

Submission to Hume's Draft Waste and Resource Recovery Strategy review

**From: Bruce Barbour
Resident of Hume
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Thank you for this opportunity to comment on the draft Waste and Resource Recovery Strategy ("the Strategy").

Please note that while I am a member of the Hume Sustainability Taskforce I am making this submission as a private resident of the Hume municipality.

Waste Material Manufactured from Fossil Fuels that is Classed as Non Recyclable

The Strategy does not state whether a larger range of materials manufactured from fossil fuels will be able to be placed in the recyclables bin for recycling compared to what is currently allowed to be placed in the recyclables bin. For example currently the following fossil fuel base materials are not classed as recyclable: thin film plastics and various other plastics such as polystyrene; synthetic textiles (e.g. various types of unusable clothing, polyester, nylon); and rubber (e.g. shoe soles). There are probably other fossil fuel based materials classed as non recyclable. It would be ideal if all these items would be recycled under the new improved system. However as this is not stated it is assumed that aforementioned fossil fuel based manufactured material will still end up in the residual waste stream for landfill or to be burnt in a waste to energy plant.

"Advanced Waste Technologies" and "Waste to Energy"

On page 23 the Strategy mentions "advanced waste technologies" and on page 24 "alternate waste technology (waste to energy)".

I understand that "advanced waste technologies" refers to waste to energy technologies, primarily generation of electricity by burning waste but can also refer to the use of bio-digesters to create methane. I will concentrate my comments on the process that burns waste to produce electricity as this is the most problematic, though bio-methane production also has significant issues.

I am not against waste to energy per se. However I am against any process that creates and releases greenhouse gases and / or toxic gases and particulates into the atmosphere.

A significant question is: how much greenhouse gas will a waste to energy plant produce? Firstly most of the organics and many other materials classed as recyclable will have been removed from the waste stream by the three bin system. Any residual organic based material will not be a greenhouse gas issue as any CO₂ produced from their burning can be seen as part of the natural carbon cycle. However unless the recycling system has removed the various forms of plastics and other synthetic material referred to in the first section of this submission, when these materials are burnt in a conventional furnace they will produce carbon dioxide that, if not captured, will add to Hume's total greenhouse gas emissions. In order for Hume to meet its Net Zero carbon goal these carbon dioxide emissions would have to be offset – a second rate option compared to not being produced or being captured and stored. Carbon credit offsets should be used as a last resort if there is no way of eliminating the carbon emissions. And of course buying carbon credits to offsets the carbon emissions over decades would cost Council a lot of money.

In the State Government's Waste to Energy Framework (Refer Link 1 below) the only greenhouse requirement for a proposed plant is that it should be assessed for greenhouse gas production "compared to landfill" (p18). What assumptions underlie this comparison? Is any new plant going to be compared to an old style landfill with a full load of organics and no methane collection system? Or is it going to be compared to a landfill which has had most of its organics removed. Regardless, any comparison is meaningless. The better approach is to look at absolute fossil fuel derived carbon emission estimates based on the proposed plant and the composition of the residual waste stream, and determine whether the emission estimates are in-line with Council's greenhouse gas reduction undertakings. Council should be aiming for zero greenhouse gases from waste disposal as it is with greenhouse gases from other sources.

I suggest that the quantity of carbon dioxide likely to be produced per annum in a waste to energy plant without carbon capture be estimated early in the consideration of options process. Don't accept estimates provided by waste to energy plant operators / promoters at face value. They will undoubtedly skew to the low end. And consider that Council may be locking itself into a contract, with minimum waste tonnage supply guarantees, until 2040 and beyond with this much fossil fuel derived carbon dioxide being produced annually. How much would that cost in terms of carbon offsets and damage to the environment or indeed how much would it cost to break the contract when it was determined that the amount of carbon dioxide released was too high to be compatible with a living planet as the world strives for Zero.

I note the pressure on Council to adopt waste to energy due to it being promoted as part of the Victorian Government's waste / recycling strategy and also the arbitrary punitive landfill levies and arbitrary timelines imposed by the State Government. Waste to energy facilities, if adopted, must fully address climate change and other pollution issues as well as landfill volume restraints. If systems that do not capture carbon are installed at this stage I envisage that it will be creating a problem that will have to be addressed within the decade. Better to get it right from the start even if it delays implementation of waste to energy and is more costly upfront. (Refer Link 2.)

If State Government wants councils to proceed with waste to energy they should be leading the process of finding appropriate zero carbon waste to energy technology to implement. There are existing zero carbon emission waste to energy systems used around the world but they are a lot less common than standard plants and may still be seen as innovative / cutting edge. (Google search "waste to energy with carbon capture".) I suggest that State Government be approached to see whether they have investigated any of these systems and what was the result of that investigation.

