Federal Court, as requiring decision makers to elevate prevention of potentially significant or irreversible risk above claims of scientific uncertainty or short-term economic benefit.

In the context of waste incineration, the requisite demonstration of safety cannot be met by claims of modernity or hypothetical “best practice” controls, especially where exposure routes, cumulative effects, and technological failures are not fully understood.<sup>2,3.</sup>

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## **1. Health Impacts of Waste Incineration**

Modern municipal solid waste incinerators are a major source of toxic air pollutants, including persistent organic pollutants (POPs) such as dioxins and furans, polycyclic aromatic hydrocarbons (PAHs), heavy metals (mercury, lead, arsenic, cadmium), and hazardous

particulates (notably ultrafine and nanoparticle fractions). Numerous peer-reviewed studies and systematic reviews have consistently demonstrated elevated health risks among populations living near waste incinerators, including increased rates of several cancers, reproductive anomalies, congenital defects, respiratory and cardiovascular diseases, and disruption of the immune and endocrine systems.

The United States Environmental Protection Agency (US EPA) recognizes municipal waste combustors as significant sources of dioxins, furans, mercury, and other hazardous air pollutants, even with modern controls. The US EPA’s own documentation highlights that “no level of dioxin exposure is considered safe,” and that incinerators remain a leading source of persistent organic pollutants in the environment. Internationally, the World Health Organization and European Environment Agency have also warned of the cumulative and long-term health risks associated with incinerator emissions, particularly for vulnerable populations such as children and pregnant women. These findings reinforce the Australian evidence base and underscore the global consensus on the risks posed by waste incineration facilities.

A recent systematic review by the Public Health Association of Australia found statistically significant associations between living near waste incinerators and non-Hodgkin lymphoma (Odds Ratio (OR) 2.3), soft tissue sarcoma (OR 3.27), sarcoma (OR 31.4 within 2 km), bowel cancers, raised heavy metals in blood/breast milk, and adverse reproductive outcomes. Ingestion (i.e., contaminated local water, food, or soil) was consistently identified as the dominant pathway of exposure for the public, making proximity to incineration sites and their fallout areas a critical risk factor, particularly in regions relying on roof-runoff rainwater or local produce.

**1.2 Table: Summary of Key Health, Environmental, and Agricultural Risks**

Risk Category	Summary of Evidence	Key Source/Location
Non-Hodgkin Lymphoma	OR 2.3 for dioxin exposure >0.0004 pg/m <sup>3</sup> <small>(N.B. An OR of 1 means there is no difference between the two groups. An OR <b>greater than 1</b> means the event is more likely in the exposed group.)</small>	Floret et al., Spain/France
Soft Tissue Sarcoma	OR 3.27 for exposure >6 fg/m <sup>3</sup> dioxins	Zambon et al., Italy
Sarcoma (Mantua, Italy)	OR 31.4 within 2 km of incinerator	Comba et al., Italy
Bowel Cancer	RR 2.1 (male mortality), RR 2.0 (female incidence)	Ranzi et al., Italy
Mercury and Lead in Blood	Significant elevation in residents and workers near sites	Deng et al., China/Spain
Arsenic Exposure	Higher urinary and blood levels in exposed individuals	Chao and Hwang, Taiwan
PAH Exposure	Urinary metabolites 15x (workers) vs controls	Oh et al., Korea

<b>Risk Category</b>	<b>Summary of Evidence</b>	<b>Key Source/Location</b>
Dioxins in Food/Blood/Milk	Higher in those consuming local food or near older plants	Cordier et al., Spain/France
Rainwater Contamination Risk	Dominant exposure pathway via ingestion	Multiple studies
Technology Limitations	Newer tech reduces, but does not eliminate emissions/risks	Multiple sources
Food Chain Contamination	Elevated dioxins in local produce, eggs, livestock	Cordier et al., IPEN studies
Reproductive/Infant Outcomes	Higher risk of birth defects, miscarriage, infant deaths	Cordier et al., Bottini et al.

Despite claims of “modern safe” technology, the latency period for disease, the diversity of exposure pathways, and ongoing emissions of unknown, unregulated compounds mean it is not credible to assert incineration is safe. Modern stack controls cannot address all harmful exposures, especially where ingestion of contaminated food and water is predominant.

