

Comments – Qld Energy from Waste Policy

Please find comments on the EfW policy as presented by ARUP on the 4th June 2021.

Thank you for the opportunity to provide comments which we have kept to each slide and outcome presented.

In general, the National Toxics Network does not support the introduction of waste to energy incineration into Queensland or Australia due to the climate and toxic air pollution they generate, the health and social impacts they cause to host communities and globally and the likely and known potential to undermine the reuse, recycling and composting sectors.

Furthermore, the heterogenous nature of residual waste, especially where separate collection and source separation is not provided, renders waste to energy incineration unsuitable due to the complex and synergistic nature of the air pollution and ash they generate, creating a more complex and toxic waste stream of significant quantities. Incinerators generate one tonne of ash for every four tonnes of waste burnt, simply converting residual waste to a quarter of its volume but into a hazardous waste stream that brings inherent risks and hazards. This is not a sustainable waste management model for Queensland or Australia.

Slide 5. The EfW hierarchy for Queensland essentially subverts well established waste hierarchies by claiming that chemical recycling or liquid fuel recovery is better than incineration and both are better than landfill with gas capture. This claim is incorrect.

Clearly this policy is designed to enable the federal government and plastics industry agenda to “reprocess plastic waste into fuel” and not a genuine policy to provide guidance on how to best deal with residual waste and capture its embodied energy.

It is unclear whether the analysis here has accounted for the tertiary emissions from the combustion of waste fuels. Without including these emissions, the whole hierarchy as presented here is flawed.

It is also unclear whether the comparisons of landfill with gas extraction against other EfW technologies includes the removal of organics prior to landfilling. Given it is widely recognised in Australia now that the removal of organics from the waste stream is essential to reduce methane and the adverse impacts associated, and while most states now remove organic waste, a policy promoted by Queensland Labor and the federal government, this should be assumed and included. Allowing organic wastes to go to landfill or incineration/RDF outcomes will put Queensland well behind other states and international best practice waste management.

Landfill (with organics removed) with gas capture is more preferable and less polluting than incineration or other waste fuel burning technologies.

<https://zerowasteoz.org.au/wp-content/uploads/2017/12/J-Morris-LCA-recycling-vs-landfoill-and-inc.pdf>

Slide 6. The policy outcomes described here are misleading and incorrect. Thermal and chemical EfW technologies do not protect the waste hierarchy. In fact, they subvert it. It is misleading to suggest that all EfW technologies have equal rating and are directly comparable under the waste hierarchy.

Chemical recycling has not demonstrated its operational performance on a scale that can manage the expected volumes generated from a states MSW, C&D and C&I waste streams.

Chemical recycling and incineration technologies require large, dedicated waste streams to maintain the operating standards and usually require 20+ year contracts. Therefore, these technologies do not adapt well to residual waste changes. In fact, they lock in residual waste streams that could and should go to better outcomes higher up the waste hierarchy. Furthermore, it is for this very reason that Europe has decided to withdraw all subsidies and classify waste incineration as a climate threat under their latest EU Taxonomy report and decommission this industry – because it is inflexible and unadaptable, cannibalises wastes that could be reused, recycled or composted, undermines the recycling sector and is a major climate pollution threat. It is

simply misleading to suggest that the incineration and chemical recycling sector can and does adapt to residual waste changes.

https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en

<https://zerowasteeurope.eu/2021/05/wte-incineration-no-place-sustainability-agenda/>

Biological, chemical and mechanical EfW technologies should all be subject to energy recovery requirements. It is unclear why this is not applied to all EfW technologies. Anaerobic digestion is a well known biological EfW technology, as is MRBT EfW technologies. Both should be required to meet energy recovery requirements. Chemical recycling is also a waste burning technology with significant tertiary emissions whether here in Australia or overseas, and therefore must be required to meet energy recovery requirement as the thermal EfW technologies are required to.

Slide 7. Role EfW.

EfW policy should be defined and created by government not industry. It should not be up to an EfW industry to predict or define the waste outcomes for any local government or community. The Qld government must set clear overarching waste policy that supports local governments to choose the best service providers that uphold the waste hierarchy. Qld is well behind on implementing the most significant waste reform – removing all organics from the waste stream. It is premature to implement an EfW policy without a full rollout of a FOGO system. Similarly, without materials recovery systems for recyclables in place, operating and delivering recycled product outcomes (ie closed loop and downcycled models), EfW technologies can and will cannibalise these waste resources and thus subvert the waste hierarchy.

