Submission No 161

INQUIRY INTO PROPOSED ENERGY FROM WASTE FACILITIES

Organisation: ALP Goulburn NSW Branch

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Waste to Energy Tarago Incinerator: ALP Goulburn Branch Submission October 2025

I write on behalf of the ALP Goulburn Branch. We have long been concerned about the Veolia Waste from Energy Project at Tarago, close to Goulburn, and part of the Southern Goulburn Mulwaree designated Precinct as part of the NSW Govt Energy from Waste Infrastructure Plan.

We join with many in the Goulburn-Tarago area who have grave reservations about the safety and environmental impact of the Project. Our response here will be relatively brief but with the attachment of a research paper, composed by a Branch member two years ago but which in its thorough study of the various elements of the Project, is still applicable. Most of my brief points below, grouped around three headings, are taken from this paper, Energy or Waste August '23.

The Plan has as its intent a worthy one.

"This is to maximise the value of waste where it can be demonstrated that it is safe and environmentally sound."

The problem lies in the way that in the search for better sources of energy and better waste disposal, scientific evidence, such as about levels of toxicity, seems not to have been taken seriously enough. Reports from the Chief Scientist have not been convincing regarding the safety of the Project.

Refutation of Veolia responses:

1. Page 13 of the Veolia EIS for the WtE Project, contrasts the air quality on our worst bush fire day on record (01/01/2020) with what is predicted from a standard day's emissions from the incinerator, measured at various locations around Woodlawn. Not surprisingly the emissions plume has been estimated to disperse fewer GHG [greenhouse gases] than a serious bushfire might. There is no mention of a combined total of a bushfire and the incinerators plume, or whether the combined annual output of the incinerator may outweigh the occasional bushfire event. Ironically the severity, and the cost to community of bushfires is steadily increasing, and emissions from waste incineration, will add to the root causes.

2. Notable hazardous gases produced from combustion of waste include nitrogen oxides, sulphur oxides and hydrogen chloride. The sulphur content of fossil fuels is far more variable and often proportionally far higher than what is found in the biogenic fraction. Chlorine containing Polyvinyl chloride (PVC) is a common plastic resin and is the world's third-most widely produced synthetic plastic polymer. A particular danger with incineration is that a plume of acid gas is emitted, if and when flue gases are inadequately de-acidified. Veolia indicates hydrated lime will be injected into the flue to neutralize acidic gases. It should be noted, however, that producing hydrated lime itself is a significant source of CO2 emissions. Hydrated lime Ca (OH)2 is produced from quicklime (CaO), which is produced from calcinated limestone (CaCO3), a process that releases significant amounts of mineral, or geogenic CO2. Global lime production is ~350 Mt/y and ~20% of it is

used for flue gas treatment. It goes some way to solving the acid rain problem at the expense of higher CO2 emissions and cost.

Continuing environmental risks:

1. The two key areas of concern are hazardous gases and CO2emissions-GHG. Both are referred to above but to state boldly here: the continuing buildup of both over many years if this Project is given the go-ahead will be dangerous for the air, the waterways and the land; all combining to be dangerous for people living over vast areas of NSW.

2. As well as those GHG coming from the industrial process itself, other significant GHG emissions will come from: more transport sector fossil fuels to power the waste trains, supercharging the incinerators burn temperature, and the release of geogenic CO2 for flue de-acidification. Note that the hydrocarbon base of plastic resins is ~ 99% sourced from fossil fuel and therefore fossil fuel carbon is temporarily sequestered in that plastic. As long as the resins are recycled, those carbons remain fixed in those plastics. However, combusting plastic by incineration is maintaining a very large carbon footprint for plastics, is wasting resources, and releases plastic and its associated emissions 'into the sky'.

What can be done better?

1. Advances have been made in green steel making, where the heat for the making of the steel is provided by green hydrogen- where the hydrogen is sourced from the electrolysis of water powered by renewables. It could be argued that household waste from the Sydney basin can be combusted in a high-tech hydrogen boosted furnace located in the Sydney basin, rather than being shifted 200km to the Woodlawn plant, where with present incinerator technology, the lower temperatures mean the waste is burnt insufficiently and toxic residues become airborne pollutants.

2. Another point to consider is the acidic nature of the flue gasses that are released by burning municipal mixed waste. The flues must have a deacidifying process. How good are the present processes? The European PVC manufactures offer some helpful advice to waste incinerator designers, recommending best practice being both a dry method, where the emissions are dusted with lime, then progressing through a wet method, where the gasses are passed through an alkaline bath. Veolia have only described the dry method for Woodlawn. The dry and wet method working together would offer the best deacidifying results.

3. Biomass gasification for hydrogen production: After recyclable products are taken out of waste collection, the remaining biomass, made up of the organics in municipal waste stream, can then be put through a bioreactor/bio digester process, where microorganisms release methane as a waste gas from metabolism, or other forms of gasification. The Fischer-Tropsch (FT) process is a catalytic chemical process that converts a mixture of carbon monoxide and hydrogen, called syngas, into liquid hydrogens. The process is key to biomass-to-liquids technologies, which enable the production of liquid fuels from biomass.

Conclusion:

Technology has advanced new pathways that can turn waste into new materials for industry. The community, industry, academics and governments all need to be working together to achieve better waste management outcomes. The Waste to Energy Plan is perhaps more about solving the waste problem of our cities rather than being safe sources of renewable energy. The problem of landfill areas running out is a real one but other solutions must be sought.

Helen Rainger-Branch Secretary 17/10/25