



Legislative Council
Economy and
Infrastructure Committee

The development and expansion of waste-to-energy (WtE) infrastructure in Victoria

Inquiry

August 2026

Published by order, or
under the authority, of the
Parliament of Victoria
August 2026

ISBN 978 0 908262 96 0 (print version)

ISBN 978 0 908262 97 7 (PDF version)

This report is available on the Committee's website:
parliament.vic.gov.au/eic-lc

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About the Committee

Functions

The functions of the Legislative Council Economy and Infrastructure Standing Committee are to inquire into and report on any proposal, matter or thing concerned with agriculture, commerce, infrastructure, industry, major projects, public sector finances, transport and education.

The Committee consists of members of the Legislative Council from the government, opposition, and other parties.

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Terms of reference

Inquiry into the development and expansion of waste-to-energy (WtE) infrastructure in Victoria

On 27 August 2025, the Legislative Council agreed to the following motion:

That this House requires the Economy and Infrastructure Committee to inquire into, consider and report, by August 2026, on the development and expansion of waste-to-energy (WtE) infrastructure in Victoria, including –

- (1) the suitability of existing WtE infrastructure plans and policies, including –
 - (a) the impact of WtE projects on residential communities and transport infrastructure;
 - (b) annual caps on waste that can be used in thermal WtE processing;
 - (c) the regulatory framework to establish and manage WtE facilities;
- (2) the impact of WtE, including from –
 - (a) separating recycling and organic material from WtE streams;
 - (b) nature and management of emissions, waste and ash byproducts;
 - (c) the cost-benefit of WtE generation to consumers and businesses;
- (3) alternative waste management approaches and emerging technologies that also align with circular economy principles, having regard to the recommendations of the Environment and Planning Committee's 2020 Inquiry into recycling and waste management and the role of WtE in the Victorian Government's circular economy plan, including Victoria's landfill management, capacity and strategy;
- (4) the adequacy of community consultation; and
- (5) any other related matters.

Chair's foreword

The Inquiry into the development and expansion of waste-to-energy (WtE) infrastructure in Victoria has been a challenging one for the Committee. The issue is one that is highly polarising with, on the one hand, a need to manage a significant waste problem, namely the substantial amount of waste going into landfill with all of its environmental concerns, and on the other hand, the significant and understandable concerns of communities that may be affected by waste-to-energy facilities.

It is not the Committee's role to determine whether or not waste-to-energy per se is appropriate, nor where such facilities should be located. It is the Committee's role to identify the concerns and to ensure that the right questions are asked in the processes that lead to the establishment of such facilities. It is essential that both the technical and community questions are adequately addressed in any approval process.

The Inquiry has attracted substantial community interest, particularly from those communities that are likely to be affected by proposed facilities.

Despite the strong and passionate advocacy by community members, and the detailed input from proponents of the proposed waste-to-energy facilities, the Committee has appreciated the respectful approach of participants in the Inquiry.

I would also like to express my appreciation for the collegiate and respectful conduct of Committee members, some of whom had strongly held views on the issues before the Committee. All members maintained polite and professional discussions throughout the evidence gathering and report writing stages of the Inquiry.

I would also like to thank the Committee Secretariat for their professional and thorough work during the Inquiry. Committee manager, Michael Baker, and the administration team of Julie Barnes, Sylvette Bassy and Monique Riordan-Hill provided excellent support throughout the Inquiry. I would also like to thank Joshua Pedersen who worked with the Committee throughout the Inquiry as a Research Assistant and provided excellent background research and writing for the committee's draft report.

Finally, I would particularly like to thank Inquiry Officer Jessica Summers who provided excellent research and writing for the report, as well as expertly managing much of the Committee's evidence gathering during the Inquiry. Jessica's work was exemplary and the Committee has greatly appreciated her efforts throughout.



Georgie Purcell MLC
Chair

Findings and recommendations

2 Victoria's waste challenges

FINDING 1: Victoria generates millions of tonnes of residual waste each year that is not currently recycled or reused. In 2024, the State generated 5.7 million tonnes of residual waste, which is projected to increase to 8.9 million tonnes by 2053. Managing and reducing this waste safely and sustainably is one of Victoria's most significant waste management challenges.

9

FINDING 2: Through the *Circular Economy (Waste Reduction and Recycling) Act 2021* (Vic), the Victorian Government has committed to transitioning to a circular economy, with a target of diverting 80 per cent of waste from landfill by 2030. Since the strategy commenced in 2020, landfill diversion rates have remained largely unchanged. Note that the Victorian Government considers waste-to-energy as a method to achieve this target.

13

FINDING 3: While Victoria has made progress in expanding waste recovery and reprocessing capacity, it is not currently on track to achieve its headline target of diverting 80 per cent of waste from landfill by 2030.

13

RECOMMENDATION 1: That the Victorian Government advocate to the Commonwealth Government to consider a national product stewardship scheme for plastics and packaging that would require manufacturers to take greater responsibility for products at the end of their life.

14

RECOMMENDATION 2: That the Victorian Government develop and deliver a public education campaign on waste reduction.

