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Preserving the Balance of Nature

WASTE TO ENERGY INCINERATORS PROPOSAL - GREENWASH AT BEST

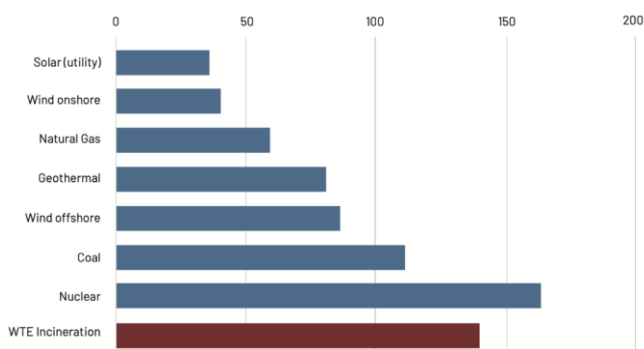
LET'S HAVE GOVERNMENT START RECYCLING – “Made in Australia” from waste

We oppose the proposal - Lithgow Environment Group representing numerous members of the Lithgow Community opposes the proposal to burn waste for energy.

Producing energy from solid waste incineration is highly inefficient

The net energy gain of burning mixed waste is low or non-existent, making incineration one of the least efficient ways to produce energy when compared to renewable sources like wind, solar, hydro or geothermal.^{2,3} Because of these inefficiencies, incineration facilities do not recoup investment based on energy income alone.⁴ The main revenue supporting these facilities is typically not the sale of heat and energy, but tipping fees.

Global levelised cost of energy generation (USD/megawatt hour as in 2023)⁵



WHAT ARE WASTE INCINERATORS? They are essentially a fossil fuel power station. Waste incinerators are a type of waste to energy facility which burns waste at very high temperatures, turning it into gas and ash.¹ The main accelerant for the combustion is high calorific value, fossil fuel-based plastics (supported by coal or natural gas backup to reach operating temperature). Small amounts of energy can be produced as a by-product of this process. Some facilities also use the excess heat as an energy source.

INCINERATION WILL UNDERMINE THE TRANSITION TO ZERO WASTE, A CIRCULAR ECONOMY AND OUR LOW-EMISSIONS FUTURE

Waste incineration for energy capture is not a ‘renewable’ source of energy; it is an extractive industry that burns fossil fuels and plastics (that come from fossil fuels) and other resources like paper, glass and organic matter. Despite this, incinerators are currently called ‘renewable energy’ by the industry and government and are thus eligible for greenhouse credits, which is used to prop up their expensive financial model. Energy generated by these facilities is also eligible for Large-Scale Generation Certificates as part of the federal government’s Renewable Energy Targets.

WASTE INCINERATORS ARE ENERGY INEFFICIENT AND EXPENSIVE Waste incinerators are an expensive way to produce energy. Very little of the energy embedded in plastic products (from extraction, production, manufacturing and transport) is recovered by burning as waste to energy. Recycling products saves far more energy overall. Studies found that energy recaptured by recycling plastics was nearly 75 mega joules per kilogram of waste, while incineration was a mere 6 mega joules per kilogram of waste.³

INCINERATORS GENERATE HAZARDOUS WASTE Incinerator chimney stacks have filters in them in an attempt to reduce toxic emissions and particles entering into the atmosphere and the environment. The filters build up fly ash – or ‘filter cake’ – over time, which is a highly hazardous material that must be disposed of in a hazardous waste landfill. 1%–5% of the quantity of the original waste feedstock becomes fly ash.⁵ In Germany, the toxic fly ash from waste incineration is buried deep in disused salt mines as they know how dangerous it is. High volumes of chemicals and water are also used to treat the gas coming out of the furnaces.

Australia has been working for years under the Stockholm Convention to eradicate dioxins and furans in our environment.⁶ These persistent organic pollutants (POPs) are known to be carcinogenic, mutagenic, teratogenic and have highly toxic characteristics.⁷ Waste incinerators will create a new and large source of dioxins from emissions and ash. Incinerators are listed in Annex C of the convention as a primary source of these hazardous pollutants, which Australia has a legal obligation to reduce and eliminate – not increase.