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## **2. Environmental and Agricultural Contamination**

### **2.1 Emissions and Fate of Pollutants**

WtE incinerators are fundamentally linear, pollution-generating technologies that convert solid waste into new, harder-to-contain forms: airborne pollutants, toxic fly and bottom ash, and leachates. Burning waste, especially plastics and treated materials, results in the formation of dangerous POPs including dioxins and a wide suite of hazardous chemicals (e.g., PFAS, PCBs, PAHs; all linked to endocrine, carcinogenic, and developmental toxicity). These pollutants are highly persistent, bio accumulative, and can be transported over long distances by atmospheric or waterborne pathways.

Both incinerator fly ash and bottom ash are highly contaminated with dioxins, heavy metals, and potentially PFAS, making their disposal a critical and unresolved risk. Ash wastes have led to significant instances of ecosystem contamination, food bans, and costly cleanups in Europe, Asia, and North America.

#### **Key Examples:**

- In France, a ban was issued on the consumption of eggs and poultry from thousands of properties surrounding the Paris Ivry incinerator due to high dioxin content in eggs and produce.
- In Australia, national monitoring shows dioxins in sediments and biota at levels that occasionally exceed public health thresholds, most notably in urban/industrial catchments and those near historical or active combustion sources.

- In China, studies show incinerator emissions are linked to dioxins in agricultural soils and food chains, and these reach concentrations exceeding local standards, with health risks that are considered “non-negligible”, especially for long-term exposures even if single-site risk is below prescribed thresholds.

## **2.2 Waterways and Rainwater**

Incinerators are emission sources not only for air, but for water and soil. Rainfall and atmospheric deposition transfer dioxins and other toxic compounds onto surfaces—including rooftops, gardens, and agricultural land. Persistent pollutants can, and do, enter drinking water supplies and local waterways via run-off, threatening both local and downstream populations with contaminated water, crops, stock, and aquatic products.

The Parkes incinerator is located within hydrological reach of both the Bogan and Lachlan Rivers—primary water sources for numerous towns downstream towns. Should atmospheric fallout, ash, or accidental water discharges from the facility enter these catchments, the contamination risk for aquatic biota, irrigated crops, and human water consumers is significant, particularly given the bioconcentration of dioxins in aquatic food chains.

As dioxins are almost insoluble in water but strongly adsorb to sediments and organic materials, direct monitoring of water samples may underestimate risk. Routine detection is not available for many dioxin-like compounds and PFAS, and environmental and public health policies recommend zero avoidable emission of dioxins into water flows.

Recent national studies by the National Dioxins Program confirm that dioxins can be found in all Australian rivers and lakes, with elevated concentrations in biota and sediments of the most industrialized and urban-adjacent catchments, but contamination is also detectable in agricultural and remote sites.

The presence of legacy dioxin contamination from previous industrial activities creates a problematic baseline: it will be extremely difficult, if not impossible, to attribute future contamination events specifically to the proposed WtE facility. This ambiguity could allow proponents to evade responsibility for new pollution, as they will argue that any detected dioxins or related compounds were already present in the environment. This legal and scientific uncertainty further increases the risk to local communities, as it undermines accountability and the ability to seek remediation or compensation for harm caused by new emissions.

While background levels are lower in inland and rural NSW, even small incremental additions from new incinerators could push concentrations into dangerous territory, particularly as dioxins are bio accumulative and have a half-life in soils and sediments stretching over decades to centuries.

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## **3. Specific Regional Risks in Parkes**

### **3.1 Rainwater Reliance**

A significant vulnerability of the Parkes community is widespread reliance on roof-harvested rainwater at properties outside the reticulated water supply system. Rain water and in some cases bore water is relied upon for all domestic and stock water needs. It is estimated that several hundred homes within a 10 to 15km radius of the proposed incinerator are totally dependent on

rainwater for drinking, cooking, bathing, and gardening, with no connection to town water or regular alternative supply.

Studies from Europe and Australia document that eggs and rainwater from homes near incinerators contain dioxin, PFAS, mercury, and arsenic concentrations above legal safety thresholds. For instance, backyard chicken eggs near waste plants in Spain and France exceeded EU legal dioxin limits, and water contamination (including PFAS) reached hundreds of times above drinking water guidelines.<sup>12,18.</sup>

Studies repeatedly show that dioxins, heavy metals, and other persistent pollutants can contaminate roofing surfaces via atmospheric fall-out, with subsequent accumulation in rainwater tanks. Ingestion (as opposed to inhalation) is the dominant exposure pathway for dioxins in affected populations, through both contaminated water and locally grown food.