While we support project proponents providing this feedstock information to government, this information should not be relied upon to determine the eligibility or performance of their project. EfW proponents often provide misleading information about potential outcomes for different waste streams and types of residual waste to suit their own interests.

Slide 8. All residual waste is able to be further sorted and managed without EfW technologies.

The assessment and approval of EfW technologies should not be predicated on what exists today but rather what is possible and achievable. It is entirely possible to manage our residual waste without incineration or chemical recycling. Indeed, under current global climate threats, we are compelled to.

Allowing EfW proponents to define an eligible feedstock cannot be supported. Life Cycle Analysis of residual waste shows that disposal via incineration is the least preferable on environmental grounds.

Slide 9.

Technically impracticable. Given that most plastic is not recyclable, it is clear that this policy and the EfW sector, plan to capture significant quantities of currently non- recyclable single use plastics. Also given that no incinerator project currently planned in Australia includes a source separation or pre-processing component as part of their operations, its fair to say that EfW technologies will capture feedstocks that can and should be reused, recycled or composted. Again, this is exactly why the EU is decommissioning this industry because it undermines the reuse, recycling and composting sectors. Qld should learn these lessons, not repeat them.

https://www.c40knowledgehub.org/s/article/Why-solid-waste-incineration-is-not-the-answer-to-your-city-s-waste-problem?language=en_US

<https://e360.yale.edu/features/in-europe-a-backlash-is-growing-over-incinerating-garbage>

<https://ukwin.org.uk/oppose-incineration/>

Slide 10. Environmentally impracticable.

This is nonsensical. All recycling, reuse or composting outcomes outweigh the benefits of EfW. It is imperative that tertiary emissions from EfW and chemical recycling are included in any LCA. The Qld needs to define a robust scientifically evidence- based definition of LCA.

Slide 11. Economically impracticable.

Any financial analysis of recycling, reuse or composting against EfW technologies must include those external costs to the environment here in Australia and globally. All tertiary emission impacts must be costed. EfW incineration contributes global persistent organic pollutants and generates significant quantities of toxic ash that requires treatment and secure landfilling. These costs must be accounted for and include intergenerational costs to account for the intergenerational impacts they cause, including loss of human rights.

Slide 12. Long term feedstock strategy.

While we support proponents providing this information, the Qld government should require full costs and details of exactly how the proponent will adapt and make changes to their technology should residual waste feedstocks be redirected to better outcomes. Any residual waste feedstock variability on emissions must be recorded through mandatory continuous emissions monitoring. This is the only way to measure the impact of the feedstock on emissions. All incinerators in Australia should be required to utilise the AMESA air monitoring system as a minimum.

Slide 13. Best Practice Operations.

The regulatory requirements for all EfW technologies should be mandatory. Is it enough to say they should meet BAT and BREF? We suggest it is better to require them to *demonstrate* that their projects meet these requirements. Given that industrial emissions monitoring is woefully inadequate currently, the introduction of the incineration sector which is more polluting than coal, oil and gas per unit of energy, demands legally enforceable pollution controls. Acknowledging that the EU BAT and BREF has not prevented the contamination and pollution of our global environment from incinerator emissions and that frontline communities continue to suffer adverse health impacts, the Qld government should set the highest regulatory standards from the beginning and take a precautionary approach to any risk, hazard or other assessment of this industry sector.

Slide 16. Commercial technologies.

Any nominated reference facility must demonstrate compliance with their regulation. Otherwise, there is no point nominating a reference facility.

Slide 18. Maximising energy products

This outcome will allow waste to be burnt in cement kilns, paper mills and other combustion industries that emit vast amounts of air pollution and have lesser environmental regulation. The throughput rate, for example in cement kilns, is higher than incinerators, ensuring more pollution is released to the environment than via an incinerator. To allow waste to be burnt in other facilities and not apply any minimum energy recovery efficiency is a legal and regulatory loophole that should be closed.

Slide 19. Establishing social licence

The waste incineration has no social licence to operate anywhere in the world. All EfW projects should be required to notify the host community in which they want to establish as a matter of principle. Local knowledge relevant to industrial projects and their regulation is often missing, especially if the proponents are not local or Australian (as will be the case) and regulators must consider their views to ensure all social, environmental and financial risks have been identified and resolved to the satisfaction of the Qld government and their citizens.