Submission No 427

INQUIRY INTO PROPOSED ENERGY FROM WASTE FACILITIES

Organisation: Member for Goulburn, The Hon Wendy Tuckerman

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The Hon. Wendy Tuckerman MP

Member for Goulburn

Parliament of New South Wales

To:

The Chair

Select Committee on Proposed Energy from Waste Facilities

NSW Legislative Council

Parliament of New South Wales

SUBMISSION TO THE INQUIRY INTO ENERGY FROM WASTE TECHNOLOGY

Executive Summary

This submission is made in strong opposition to the proposed Veolia Woodlawn Advanced Energy Recovery Centre (ARC) at Tarago and any other regional waste-to-energy (WtE) facilities intended to manage Greater Sydney's waste.

The Tarago region already bears a disproportionate burden by hosting the Woodlawn landfill, which currently manages approximately 40 per cent of Sydney's municipal waste. The proposed expansion into combustion-based waste processing introduces additional and unacceptable health, environmental, agricultural and social risks.

Key concerns include:

- Significant public health risks from emissions of toxic pollutants, with long-latency diseases not adequately considered.
- Threats to high-value agricultural lands and export markets, including contamination risks and food-system vulnerability.
- Environmental strain and cumulative amenity impact upon a rural community already hosting major metropolitan waste operations.
- Insufficient, reactive and low-transparency consultation processes that have eroded public trust.

- Policy conflicts that undermine waste reduction, recycling innovation, and NSW's transition to a circular economy.
- The proposed location in productive farmland and within a drinking water catchment is fundamentally incompatible with waste incineration.

This submission therefore recommends:

- The proposed Veolia Woodlawn ARC does not proceed.
- EfW incineration facilities should not be located near agricultural land used for food production or within drinking water catchments.
- Stronger protection for State Significant Agricultural Land is urgently required.
- NSW must prioritise waste reduction, advanced recycling and circular economy infrastructure located closer to where waste is generated.
- The precautionary principle demands the Parliament protect human health, agricultural integrity and regional sustainability.

Introduction

As the Member for Goulburn, I oppose the Veolia Woodlawn ARC and similar regional WtE developments due to the deeply inequitable impact they impose on rural communities.

This submission draws on current scientific literature, food-system policy, community feedback and regulatory history. Regional NSW must not continue to be used as the endpoint for metropolitan waste problems.

The proposed Veolia ARC seeks to incinerate 380,000 tonnes of municipal, commercial, and industrial waste annually, generating 39 megawatts of electricity, proposing to power approximately 50,000 homes.

The facility is planned within prime agricultural land within the Sydney water catchment and will create an unnecessary and inequitable burden on regional NSW.

My electorate has long been subjected to the impacts of Sydney's waste management practices, including landfilling and transport of waste, with frequent breaches by Veolia, resulting in minor fines highlighting the inadequacy of regulatory enforcement. Expansion of these activities will exacerbate these issues, making it imperative that the Inquiry considers the following.

As of late 2024 and early 2025, Veolia was approved to receive up to 1.3 million tonnes of waste annually at the Woodlawn Eco-Precinct. In practice, this volume includes waste sent to both the bioreactor landfill and the Mechanical and Biological Treatment (MBT) facility.

The facility's approved intake consists of two main streams:

- **Bioreactor:** This includes up to 900,000 tonnes per year of waste arriving from Sydney by rail and 125,000 tonnes from local sources. In 2025, Veolia's CEO noted that about 1 million tonnes per year of Sydney's waste arrives at Woodlawn by train.
- **MBT facility:** This facility is approved to process up to 280,000 tonnes of waste annually.

Veolia is seeking to expand operations at Woodlawn.

The New South Wales draft waste plan, released in May 2025, indicated Veolia has the capacity to increase its annual landfill tonnage at Woodlawn from 1.18 million to 2 million tonnes.

HEALTH & ENVIRONMENT

While waste-to-energy (WtE) incineration is often marketed as a “clean” energy solution, evidence suggests this portrayal is misleading. Many studies focus on older incinerator technologies, meaning that even if modern designs improve emissions controls, the long-term health consequences of exposure may not become fully apparent for decades. Health effects often result from cumulative exposure, making it difficult to assess whether new incinerators truly eliminate the risks identified in past research.