Local empirical studies have highlighted even trace emissions reaching rooftops are enough to result in human exposure exceeding recommended tolerable daily intakes, especially in children and pregnant women. The US EPA confirms dioxins can contaminate water sources when airborne fallout lands on collection surfaces.<sup>19.</sup>

Removal of rainwater as a safe supply, or contamination at levels above recommended guidelines, would put a significant burden on those affected, create major economic loss (needing to truck in all water), undermine local property values, potentially trigger public health emergencies, and create serious social and psychological distress for families and rural businesses.

### **3.2 Agricultural and Economic Consequences**

#### **3.2.1 Soil and Crop Contamination via Airborne Deposition**

Dioxins, heavy metals, PFAS, and particulate matter emitted by WTE incinerators are deposited onto soils and vegetation, contaminating crops and fodder. These toxicants accumulate over time, particularly in the topsoil, and are not degraded by normal agronomic processes.

Studies around European and Australian incinerators show dioxin levels in soil and moss up to 300 times pre-operation baseline, with corresponding contamination of food produced in the area.<sup>7,12,18.</sup>

- Root and leafy vegetables accumulate contaminants, making garden produce a significant exposure route.
- Grain, forage, and silage crops grown for local livestock become contaminated, introducing toxins into the meat and dairy supply.

#### **3.2.2 Livestock Exposure, Bioaccumulation, and Productivity**

Grazing animals ingest dioxins, furans, and heavy metals via contaminated soil, pasture, and water. These bioaccumulate in fat, milk, organ meats, and eggs, entering human food chains. Eggs and milk from animals foraging even a few hundred meters downwind from WTE stacks have regularly tested above international safety limits for dioxin content.<sup>12,18.</sup>

Chronic exposure in animals is associated with:

- Reduced productivity and reproductive success
- Increased rate of miscarriage

- Immune dysfunction and greater susceptibility to disease
- Rejection of produce by domestic and international buyers due to safety violations (causing economic harm to local agriculture) <sup>18,20</sup>.

The contamination of agricultural produce undermines the market integrity of the Parkes region—the very economic base the local population relies upon.

Parkes and the wider Central West is an agricultural powerhouse, producing premium wool, grains, beef, sheep, and oilseeds, as well as horticultural produce. Proven or suspected dioxin contamination would have catastrophic direct and indirect economic impacts—immediate bans on produce (as seen in France and elsewhere), loss of domestic and export market access, costly monitoring and remediation, and permanent damage to agricultural land. Brand damage to the Australia and the region’s reputation for clean and green food will likely develop regardless of circumstances.

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#### **4. Short-Term and Acute Health Impacts**

Acute exposure—most likely during major emissions events, accidental releases, or process upsets—may result in chloracne, immune suppression, respiratory distress, and hepatic (liver) dysfunction. Children, pregnant women, and people with pre-existing health conditions are at higher risk of acute effects. <sup>4,11, 13,14</sup>.

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#### **5. Medium Term Health Risks**

The World Health Organization, IARC, and US EPA all classify dioxins as Group 1 (carcinogenic to humans), with no identified safe threshold for chronic exposure. <sup>4,6,15,16</sup>.

#### **Chronic Disease and Reproductive Outcomes**

Chronic medium-term exposure within a 2–10 km radius of waste-to-energy plants correlates with:

- Increased risk of pregnancy complications (miscarriage, low birth weight, congenital anomalies)
- Higher incidence of some cancers, notably non-Hodgkin lymphoma and certain solid tumours
- Impaired lung function, elevated rates of chronic obstructive pulmonary disease (COPD), and asthma
- Endocrine disruption and potential increases in diabetes and metabolic syndromes

A 2025 systematic review and meta-analysis found slight but significant increases in hospitalization rates for cardiovascular and respiratory diseases (HR 1.02–1.08), and a weakly elevated risk of non-Hodgkin’s lymphoma in populations residing near municipal solid waste incinerators, with the highest quality studies yielding the strongest association. <sup>13,17</sup>.

