



# **Victorian Government waste to energy framework**

**Submission**

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## Table of contents

1	<i>Executive summary</i> .....	4
2	<i>Introduction</i> .....	5
3	<i>The cap</i> .....	6
1.1.	Existing facilities .....	7
4	<i>Response to discussion paper questions</i> .....	8

# 1 Executive summary

In the Recycling Victoria policy, the Victorian Government announced it would implement a one million tonnes per annum cap on the amount of residual waste that can be used in thermal waste to energy facilities.

We strongly support waste to energy (WtE) as an alternative to landfill. WtE must be considered in the context of the waste hierarchy (see Figure 1), and not compromise waste avoidance or higher order reuse and recycling opportunities. Victoria sorely needs a clear WtE policy to ensure these outcomes and provide industry with the necessary certainty for large-scale investment. We welcome the development of the WtE framework to provide that policy clarity.

We do have concerns regarding the cap itself. There has been inadequate justification for why a cap is the appropriate policy response. Stringent controls on the material streams allowed as feedstock could be used as an alternative. The figure of one million tonnes also lacks robust justification. We are concerned that this continues a trend of the Victorian Government making major decisions impacting the waste and resource recovery sector with no transparency and no publicly accessible evidence base. These concerns are expanded upon in Section 3.

If a cap is implemented, allocations must be determined via a coordinated EOI process, rather than first-come-first-served. The cap represents a limited (if artificially so) resource that must be efficiently utilised.

An Expression of Interest (EOI) process should evaluate the comparative benefits of the different projects, including:

- Environmental, economic, and social benefits
- Equitable access across Victoria
- Potential impacts on higher order materials recovery

The framework does not appear to identify a method to build in contingency or surge capacity for WtE. The experiences of the past several years have made clear the dangers of a resource recovery system that operates at near capacity. When one facility is taken offline for whatever reason the flow-on effects can have major environmental and safety impacts.

The framework must address the constraints on councils' ability to control what material goes into the waste streams they manage streams. Education can only go so far. Unexpected materials will always be found in residual waste. Ideally WtE facilities would have the ability to deal with this through some level of sorting before stock is fed in, to recover higher value recyclables. The return on investment (both financially and environmentally) of presort capacity would need to be considered.

The proposed framework offers a blanket exemption from the cap for a wide range of waste biomass. This has the potential to seriously compromise materials recovery and is out of step with the proposed treatment of food organics and garden organics (FOGO) streams collected by councils.

## 2 Introduction

The Municipal Association of Victoria (MAV) is the peak representative and advocacy body for Victoria's 79 councils. The MAV was formed in 1879 and the *Municipal Association Act 1907* appointed the MAV the official voice of local government in Victoria.

Today, the MAV is a driving and influential force behind a strong and strategically positioned local government sector. Our role is to represent and advocate the interests of local government; raise the sector's profile; ensure its long-term security; facilitate effective networks; support councillors; provide policy and strategic advice, capacity building programs, and insurance services to local government.

The MAV welcomes the opportunity to provide feedback on the Victorian Government's draft Waste to Energy Framework. The MAV has previously made several submissions<sup>1 2 3 4</sup> addressing waste to energy and the role it should play in a Victorian circular economy.

The core of our existing positions on WtE are that:

- Waste to Energy must be considered within the context of the waste hierarchy (see Figure 1), with energy recovery being preferable only to the treatment and disposal of waste.
- Policy responses to minimise waste and the negative impacts of waste are best targeted as far upstream as possible where they can influence the decisions that generate waste.



Figure 1 - Waste hierarchy - Source: NSW Environment Protection Authority

<sup>1</sup> [Submission to turning waste into energy discussion paper](#), MAV, December 2017

<sup>2</sup> [Submission to Parliamentary Inquiry into Recycling and Waste Management](#), MAV, May 2019

<sup>3</sup> [Submission to Circular economy issues paper](#), MAV, August 2019

<sup>4</sup> [Submission to Infrastructure Victoria's Recycling and Resource Recovery Infrastructure Report](#), MAV, December 2019

### 3 The cap

In its Recycling Victoria policy, the Victorian Government committed to a 1 million tonne per annum cap on the amount of residual waste able to be used in WtE.

The objectives the cap is intended to achieve are two-fold:

- To ensure that WtE facilities do not compromise opportunities for higher order recovery of materials
- To prevent overinvestment into WtE facilities by private industry

The policy and subsequent announcements have failed to justify why a cap is the best way of achieving these goals.

A stringent control on the types of feedstock allowed should be sufficient to ensure that WtE facilities operate within the waste hierarchy and protect opportunities for recycling over energy recovery.