The human health implications derive from exposure to pollutants via multiple pathways (inhalation, ingestion of food, ingestion of soil/dust, dermal contact) often associated with incineration emissions and soil/land contamination.

Exposure pathways

- **Emissions** (air): people living near incinerators may inhale particulate matter, heavy metals, dioxins/furans, other combustion by-products.
- **Soil/land contamination**: people (especially in farm settings) may ingest or inhale dust from contaminated soils; crops/food grown on contaminated soils may carry pollutants.
- **Livestock exposure**: contaminated grazing land can lead to accumulation in animals → humans via meat/milk ingestion.
- **Groundwater/seepage**: if ash/residues leach into soil and groundwater, drinking water may become contaminated.
- **Cumulative/low-dose chronic exposures**: many pollutants are persistent, bioaccumulative and may present long latency risks (e.g., cancer, endocrine disruption).

Documented health effects near incinerators

A recent systematic review (2025) on residential exposure to municipal solid waste incinerators (MSWIs) found evidence of adverse health effects in nearby populations. Earlier reviews note that evaluating the contribution of incinerators to human exposure is complex but some studies show increased risks of cancer, respiratory disease, and reproductive outcomes.

For example, in Korea and other locations, studies of populations around industrial/incineration facilities showed exposures to PCDD/Fs and potential health effects.

Residential exposure to municipal solid waste incinerators has been associated with emissions including dioxins, furans, heavy metals, nitrogen and sulfur oxides, particulate matter, carbon dioxide, and acidic gases. These chemicals have significant toxic potential, capable of interfering with multiple biological pathways and increasing the risk of adverse health outcomes. Epidemiological studies, employing both simple proximity-based measures and advanced dispersion modelling, suggest small but measurable increases in certain cancers, adverse birth outcomes, and mental distress (attached).

Systematic reviews (attached) and the NSW Chief Scientist report (attached) explicitly recommend that new incinerators be sited away from areas of food production, and that crops grown near such facilities should be avoided.

Occupationally exposed workers are considered a sentinel population for these affects, but they are often also local residents, meaning that exposure pathways extend to the wider community. The evidence suggests that food contamination and inhalation pathways pose risks not only to residents nearby, but also to populations consuming food grown near incinerators. Many studies examine only a subset of these potential exposures, so it is likely that the full health impacts have been under-discovered.

While some newer incinerator technologies with robust maintenance schedules may be less harmful, the precautionary principle dictates that there is insufficient evidence to conclude that any incinerator is completely safe.

Diseases from exposure tend to manifest after decades of cumulative exposure, meaning it is premature to assume modern facilities eliminate risks.

ECONOMY AGRICULTURE

The environmental and agricultural consequences of WtE emissions is substantial.

Deposition of toxic ash and airborne contaminants can degrade soil quality, harm livestock, and reduce crop yields, threatening local farmers' livelihoods and the economic viability of the agricultural sector.

Even without direct contamination, the perception of a WtE facility operating within fertile farmland and a critical water catchment is likely to erode confidence in local produce, potentially harming market access and reducing the value of agricultural products.

Consumers, both domestic and export, may perceive elevated health or contamination risks, creating lasting economic consequences. The perception of the area as Sydney's "dumping ground" threatens not only agricultural markets, but also property values and tourism.

Heavy freight traffic and odour associated with the waste operations serve as visible reminders, further undermining public confidence in the region's produce.

Agricultural enterprises in the Goulburn electorate represented by Longwater Agriculture Inc, a third-party organisation providing aggregated data and advocacy for regional primary producers located within approximately a 40-kilometre radius of the proposed development have also provided information on the affected area which comprises of:

- 57 agricultural enterprises
- 63,966 hectares of productive agricultural land
- Estimated asset value > $700 million

This region forms a critical part of NSW's meat, wool and cropping economy and supports local and national food-security outcomes.

Farming activities recorded in this zone include:

- 220,547 Sheep (export-quality meat)
- 5,000 Bales of wool
- 21,206 Cattle (breeding and beef)
- 20,000 Chickens
- 7,247 Hectares of cropping
- 143 regional jobs supported

The region also relies on local export-focused processing infrastructure such as Southern Meats, located in Goulburn — a key link in the international red-meat supply chain.

Despite the high value and strategic nature of this region's agricultural production, none of these enterprises were consulted by the NSW Department of Primary Industries (DPI) prior to the formulation of its response to the Environmental Impact Statement (EIS) for the proposed incineration facility. Further, a formal letter from the LWAA to DPI raising these concerns was met with refusal to engage — a clear failing in collaboration and stakeholder engagement.