## 6. Intergenerational and Long-Term Health Risks

### 6.1 Persistent and Endocrine Disrupting Chemicals

Dioxins, furans, PCBs, and PFAS are all classified as persistent organic pollutants: they resist degradation, bioaccumulate in the food chain, and can exert toxicity at vanishingly small concentrations. Chronic exposures during critical windows of development—in utero, early childhood, and puberty—are linked to increased long-term risk of cancer, impaired neurodevelopment, endocrine disorders, immune suppression, and reproductive problems.

Particularly concerning are emerging data on **transgenerational** effects of dioxin exposure. Studies show that exposure to dioxins can induce epigenetic changes that persist across generations, causing altered gene expression, decreased sperm counts, lowered male/female birth ratios, malformations, and increased disease in children and grandchildren, even after the original exposure has ceased.

Chronic low-dose exposure is far more insidious. Scientific evidence, including WHO, IARC, EPA, and systematic reviews, identifies correlations with:

- Increased risk of multiple cancers, especially non-Hodgkin lymphoma, soft tissue sarcoma, lung and rectal cancer <sup>13,14,15,16,17</sup>.
- Reproductive and developmental disorders (including low birth weight, congenital anomalies, miscarriage, and birth defects)
- Endocrine and immune system disruption
- Diabetes and metabolic disease
- Chronic respiratory and cardiovascular illness\*

The Seveso, Italy cohort, exposed to TCDD from an industrial release, exhibited increased total and cancer mortality, particularly lymphohemopoietic neoplasms (RR up to 3.8), reproductive impacts, and diabetes decades after exposure. <sup>16</sup> Similar findings are documented in communities around waste incinerators globally. <sup>10,13,14,17</sup>

### 6.2 Demonstrated Reproductive and Child Health Effects

Peer-reviewed epidemiological studies have found:

- Statistically significant increases in congenital anomalies and pre-term birth in populations proximate to incinerators, especially for urinary tract birth defects.
- Lower birth weight, higher rates of miscarriage and infant mortality, especially linked to maternal exposure via diet, water, and air.
- Chronic developmental toxicity at exposures well below short-term reference values, especially for infants and children whose cumulative risk over a lifetime may be underestimated.
- Children are disproportionately exposed to and affected by low-dose environmental dioxins owing to higher intake per body weight and developing organ systems.

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## 7. Socioeconomic Risks

The proposed WtE facility is likely to create a negative perception of the Parkes area leading to reluctance to live or work in the area in future. This could lead to socioeconomic impacts such as:

- Potential devaluation of land and agricultural output
- Health care costs and long-term financial burden from increased disease
- Erosion of community cohesion and population decline

These costs could far outweigh any temporary employment or economic benefit claimed by the proponent.

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## **8. City–Country Equity and Environmental Justice - The Principle of Fair Burden Sharing**

### **8.1 Unjust Risk Transfer**

The selective siting of waste incinerators in regional NSW, having previously been refused in metropolitan Sydney and then subsequently banned in NSW via the Environmental Legislation Amendment Bill 2025 and the Environmental Planning and Assessment Amendment (Thermal Energy from Waste) 2022 modifying the Protection of the Environment *Operations Act* except for four regional areas including Parkes, constitutes an unjust transfer of health and environmental risks from urban centres to smaller, less politically powerful rural communities.

It is unconscionable and indefensible to impose risks on the Parkes community that are not considered safe for city residents, especially when the waste originates overwhelmingly from the city itself, especially so when the waste generated originates overwhelmingly from the city itself.

Concerns raised by the Parkes community are echoed by rural and regional residents across Australia who have resisted being made “sacrificial communities” for urban waste exports. The principle of city–country equity requires that rural people not bear disproportionate risk for the convenience and benefit of city dwellers. Policy settings that restrict or ban WtE incineration in cities yet fast-track it through regional “special activation precincts” violate this principle, and have driven strong opposition at Narromine, Goulburn, Lithgow, Richmond, and elsewhere.