With access to up-to-date and reliable information, as well as certainty over government policy, industry should be able to make responsible investment choices. Government must be clear on the types of waste streams allowed as feedstock and the projected trends for volumes of those materials.

Approval processes for individual facilities will provide government with the opportunity to assess the merits of a proposal. This should include the viability of the proposed feedstock over the lifespan of the WtE facility, and any assertions made regarding how that feedstock is consistent with the waste hierarchy. None of this requires an overall cap.

The cap imposes an artificial constraint on WtE capacity and creates scarcity. Those in control of residual waste, such as councils, will need to compete to prevent that waste from being sent to landfill. It seems likely that allocations will be quickly exhausted by residual waste managers able to provide large volumes to processors. This would isolate small volume managers such as regional councils from the market and maintain high landfilling costs while achieving significant discounts for larger operators. It will also result in material being landfilled which could have instead been recovered as energy, and it will result in a higher cost to ratepayers. There needs to be a mechanism within the cap to assign priority to municipal solid waste.

Councils have also expressed concern about the cap serving as a disincentive to commercial operators to enter the market and the pressures this creates when landfills in some areas are almost at capacity.

While we are confident that the Victorian Government is genuine in its commitment to a circular economy, a restrictive WtE cap carries potential perverse incentives with landfill levy income. If cost of WtE is higher than cost to landfill (due to scarcity created by the cap), it is likely the Government will raise the landfill levy to maintain parity. The more restrictive a cap the more material sent to landfill and a higher levy rate collected (see Figure 2). Councils and ratepayers would also find it difficult to accept further increases to the landfill levy following the 60%

increase in 2021/22 without being given more confidence of the value reinvestment of that money achieves.

In addition to questions over the merit of the cap as a policy, we question the proposed size of the cap. No evidence has been provided for how the figure of one million tonnes per annum has been reached. It is also misleading, as there is a potential 950,000 tonnes per annum of WtE capacity exempt from the cap due to having existing planning approvals (See Figure 3). There is no clarity on whether these facilities with pre-existing approval need to apply for a cap allocation if they wish to increase their capacity in the future, or if they merely need to go through environmental and planning approvals to do so.



Figure 2 - Potential perverse incentive of a restrictive WtE cap

### 1.1. Existing facilities

Pre-existing approved facilities not subject to the cap

Facility	Annual feedstock	Electrical output	Thermal output	Notes
Australian Paper (Maryvale) <sup>5</sup>	650,000 tonnes	45 MW <sub>e</sub>	225 MW <sub>th</sub>	Electricity and heat to supply on-site paper mill
Recovered Energy Australia (Laverton) <sup>6</sup>	200,000 tonnes	15.1 MW <sub>e</sub>		Output excludes 2.1 MW <sub>e</sub> for plant operation; proposed capacity to provide thermal output to nearby properties in future
Great Southern Waste Technologies (Dandenong South) <sup>7</sup>	100,000 tonnes	7.9 MW <sub>e</sub>		
<b>TOTAL</b>	<b>950,000 tonnes</b>	<b>68 MW<sub>e</sub></b>	<b>225 MW<sub>th</sub></b>	

Figure 3 Already approved WtE facility capacity

<sup>5</sup> <https://engage.vic.gov.au/epa-works-approvals/australian-paper-wa>

<sup>6</sup> <https://engage.vic.gov.au/epa-works-approvals/recovered-energy-australia>

<sup>7</sup> <https://engage.vic.gov.au/epa-works-approvals/GSWT>

## 4 Response to discussion paper questions

### **Question 1: Are further clarifications to the proposed definition of ‘thermal waste to energy’ for the purposes of the waste to energy cap required?**

The definition appears clear.

### **Question 2: What other wastes or processes should be considered to be permitted or banned for the purposes of the waste to energy cap, and why? Are there any other factors that should be considered when determining which wastes are permitted?**

The DELWP paper refers to a four-bin service. Recycling Victoria instead refers to councils being required to ensure all residents have access to a four-stream service (glass, FOGO, co-mingled recyclables, and residual waste). Throughout much of Victoria a 4-bin kerbside service is not viable due to several factors including street space, collection distances, and the volumes and value of material collected. We also note that some councils provide an opt-in organics service because multi-dwelling sites do not generate garden waste, do not have storage capacity for a 3rd and 4th bin and the provision of an additional bin when not needed has encouraged its use as a de facto garbage bin compromising the composting process and output. This reality needs to inform DELWP thinking.

The WtE Framework must address this and seek to accommodate equitable access to landfill alternatives such as WtE across Victoria.