Another issue that needs to be considered with a waste to energy plant is whether the plant will release exhaust gases that contain toxic chemicals or particulates. While EPA licensing requirements (Refer Link 3) will put limits on this pollution it may not be zero. I understand that modern high temperature furnaces limit most of this type of pollution however it still needs to be investigated and known prior to proceeding with any plant.

In the Strategy references to "advanced waste technologies" and "alternate waste technology (waste to energy)" should be qualified to ensure that any system considered must not result in the release of toxic gases, particulates and fossil fuel derived carbon dioxide and methane into the atmosphere. This is regardless of whether any proposed plant would be located in the municipality or outside the municipality.

I note that the Waste to Energy Framework indicates a review of the Framework will occur in 2023 (P2 of the Framework). Hopefully this review will address some of these issues as in my opinion the Framework is inadequate in many aspects. Perhaps Council could make a submission to this review and delay any progress towards waste to energy until after a revised Framework is issued.

Sunbury Landfill (page 24)

The Strategy refers to the proposed closure of the Sunbury landfill by 2030. Please consider the inclusion of a reference to provision of landfill gas / methane capture and flaring (or electricity generation) at the site. (Or at least the requirement to undertake a feasibility study.)

Single-Use Plastic Shopping Bag Ban (Page 7)

As it has been three years since implementation the effectiveness of the ban on single use plastic shopping bags needs to be reviewed. Is it doing what it is meant to do? – which is to decrease the total amount of plastic used.

The “heavy duty” plastic bags that are sold by the supermarkets contain many times the plastic contained in the original light plastic bags that use to be provided by the supermarkets. One reference I have seen stated that the “heavy duty” bags needs to be reused at least four times to result in a saving on plastic used.

My random observations suggest that some customers may not be reusing these bags but instead opt to buy new bags each time they shop. There is also the rise of online shopping since the original light weight plastic shopping bag ban. This shopping is delivered to the home in the “heavy duty” plastic bags. If the shopping is always online there is no opportunity for the reuse of the bags. (My observations are based on Coles.)

It may be better for the supermarkets to go back to the light weight bags but still charge for each bag supplied. However this would be for the proposed review to look at.

The review should be done by State Government or a group of councils.

I note that recycling plastic film from all sources is still very problematic. While the supermarkets have a scheme (Redcycle) I would question whether this captures a significant proportion of the supermarket supplied plastic film. The rest would currently go to waste – to landfill or indeed burnt in a future waste to energy plant if implemented. This needs to be addressed but is a bigger issue than Council could address by itself.

Glass Recovery Service (Page 26)

Further work needs to be done investigating options for the glass recovery service. Drop off at the Resource Recovery Centres, as suggested on page 26, is problematic including likely low uptake or capacity constraints and environmental issues if it was taken up extensively. It may be Ok as an interim stage to meet Recycling Victoria’s requirement by 2027, with glass still being allowed in the recyclables bin, but in the longer term other options should be investigated - whether that is household pickup or more widespread drop off options. I understand that there is a trade off between the cost and environmental impact of collection, and the value and quantity of the recyclable glass collected that needs to be considered.

Other Waste Streams

There is no reference to waste streams from construction works – both Council generated works and private. This would be from demolition work and also waste generated from new construction. I don't know what size this waste stream is but I think it would be significant in terms of total waste generated within the municipality.

While there are a number of references to industry in the Strategy there is no specific item addressing industry in the Action Plan. There is an item regarding product stewardship for manufacturers.

Retail and commercial is mentioned in the Strategy but the only item in the Action Plan is in relation to dumping.

Typos and Other Minor Suggestions

Page 14	We reccovered 58% of items	
	1,425m2 of materials were collected from mulching day events	Should this be "1425m3"?
Page 21	Increase the accessibility of information across our collateral	Perhaps "community"?
	Build stronger links across Council strategic documents, such as the Towards a Circular City actions.	Perhaps "Towards Hume as a Circular City"?
Page 24	3 rd Point - Resurce Recovery Centres	
	6 th Point - Resouce Recvoery Centre	
	8 th Point - Monitor the impact of CDS on kerbside	As this is the first use of the initials perhaps expand to "the Container Deposit Scheme (CDS)". It is expanded later on page 27.
	Last Point - Advocate for increased product stewardship arrangements and increaes manufacturers' responsibility for end-of-life products	
Page 17 onwards	Please ensure page numbering is consecutive.	

Please feel free to contact me if you have any questions.

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Links:

1. Victorian Waste to Energy Framework: - https://www.vic.gov.au/sites/default/files/2022-02/Victorian%20waste%20to%20energy%20framework_0.pdf
2. Understanding the Carbon Impacts of Waste to Energy (Zero Waste Europe): - <https://zerowasteurope.eu/2020/03/understanding-the-carbon-impacts-of-waste-to-energy/>
3. EPA Energy from Waste Guideline - <https://www.epa.vic.gov.au/-/media/epa/files/publications/1559-1.pdf>
4. My further Ideas - <http://www.green.oversite.info/oxygen.html>