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## **9. Limitations of Air Pollution Control Technologies**

### **9.1 Technology Gaps and Unregulated Compounds**

Industry-provided emissions data and regulatory frameworks focus on a limited suite of pollutants, measured under controlled conditions unlikely to represent real-world maximum emissions or “worst case” events (e.g., startup/shutdown, equipment failure). Advanced pollution control devices—fabric filters, electrostatic precipitators, wet/dry scrubbing, and activated carbon injection—while effective for many regulated pollutants and large particulates, cannot capture all ultrafine, nano-particle, or semi-volatile organic pollutants (SVOCs). There are currently no enforceable standards or continuous monitoring for the vast array of chemicals (including PFAS, unknown dioxin-like compounds, ultra-fine PM) in Australia.

Baghouse and fabric filter technologies may claim removal efficiencies >99% for mass-based PM, but scientific reviews show that for particulates below 0.1 micron (ultrafine and nano-particles), collection efficiencies drop substantially—often below 30% or worse—and are not systematically monitored. These particles have massive surface area, can adsorb and carry highly toxic organic or metallic pollutants, and are strongly associated with cardiovascular, neurological, and pulmonary impacts. The high-temperature breakdown of plastics in the waste

stream exacerbates this risk by producing novel, uncharacterized compounds and enhancing the mobility of endocrine disruptors, micro- and nano-plastics, and their adsorbed toxicants.

## 9.2 Continuous Emissions Monitoring: Illusion of Safety

While real-time emissions monitoring is now required for some criteria pollutants (e.g., NO<sub>x</sub>, SO<sub>x</sub>, CO), many of the most dangerous substances (dioxins, furans, PAHs, mercury, PFAS, and semi-volatile organics) are not measured continuously and are often only sampled for brief “compliance” periods each year. To increase sampling frequency to any meaningful level would result in very high cost impacts on the incinerator operation and is unlikely to be required by regulators. This creates opportunities for undetected peaks, circumvention (e.g., by only sampling during ideal combustion), and intentional or accidental failure to record excursions. Furthermore, the long and variable latency of health impacts means that absence of immediate effect cannot be interpreted as evidence of safety.

Proponents claim that modern WTE plants, fitted with expensive air pollution control (APC) systems—such as fabric filters, activated carbon beds, and wet/dry scrubbers—emit only negligible amounts of pollutants. However, robust evidence demonstrates that even with best available technology, significant quantities of harmful substances escape into the environment, owing to:

- Incomplete capture of ultra-fine particles and non-dioxin POPs
- APC system failures, bypasses (e.g., during maintenance, power loss, or malfunctions), or underperformance
- “Sampling frequency bias” where compliance is determined through infrequent short-duration stack tests under ideal conditions, rather than during peaks or operational upsets.<sup>9,21</sup>

Notably, proponents of waste-to-energy incinerators in Australia have effectively conceded that dioxins and dioxin-like compounds will be produced and cannot be effectively filtered out by current or any emerging technology. Regulatory documents and environmental impact statements typically acknowledge that “best available technology” can only reduce, not eliminate, these emissions. Furthermore, Australia’s allowable emission limits for dioxins from incinerators are significantly higher than those enforced in the European Union and other jurisdictions, meaning that facilities here may legally emit more of these toxic compounds than would be permitted overseas. This undermines claims that new technologies can make incineration safe, as even the industry does not argue that emissions can be fully prevented.

Research has further shown that dioxins and similar pollutants can (re)form in stack gases downstream of APC equipment, notably in the “temperature window” common in exhaust ducts and stack tops—precisely where final monitoring is carried out.<sup>8,9</sup> Routine monitoring misses these emission spikes, resulting in legal compliance that does not reflect actual, cumulative community exposure.

Compounding these risks, the existence of background contamination makes it virtually impossible to conclusively prove the source of any new pollution detected in the environment or food chain. This lack of traceability is a well-documented challenge in environmental law and public health, and it is routinely exploited by polluters to avoid liability. Without robust, independent, and continuous monitoring—covering all relevant pollutants and exposure pathways—communities will be left without the means to demonstrate harm or enforce compliance, especially given the limitations of current regulatory frameworks.