The proposed Framework is unclear on the distinctions made between streams collected by councils as opposed to construction & demolition (C&D) and commercial and industrial (C&I) waste. Based on the diagram on page 13, both council-collected and C&D/C&I recyclables can be used as feedstock if separated at a Material Recovery Facility (MRF) and it can be demonstrated that that stream has no market for recycling. The accompanying text appears to muddy this somewhat, with blanket statements such as recyclable materials from council sources being banned.

The distinction between councils that have introduced a 4-bin service and those that have not is also confusing. Waste streams from councils with a 4-bin service and those without will likely be aggregated and processed at the one MRF. They will similarly be aggregated with some C&I/C&D streams. If the requirements to sort and demonstrate the lack of an alternative use is present, it makes little sense to treat these waste streams separately.

### **Question 3: What information should waste to energy facility operators need to provide to demonstrate that C&I or C&D waste has no market available for reuse or recycling?**

As discussed above, these criteria should also be applied to council streams that have been separated through an MRF.

The starting point for allowable materials should be anything that goes in a residual kerbside bin (and thus is a permitted material). Glass, FOGO, and standardized co-mingled recyclable contents should be banned unless a specific exception is granted.



Ultimately, the onus for determining what materials to permit must be on the State through the Waste Authority. The outcome of this should be a clear list of permitted and banned waste types.

If the WtE industry is seeking to ask the Waste Authority to permit a waste type, they should provide information to support their case. The decision of the Waste Authority should consider:

- Is the material being successfully recovered in other jurisdictions?
- Is transport to those jurisdictions plausible environmentally, legally, and economically?
- Are there prospects of that method of recovery being established in Victoria (or a nearer jurisdiction that may make transport plausible)?
- Is it viable to stockpile that material in anticipation of future recovery capacity being available?
  - Are there environmental and safety concerns, e.g., fire hazard or leachate?
  - Does the material degrade and lose value?
- Even if stockpiling is not viable, is it preferable to landfill the material in the interim to avoid locking in a waste stream as feedstock and compromising the ability to establish recovery capacity?
- If the alternative to WtE for the material is landfill, how does this stack up compared to other potential feedstock (including available residual waste) in terms of emissions, amounts of energy recovered, and by-products?

In allowing recyclable materials to be a permitted waste, there must be a clear case for why allowing that material stream is preferable to relying solely on already permitted materials (including residual waste).

It may be appropriate to consider permission of a material at a specific facility only. For example, distances to a processing facility may make recovery unviable for some high weight/volume but low value materials. This criterion should be used with a large degree of caution to ensure it does not harm the opportunity to establish regional material recovery of those materials in the future.

It may also be appropriate to have the power for temporary approvals to deal with surges in specific waste streams such as following clean-up of natural disasters or if another facility goes online.

We would also like to see some consideration given to markets for secondary outputs of WtE. Biochar and other outputs currently have immature and highly variable markets in Australia. The State Government could support the development of WtE facilities by providing evidence-based guidance on the markets for these products thus enabling processors to include these products in their business case.

**Question 4: Are there other wastes or processes that have a case to be considered exempt from the waste to energy cap, and why?**

We don't believe there are additional wastes that should be exempt at this time. We do have concerns about some of the proposed exempt materials (see Question 5).

**Question 5: What implementation issues could arise if the proposed permitted, banned and exempt waste categories are adopted?**

It is unclear why such a blanket exemption should be given to waste biomass.

Many of the types of wood waste defined by the Renewable Energy (Electricity) Regulations 2001 can be successfully recycled.

Many of the wastes described arising from primary and manufacturing industries can be successfully composted. In some cases, such as fruit and vegetable processing waste, it could be expected that a cleaner composting stream is produced than through household FOGO.

There should be a requirement to demonstrate these waste streams lack viable recycling opportunities in the same way as recyclable materials within the cap.

**Question 6: Which option (1 or 2) would be most suitable for allocating the waste to energy cap to applicants? Why or why not?**

If a cap is instituted, a coordinated EOI approach is the only appropriate method for allocations.

The cap is a limited (if artificially so) resource and must be utilised to best achieve stated outcomes. This is not possible with a first come first served allocation method.

The criteria proposed in the discussion are appropriate. We believe particular focus should be placed on equitable access across the state. Figure 4 shows the current location of approved facilities and one facility seeking approval. Consideration should also be given to the opportunity to harness heat output, either on-site or in the local area, as this can represent a significantly more efficient energy recovery outcome.