The EIS for the proposed incinerator lists the release of heavy metals and toxins including cadmium, lead, mercury, arsenic, chromium, beryllium, dioxins and furans. Additionally, published research indicates the likely presence of persistent contaminants such as asbestos and PFAS, which are not fully degraded by incineration, and currently lack adequate regulatory treatment in NSW.

These pose significant risks:

- contamination of soil, pasture, surface and groundwater;
- residual uptake in cropping or fodder;
- bioaccumulation in livestock, with potential jeopardy to export-market accredited status;
- long-term land-value depreciation and impaired production capacity;
- potential job losses, business closures, and erosion of the regional economy.

Given the region's production is enough to supply approximately 220,000 people with lamb and 140,000 people with beef for a year and the key role it plays in the export meat supply chain, the risk to food security and agricultural resilience is real and unacceptable.

As outlined in the reports of the former NSW Agriculture Commissioner, Daryl Quinlivan, the planning system in NSW lacks sufficient mechanisms to manage land use conflicts and protect high-value agricultural land. His publications highlight the need for:

- formal classification of State Significant Agricultural Land (SSAL);
- development of an Agricultural Land Use Planning (ALUP) policy;
- recognition of emerging pressures such as alternate land uses, industrial encroachment and contamination risk.

At a national level, Australia's food-security strategy emphasises the importance of productive, secure, sustainable agricultural land and warns of threats from climate change, supply-chain disruption and land-use change. Any land-use decision which jeopardises export-capable production, accreditation frameworks (e.g., Livestock Production Assurance) or land value runs counter to that strategy.

The agricultural land around Woodlawn is, highly productive, strategically critical, export accredited. It is a major contributor to food-security resilience in NSW.

Waste-to-energy incineration activities cannot coexist safely with high-value livestock and crop production.

NSW must not sacrifice multi-generational farming and export reputation to facilitate contamination-prone industrial waste processing.

ECONOMIC IMPACTS, TOURISM, AND VITICULTURE

The proposed Woodlawn ARC and any EfW facility introduces reputational, environmental and amenity risks that extend well beyond agricultural production. It threatens key regional economic contributors including tourism, wine production, and associated hospitality and events industries.

The Goulburn electorate and surrounding regions are relied upon for:

- Tourism linked to nature, heritage, food and wine
- Boutique primary production including vineyards and cellar doors
- Destination hospitality and accommodation
- Events and recreational experiences drawing domestic and international visitors

The proximity of a large-scale waste incinerator creates the following economic threats:

- Negative brand association with pollution, waste and industrial impacts
- Deterrence of visitors due to odour, noise, freight traffic and visual amenity loss
- Increased investment risk perception among tourism operators and wine producers
- Devaluation of nearby properties and business assets
- Reduced labour attraction in hospitality, food and agricultural sectors due to declining liveability
- Future expansion constraints for existing and emerging tourism precincts

Viticulture is particularly sensitive to environmental factors. Airborne pollutants including sulphur oxides and particulate matter are known to:

- Interfere with grape development and plant respiration
- Alter soil chemistry and microbial balance critical to terroir expression
- Introduce contaminants affecting taste, quality and marketability
- Increase susceptibility to disease and production loss

Any contamination incident, real or perceived, can:

- Trigger immediate withdrawal of wine products from sale
- Damage long-term reputation of vineyards and regional wine branding
- Undermine export potential in a globally competitive sector

Tourism and viticulture rely on the region's clean, rural character and its role as part of

NSW's "food and wine country". Siting a major waste incinerator in this landscape is entirely inconsistent with current and future regional economic development strategies.

The economic cost of lost confidence in local produce and tourism would far outweigh any claimed benefits of an EfW facility.

Viticulture is a critical contributor to the NSW economy, supporting major wine-producing regions.

In 2023–24, the gross value of NSW wine grape production was estimated at **$174 million**, and the value of **NSW wine exports reached $442 million**, underscoring the industry's economic significance and its reliance on strong environmental reputation and clean production landscapes.