### 9.3 Regulatory Gaps and International Warnings

Australian and NSW standards for monitoring and enforcement remain relatively lax compared to the European Union, with many chemicals of concern, including novel persistent toxicants (e.g., PFAS, brominated dioxins), unmonitored or insufficiently regulated.<sup>21</sup> The Stockholm Convention and EU Directives impose much stricter requirements on dioxin reduction, monitoring, and public transparency than currently exist locally.<sup>4,22,23,24</sup>

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## 10. Facility Refusals, Shutdowns, and International Policy Shifts

Globally, trends are moving away from thermal waste treatment in favour of true circular economy solutions (waste avoidance, composting, materials recovery, and non-combustion residuals management). Key international examples and policy reversals include:

- **Eastern Creek, NSW:** The Independent Planning Commission refused a WtE incinerator in 2018 due to health and environmental risks, despite industry assurances and supposed compliance with best available technology. The proposal was found to pose unacceptable risks to air quality, water, and communities in western Sydney—an area already disadvantaged in air quality—after strong community protest and expert evidence.
- **Denmark, Netherlands, EU:** The Netherlands has imposed a moratorium on new incinerators, and Denmark is closing 7 of 21 plants as part of national carbon reduction efforts. The European Union’s Circular Economy guidance explicitly warns that WtE is not compatible with a zero-waste future, and recommends phasing out incineration capacity.
- **France:** Authorities have had to ban consumption of garden produce and chicken eggs over hundreds of square kilometres surrounding Parisian incinerators due to persistent dioxin contamination.
- **China and Czechia:** Scaling up WtE caused chronic overcapacity and undermined recycling, leading to national strategies to reverse expansion and focus efforts on waste sorting, recycling, and biowaste diversion.
- **US:** No new large-scale incinerators have been approved since the 1980s, and existing facilities face pressure to close or convert in line with climate and environmental justice goals.

A table of selected international refusals and shutdowns is provided below:

Facility/Country	Year	Action	Reason/Notes
Eastern Creek, NSW	2018	Refused	Health, proximity to homes/water
Paris, France	2020s	Food ban	Dioxin in backyard eggs/produce
Denmark	2020	Close 7/21	Carbon reduction, overcapacity
Netherlands, EU	2023	Moratorium	Overcapacity, climate, circular policy

Facility/Country	Year	Action	Reason/Notes
Various (US)	1990–	No new builds	Public opposition, health standards
Czechia	1990s–	Closure	Non-compliance, move to recycling

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## 11. Transparency, Governance and Public Consultation Failures

### 11.1 Failure to Inform and Engage

The Parkes WtE incinerator proposal was, by any objective standard, introduced to the local community through a process lacking transparency and genuine engagement with the vast majority of residents only becoming aware of the proposal in early 2025.

This is despite the Parkes Shire Council Councillors, General Manager and Senior Staff being aware that the WtE formed a key part of the Parkes Special Activation Precinct from as early as 2019, this component was withheld from public view and consultation for years, preventing open debate, reasoned scientific scrutiny, and the opportunity for alternative local visions to be considered.

As a former employee of Parkes Shire Council I have firsthand knowledge the Council General Manager, Senior Staff and Mayor were well aware that the WtE formed part of the proposed SAP in 2019 and were dealing with State Government bureaucrats and the then Deputy Premier & Minister for Regional NSW, Industry and Trade, Giovanni Domenic "John" Barilaro regarding the WtE proposal. In 2019 Council purchased an option to purchase the then Mayor's property for the SAP. Prior to this Council presented a pre-emptive written briefing to the Independent Commission against Corruption advising of the impending purchase of the then Mayor's land for the SAP. This was could this have been to limit the potential for the ICAC to investigate on any later complaint?

The Council did not make clear and transparent what was proposed to the Parkes and surrounding community before the project had significantly progressed to a point which the momentum would be difficult to stop. For the approximately 6-year period they were aware of the project discussion regarding the project were hidden in meetings behind closed doors and at best in closed council. Notably when spoken of by Council representatives the WtE was often referred to as a "recycling facility" to disguise its true nature.

In March 2025 the Council media release issued regarding the WtE was carefully worded to appear that the Council had little involvement and inferred the project was a relatively new development to the Council. The current Mayor and supportive Councillors current rhetoric that the proposed WtE "relatively new to Council" is demonstrably untrue. The General Manager, Senior Staff, and former Councillors have been aware of the project since 2019 and Council has been involved in supporting the progression of the project through various concept design costing exercises for roads, power, and water supply in the SAP since 2019. Council continues to support the project as the local water authority planning to if not already commencing works to provide upgraded water infrastructure to the SAP including the WtE.