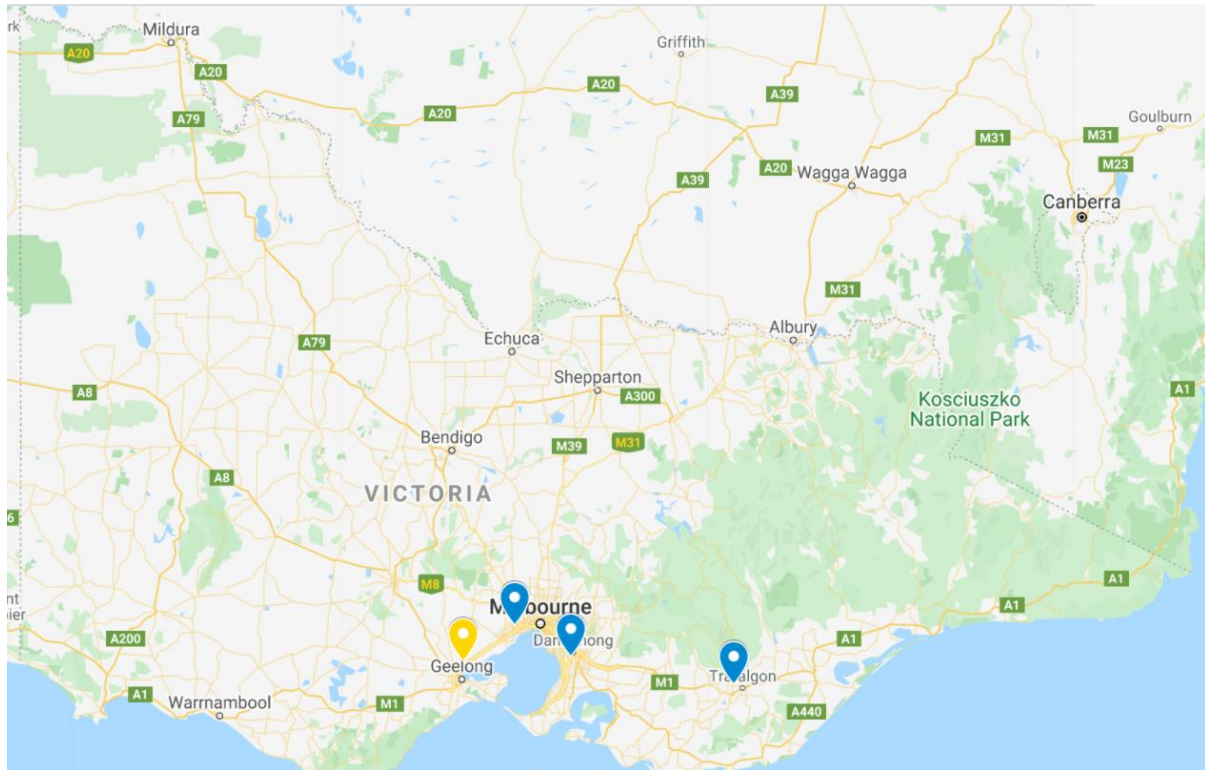


Figure 4 - Locations of currently approved Waste to Energy Facilities and Prospect Hill International facility currently seeking approval in Lara.

**Question 7: What are your views on the proposed methods for modifying cap allocations once they have been granted? What implementation issues could arise?**

We support the proposed methods for changing cap allocations. Conditions under which an allocation can be revoked must be clear, to provide investors with confidence.

We support allocations not being transferrable between operators unless the change is purely administrative, for example a change in ownership.

**Question 8: How should waste to energy facility operators' compliance with cap allocation conditions be reported and monitored?**

There needs to be active monitoring by the state, and not an over-reliance on self-regulation by the industry.

Our initial view is that the EPA would be better suited than the Waste Authority to monitor and investigate the types and volumes of wastes being fed in. However, the eventual makeup of the Waste Authority may include suitable expertise.

**Question 9: What considerations should the government include in future reviews of the waste to energy cap?**

The criteria for review of the cap appears appropriate.

We question the appropriateness and usefulness of reviewing the cap in 2023. Given the wind-up time for facilities in receiving approvals, applying for cap allocations, securing feedstock, and constructing and operating the plants themselves, we question how much useful data will be available at this early stage.

We are also concerned that the prospect of a review in 2023 may further hamper initial investment by the industry, leading to a less competitive and worthy range of applications to grant allocations to.

**Question 10: Do you agree with the proposed split of responsibilities for administration and review of the cap?**

While the Waste Authority appears the suitable body for administering the cap, the EPA may be better suited to on the ground monitoring and investigation of facility compliance.

It is not yet clear what role, responsibilities, and powers the Waste Authority will have. There is a risk of a conflict of interest if the one authority is setting the cap, deciding on the allocation of the cap, administering the cap, monitoring for compliance and administering collective procurement services on behalf of local government for WtE services.

It is vital that when setting and reviewing the cap, the Minister be transparent about how decisions have been reached. As discussed above, there is little confidence in local government or industry of the method to determine an initial cap of 1 million tonnes was appropriate.