TRANSPORT AND INFRASTRUCTURE

The logistical implications of transporting nearly one million tonnes of Sydney's waste annually to regional facilities such as Tarago are profound. Tarago already manages a disproportionate share of Sydney's waste, with the Woodlawn landfill handling approximately 40% of the city's municipal solid waste. Municipal waste is transported via rail and truck through national parks, rural villages, and past local schools, then reloaded for final transport across local roads.

The addition of a WtE incinerator would significantly increase traffic volumes, creating elevated risks of accidents, mechanical failures, emissions, pollution, noise, odour, and spillage. These impacts degrade quality of life, create additional demands for local infrastructure, and impose ongoing costs on residents and local agencies.

From a resource efficiency perspective, transporting waste hundreds of kilometres only to convert it to energy and potentially return by-products to Sydney is highly inefficient. This process generates unnecessary carbon emissions and contributes little to meaningful environmental or energy benefits, undermining circular economy principles. Waste-to-energy facilities should instead be located closer to waste sources, to reduce transport burdens and environmental risks.

Transporting Sydney's municipal and commercial waste to Tarago already places enormous strain on rural transport corridors. Waste arrives by rail and truck, travelling long distances through sensitive environments, including national parks, conservation areas, rural villages and school zones. It is then unloaded and re-handled for transfer to the Woodlawn site — with multiple opportunities for operational failure and environmental harm.

Waste received at Woodlawn is known to contain significant liquid content, especially following wet weather events. As the NSW EPA has noted in regulatory correspondence, this liquid often includes:

- Leachate from decomposing organic matter
- Chemical residues mixed into municipal waste
- Run-off contaminated with PFAS, microplastics and heavy metals

Documented and reported issues associated with waste transport to Woodlawn include:

- Spillage of leachate and rubbish from rail wagons onto railway alignment during transport
- Odour emissions affecting residents of Tarago, Lake George and passing travellers
- Contaminated effluent dripping from trucks on approach roads to the landfill
- Dust-laden waste particulates escaping from loads during transfer operations
- Noise disruptions, particularly at night, as freight is received outside standard hours
- Rail-to-road transfer activities occurring in proximity to local watercourses and drainage lines

These are not hypothetical risks – they are established and recurring impacts.

Further, Woodlawn-bound trucks and service vehicles make tens of thousands of additional vehicle movements annually. Increased freight loads associated with a WtE facility would:

- Accelerate deterioration of local roads already requiring frequent repair
- Increase braking, exhaust and tyre wear pollution adjacent to rural homes
- Heighten collision risk on narrow regional roads not engineered for heavy haulage
- Elevate fire danger from vehicle breakdowns in dry grassland areas
- Increase greenhouse gas emissions through duplication of long-haul transport

Each tonne of waste transported from Sydney to Tarago travels over 200 kilometres before processing — an inefficient waste-management design that:

- Increases overall emissions intensity of the waste life cycle
- Produces ash and residuals that may still require return transport back to Sydney
- Contradicts NSW's legislated transition to a circular economy
- Creates unnecessary risk exposure for communities not responsible for generating the waste
- Real-world precedent shows the risks are underestimated

In New South Wales and other jurisdictions:

- Rail waste transfers have resulted in leachate spills into stormwater systems
- Truck roll-overs have released untreated municipal waste into waterways and paddocks
- Contaminated liquids have flowed from aging rolling stock with poor containment
- Rural communities have been exposed to biosecurity hazards from unsecured loads

The introduction of WtE incineration would mean even more waste movement, including:

- Bulk transport of fly ash and toxic residue, classified as hazardous under EPA guidelines
- Increased movement of municipal red-bin waste, which is the highest contaminant stream
- Greater reliance on combustible waste freight, elevating fire and accident risk

These impacts would be ongoing, not temporary, requiring permanent and costly infrastructure upgrades funded primarily by local councils and ratepayers.

Regional NSW should not be required to assume further risk to facilitate Sydney's historical under-investment in waste reduction and recycling.

COMMUNITY CONSULTATION AND SOCIAL LICENCE

Government policy has explicitly enabled the siting of WtE facilities in selected regional areas, including Tarago, through the Energy from Waste Infrastructure Plan and the Southern Goulburn Mulwaree Precinct designation.