The actions of the Council General Manager, Senior Staff and Councillors together with the State Government raise genuine concerns regarding the integrity of this process to date. Combined with the source of funding and reasoning behind such funding from the Middle East should form part of further investigation into the proposed WtE and expanded terms of reference for this committee.

Could there be an incentive for Council support for this development is at best intention driven by the potential income stream of several million dollars per annum? For a Council who continue to mismanage Council budgets with unplanned budget deficits and project overruns over the last decade resulting in an impost on ratepayers though a significant special rate variations from 2012 and another above rate pegging limits in 2024.

## **11.2 Regulatory Capture and Exclusion of Health Agencies**

The NSW Government's recent fast-tracking of regional incinerators, under the guise of a statewide "waste emergency," has aggressively prioritized the commercial interests of waste and energy corporations while sidelining local residents, farmers, and health professionals. At the same time, the State has systematically excluded metropolitan areas, where political opposition and scrutiny are higher, from the siting of new WtE facilities, further compounding the unfair burden on country regions.

Notably, the latest waste infrastructure and circular economy plan in NSW established an "Interagency Working Group" on waste incineration that does not include public health or environment agencies, limiting the scope and independence of regulatory oversight. Community petitions, public submissions, and expert recommendations have been ignored or downplayed as mere "concerns," rather than as substantive evidence requiring policy reversal.

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## **12. Power Generation vs. Waste Burned**

The Parkes Energy Recovery facility is proposed to process approximately 600,000 tonnes of waste per year primarily transported from Sydney. while generating approximately 60 megawatts (MW) of electricity, enough to power around 80,000 homes annually. At first glance, this may appear to be a significant contribution to local energy needs. However, when examined in context, the energy output is modest compared to the sheer volume of waste incinerated and the associated health and environmental risks.<sup>33</sup>

### **12.1. Energy Efficiency: Low Output, High Input**

- Waste-to-energy incinerators are among the least efficient forms of power generation. Studies show that typical electricity generation efficiencies for incinerators are only in the mid-20% range—far lower than coal-fired power plants (about 35%) and modern gas turbines (up to 55%).<sup>34</sup>
- To produce 60 MW of electricity, the Parkes facility will burn 600,000 tonnes of waste annually. This means that for every tonne of waste incinerated, only a small fraction is converted to usable energy, while the majority is lost as heat, ash, and emissions.
- The environmental cost per unit of energy is high: Incinerators emit nearly double the greenhouse gases per unit of electricity compared to natural gas generation, and similar to coal.<sup>34</sup> <https://zerowasteurope.eu/press-release/energy-efficiencies-of-eu-waste-incinerators-are-appalling-low-new-study-finds/>



## **12.2. Greenwashing: The Reality Behind “Energy Recovery”**

- The claim that incineration is “green” or “renewable” is widely disputed. Independent analyses and environmental groups have labelled waste-to-energy incineration as blatant greenwashing, arguing that it is promoted as sustainable while masking its true impacts.<sup>35</sup>
- Most of the waste burned is recyclable or compostable: In the UK, more than half of incinerated plastic is “readily recyclable” or “potentially recyclable,” yet incinerators are marketed as a solution to landfill problems.<sup>36</sup>
- Incinerators lock communities into long-term waste contracts, undermining recycling and circular economy goals. The Parkes facility is being promoted as a solution to Sydney’s landfill crisis, but in reality, it shifts the burden and risk to regional communities while discouraging genuine waste reduction and resource recovery.<sup>37</sup>

## **12.3. Health and Environmental Costs Far Outweigh Energy Benefits**

- Persistent pollutants: Incinerators are major sources of toxic air pollutants, including dioxins, furans, heavy metals, and ultrafine particulates, which pose serious health risks to nearby communities.
- Agricultural and water contamination: The fallout from incinerator emissions can contaminate soil, crops, livestock, and rainwater, threatening local food security and water supplies.
- Community opposition: Thousands of Parkes residents have voiced strong opposition, highlighting that the facility was deemed too risky for Sydney but is now being imposed on regional NSW.<sup>38</sup>

## **12.4. International Perspective: Moving Away from Incineration**

- Global trends are shifting away from incineration: Countries such as Denmark, the Netherlands, and France are closing or banning new incinerators, citing climate, health, and circular economy concerns.<sup>39</sup>
- Australia’s own experts warn that minimal risk does not mean zero risk, and that incineration should not supplant recycling or genuine waste reduction efforts.<sup>40</sup>

The Parkes WtE incinerator’s power generation is modest compared to the massive volume of waste burned and the significant health and environmental risks imposed on the community. The attachment of power generation to waste incineration is nothing more than “greenwashing” to deflect attention from the facility’s true impacts and undermines genuine progress toward a zero-waste, circular economy.