Air pollutants such as nitrogen oxides, sulfur dioxides, particulate matter, mercury, lead, dioxins and furans are emitted from waste incinerators at higher levels than gas-burning power plants. These substances are known to have effects such as increased risk of cancer, respiratory illness, cardiac disease, and developmental and neurological problems. Australia's air pollution standards for sulfur dioxide are currently 11 times higher than standards recommended by the World Health Organization.

Solution: NO INCINERATORS

- Implement recycling solutions that will begin our transition to zero waste and a circular economy.
- Lithgow community is against this, and does not accept the proposal to operate such a process
- Our community opposes any business proposing to reuse energy from waste from a form of incineration;
- Stop All hazardous emissions. Licences required to limit ALL emissions generated;
- Wallerawang ash & dam repositories are currently remediating these significantly contaminated sites, Mt Piper Ash Repository is leaching into underground water and local waterway. Adding another source of ash, as in this proposal before a long term solution is ludicrous;
- Gardens of Stones SCA is on 2 sides in parts to Mt Piper and decommissioned Wang PS;
- Energy from Waste is not a source of renewable energy should be removed from NSW EPA hierarchy;
- We will only vote for politicians willing to promote recycling/circular economy/environment/people first

REFERENCES AND ENDNOTES Extract - from The Greens - INCINERATOR FACT SHEET - AUGUST 2021 and c40knowledgehub.org

Municipal waste incinerators are supposed to operate at >850°C to help prevent dioxin formation. Hazardous waste incinerators have to operate at >1,000°C due to the higher chlorine content, generating higher levels of chlorinated dioxins. Even these temperatures do not prevent de novo synthesis of dioxin on ash after the combustion chamber. 2. *Baltimore Sun, 16 April 2019, 'Wheelabrator sues Baltimore County over \$32M contract dispute' April 16, 2019. <https://www.wastedive.com/news/wheelabrator-baltimore-lawsuit-contract-dispute/552762/>* 3. *Arafat, Hassan A., Kenan Jijakli, and Amimul Ahsan. "Environmental Performance and Energy Recovery Potential of Five Processes for Municipal Solid Waste Treatment." Journal of Cleaner Production 105 (2015): 233-40 <https://doi.org/https://doi.org/10.1016/j.jclepro.2013.11.071>* 4. *Environment Victoria. 'Victoria – the Green Jobs State: Seizing the Opportunities.' 2009.* 5. *IPEN, 2005, 'After Incineration: The Toxic Ash Problem', https://ipen.org/sites/default/files/documents/After_incineration_the_toxic_ash_problem_2015.pdf* 6. *Australian Government, Department of Environment and Energy, Stockholm Convention on Persistent Organic Pollutants (POPs) <https://www.environment.gov.au/protection/chemicals-management/pops>* 7. *World Health Organization, 2016, Dioxins and their effects on human health. <https://www.who.int/news-room/fact-sheets/detail/dioxins-and-their-effects-on-human-health>* 8. *IPEN, 2005, 'After Incineration: The Toxic Ash Problem', https://ipen.org/sites/default/files/documents/After_incineration_the_toxic_ash_problem_2015.pdf* 9. *Candela, Bonvicini, Ranzi, Environ Int. 2015, 'Exposure to emissions from municipal solid waste incinerators and miscarriages: a multi-site study of the MONITER Project.' <https://www.ncbi.nlm.nih.gov/pubmed/25765761>* 10. *Dahiya, Sunil; Myllyvirta, Lauri. Global SO2 Emission Hotspot Database, Ranking the World's Worst Sources of SO2 Pollution. (Greenpeace Environment Trust, 2019). https://storage.googleapis.com/planet4-international-stateless/2019/08/3406a165-global-hotspot-and-emission-sources-for-so2_19_august-2019.pdf*
https://www.c40knowledgehub.org/s/article/Why-solid-waste-incineration-is-not-the-answer-to-your-city-s-waste-problem?language=en_US

[1] *Brown, M. (2015) Is waste a renewable source of energy? Zero Waste Europe.*
[2] *Planete Energies (2015) Incineration, the heating power of refuse.*
[3] *Born to Engineer (2017) What are the most efficient forms of renewable energy?*
[4] *GIZ (2017) Waste-to-energy options in municipal solid waste management: A guide for decision makers in developing and emerging countries.* [5] *The current amended NSW EPA Waste to Energy Waste policy statement Introduction page 1 after 1st paragraph 2nd dot point: "community acceptance to operate such a process has been obtained";*

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