In 2021, the NSW Government released the NSW Energy from Waste Infrastructure Plan, following significant industry interest in establishing large-scale WtE facilities within the Goulburn electorate. At that time, the most progressed proposal was the Jerrara Power incinerator at Bungonia, which generated substantial local concern due to its proximity to agricultural operations, rural communities and the Sydney drinking water catchment. As the local Member, I did not support the policy direction because it was clear that the communities I represent do not accept or endorse the siting of waste incineration infrastructure in this region, given the environmental, health and economic risks involved. The Plan effectively imposed state-led industrial development onto rural communities without their consent and despite strong opposition from residents, primary producers and local stakeholders.

Notably, GIPA-obtained documents reveal that Veolia lobbied to reduce air emission standards recommended by the NSW Chief Scientist & Engineer, raising significant concerns about regulatory oversight and environmental protection. This lobbying, coupled with the Government's endorsement of the facility, reinforces the local perception that the project is a fait accompli, imposed on the community despite widespread opposition.

Tarago's fertile agricultural land, proximity to the Sydney water catchment, and small population make it particularly vulnerable to environmental and social impacts. While the NSW Government asserts the facility will adhere to international best practice and rigorous regulatory standards, residents remain unconvinced. They fear that the cumulative effects of decades of waste disposal, combined with the introduction of WtE incineration, will compromise public health, food production, and the natural environment.

In short, the proposal reflects a pattern of centralised decision-making and regional burden-shifting, where the costs of managing Sydney's waste are externalised to rural communities without adequate consultation, transparency, or assurance of safety.

Regional communities continue to call for EfW projects to be reconsidered in favour of waste management solutions that align with circular economy principles, reduce transport, and prioritise local health and environmental protection.

POLICY AND ALTERNATIVE APPROACHES

Building a reliance on maintaining a waste stream to supply material for energy generation directly contradicts NSW's imperative to reduce waste at its source. As an example, the proposed Tarago incinerator undermines the State's commitment to a circular economy and sustainable waste management. Rather than investing in technologies that perpetuate waste generation, the State should focus on:

- Source reduction, improved recycling, and organic waste diversion.
- Banning single-use plastics.
- Implementing extended producer responsibility schemes, requiring manufacturers to account for the lifecycle of their products.
- Investing in local recycling capabilities, reducing transport distances and emissions.

Regional communities should not bear the disproportionate burden of urban waste management strategies. The principle of environmental justice dictates that all communities, irrespective of location, should have equal protection from environmental hazards. The Tarago facility represents an inequitable imposition on a rural community already managing a substantial portion of Sydney's waste.

CONCLUSION

The review of waste incineration highlights that food contamination and pollutant ingestion is a significant risk pathway for residents near incinerators and for those consuming food from affected areas.

Occupationally exposed workers may be a smaller subset, but they often live locally and are subject to exposures outside the workplace. Because many studies examine only a subset of exposure pathways, it is likely that the full spectrum of health impacts has been underestimated. Older incinerators were linked to neoplasia, reproductive issues, and other diseases, and while modern technologies may reduce some risks, diseases often manifest only after decades of cumulative exposure, making it premature to assume safety.

Alternative policy approaches would deliver greater environmental and social benefits, while aligning with global best practice. Policies promoting reduction, reuse, and recycling are more effective, equitable, and sustainable than imposing high-risk WtE facilities on rural communities, particularly given the uncertainty of long-term health and environmental consequences.

In light of the above, I strongly oppose the establishment of a waste-to-energy incineration. The potential health, environmental, agricultural, social, and economic risks far outweigh any purported benefits.

I urge the Inquiry to consider alternative waste management strategies that prioritise sustainability, circular economy principles, community health, and environmental protection.

Wendy Tuckerman MP

Member for Goulburn

ATTACHMENTS/REFERENCES

Appendix A: GIPA documents showing Veolia lobbying for lowered EPA emission standards.

Appendix B: Energy from Waste Report from the NSW Chief Scientist & Engineer May 2020 with additional advice as at November 2020 Hugh Durrant-Whyte Chief Scientist & Engineer 13 November 2020 https://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0009/1431/FINAL-Report_EFW-with-additional-advice.pdf

Appendix C: The health impacts of waste incineration: a systematic review Tait et al. Aust NZ J Public Health. 2020; https://doi.org/10.1111/1753-6405.12939

Appendix D: Residential exposure to municipal solid waste incinerators and health effects: a systematic review with meta-analysis Bottini et al. BMC Public Health (2025) https://doi.org/10.1186/s12889-025-23150-z

Appendix E: Report by Darryl Quinlivan

BioMed Central

ScienceDirect

National Academies Press