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## **13. Public Consultation and Social Licence**

The failure to obtain free, prior, and informed consent for the Parkes facility is a breach of fundamental democratic and environmental justice standards. The NSW planning process demands genuine community engagement and explicit demonstration of a social licence to operate for high-risk projects; these conditions remain unmet in the case of Parkes, as evidenced

by thousands of petition signatures and ongoing grass-roots opposition (e.g., Parkes Clean Future Alliance).

It is important to note that, as of this submission, planning approval for the Parkes WtE facility has not yet been undertaken. Nevertheless, the concerns outlined above remain highly relevant.

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#### **14. Legal and Policy Frameworks for Banning Incinerators**

International conventions, including the Stockholm Convention on POPs (ratified by Australia), require signatory countries to eliminate or minimize release of dioxins, furans, mercury, and related toxicants, with a strong “precautionary and polluter pays” approach to high-risk activities like incineration. Multiple Australian jurisdictions have already taken legislative action to ban (ACT policy), phase out, or exclude energy-from-waste from key regions (NSW), in recognition of the scale and irreversibility of the risks involved.

Consistent with the National Waste Policy and national Circular Economy objectives—reducing landfill, eliminating problematic plastics, and maximizing resource recovery—the direction for NSW must be clear: avoid incineration, invest in next-generation zero waste, high-recycling systems, and provide robust regional funding for circular, non-combustion waste management.

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#### **15. Alternatives to Incineration: Viable Paths Forward**

A growing body of international evidence shows that high-recovery, closed-loop, zero-waste approaches are more effective, less expensive, and better aligned with community well-being and climate action than incinerators. These models create more jobs per dollar spent, avoid locking communities into “waste contracts” for decades, accelerate landfill reduction, and pose far fewer cumulative risks. Composting of organics, advanced recycling, materials recovery, anaerobic digestion of residuals, and landfilling of inert material (with modern containment and gas collection) can all deliver better outcomes.

NSW should also legislate to reduce packaging waste at the source by banning unnecessary plastic wrapping of fruit and vegetables, Mandating minimal, recyclable packaging, incentivising innovation in compostable and reusable materials.

Such reforms would dramatically reduce the volume of general waste and eliminate the need for incineration.

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#### **Conclusion**

The evidence is clear, incineration is not a sustainable or safe solution for NSW’s waste crisis. It is not just nor sustainable for urban waste producers and the NSW Government to offload the unresolved health, environmental, social, and economic risks of waste incineration onto the Parkes community or any other regional area. The evidence is overwhelming, WtE incineration, regardless of claimed technological advances, cannot be made safe for people or the environment in the context of persistent, bio accumulative, and proven health impacts.

The proposed Parkes WtE incinerator, and similar facilities, pose unacceptable risks to agriculture, water security, and possibly more importantly the human health and wellbeing of future generations.

**NSW should legislate for a permanent, state-wide ban on waste incinerators, and redirect investment to genuine waste reduction policy towards zero-waste, circular solutions.** This is the only path that honours the precautionary principle, global treaty obligations, agricultural and rural livelihoods, and the rights of all NSW residents—urban and country alike—to healthy air, water, food, and an uncontaminated future.

I urge the Committee to recommend the following:

- 1. Immediate legislative ban on all WtE incinerators and thermal waste-to-energy facilities in NSW.**
- 2. Shift Policy towards genuine waste reduction policy towards zero-waste, circular solutions**
- 3. Investment in high-recovery, community-scale waste alternatives (composting, anaerobic digestion, advanced recycling) and meaningful packaging reform.**
- 4. Independent review of governance decisions, procurement arrangements, funding streams, and potential conflicts of interest associated with the Parkes Special Activation Precinct, Waste to Energy Incinerator and related Council actions.**

Yours

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