15

3 Waste-to-energy technology

FINDING 4: Waste-to-energy does not eliminate waste completely. It converts residual waste into energy and solid residues that require ongoing management through reuse or disposal.

22

FINDING 5: Both incinerator bottom ash and fly ash may have beneficial reuse pathways, but stakeholders disagreed about the safety and long-term suitability of some of these applications.

23

FINDING 6: Victoria's current regulatory framework may create barriers to recovering treated fly ash as a product, with some stakeholders advocating for an end-of-waste framework similar to those operating in other jurisdictions.

23

FINDING 7: The long-term management, transport and final destination of incinerator bottom ash and fly ash are important concerns for many community members and should be clearly explained as part of any waste-to-energy proposal. These matters have not yet been clearly explained as part of proposed waste-to-energy projects.

23

RECOMMENDATION 3: That the Victorian Government update the Environment Protection Authority Victoria's *Energy from Waste Guideline* (Publication 1559.1) to clarify that proponents should provide detailed plans for the long-term management, transport and final destination of bottom ash and fly ash as part of any development and operating licence applications.

23

RECOMMENDATION 4: That the Victorian Government develop an end-of-waste framework to enable the recovery of suitably safe materials to support their safe commercial reuse.

23

FINDING 8: Reducing waste at its source decreases the amount of waste that needs to be managed through recycling, thermal waste-to-energy or landfill.

25

FINDING 9: Maximising source separation and material recovery is essential to ensuring that only genuine residual waste is directed to thermal treatment.

26

FINDING 10: Separating food and garden organics at the source supports the waste hierarchy by enabling composting and anaerobic digestion in place of lower-order waste management options.

26

FINDING 11: Improved sorting, including through mechanical recovery biological treatment (MRBT), can increase resource recovery and reduce the amount of waste requiring disposal through thermal treatment or landfill.

27

FINDING 12: Waste-to-energy is not a single technology. It includes technologies such as moving-grate incineration, gasification, pyrolysis, plasma-assisted gasification and waste-to-hydrogen, each with different feedstock requirements, processes, outputs and environmental considerations.

28

RECOMMENDATION 5: That the Victorian Government develop a strategy to ensure that only genuine residual waste is managed through lower-order waste management options, while higher-order strategies such as waste avoidance, reuse and recycling, can recover as much waste as possible.

28

4 Regulating what a waste-to-energy facility can incinerate

FINDING 13: Victoria's waste-to-energy cap is intended to strike a balance between encouraging investment in waste-to-energy for genuine residual waste and ensuring it does not undermine recycling and other higher-order waste management activities. The Committee questions whether it achieves this purpose.

31

FINDING 14: The *Victorian Waste-to-Energy Framework* allows cap licences to be extended, revoked and reallocated, but it does not establish a recurring review cycle or a published test for amending the cap if residual waste volumes change.

31

RECOMMENDATION 6: That the Victorian Government amend the *Victorian Waste-to-Energy Framework* to require periodic public review of the waste-to-energy cap. Each review should consider factors such as:

- actual and projected residual waste generation
- progress in avoidance, reuse, recycling and organics recovery
- actual facility throughput licensed projects that have not reached financial close or commissioning
- capacity that has been extended, revoked or reallocated
- whether different licence applicants or facilities rely on the same available feedstock.

The review process should allow the cap to be reduced as well as increased, and its findings and decisions should be published.

32

FINDING 15: Recycling Victoria allocated 94% of the available statewide waste-to-energy cap capacity on 17 August 2025.

34

FINDING 16: The 2.5 million-tonne per year waste-to-energy cap does not include capacity held under existing operator licences and therefore does not describe all licensed thermal waste-to-energy capacity in Victoria.

34

FINDING 17: Information about waste-to-energy projects is spread across multiple sources and is not consistently reported. This makes it difficult to understand how projects are progressing, why cap allocations have been made, and how they fit within Victoria's broader waste management system.

35

RECOMMENDATION 7: That the Victorian Government establish a central public register for licensed thermal waste-to-energy projects that includes information on licence holders, capacity allocations, project progress, planning and environmental approvals, feedstock arrangements, operational performance, and licence variations or compliance actions.

35

FINDING 18: The public information that was released about Recycling Victoria's waste-to-energy cap allocation decision was insufficient to explain how the statutory assessment criteria were applied. While commercially sensitive information must be protected, greater transparency about the basis for these decisions is needed to support public confidence and accountability.

37

RECOMMENDATION 8: That the Victorian Government publish a statement of reasons within the next six months explaining how Recycling Victoria applied and satisfied the mandatory statutory criteria when allocating waste-to-energy cap licences. A statement of reasons should also accompany any future allocation of further cap licences. There is no expectation that these statements disclose confidential or commercially sensitive information.

37

RECOMMENDATION 9: If the Victorian Government declines to publish a decision summary within the next six months, Recycling Victoria's decision-making process should be referred to the Victorian Auditor-General's Office for review to confirm that all mandatory statutory considerations were properly considered.

37

FINDING 19: Victoria's *Waste-to-Energy Framework* sets rules about what waste can be used as feedstock in thermal waste-to-energy facilities. However, it is not clear how those rules will operate in practice or be updated as recovery options improve.

39

FINDING 20: Household waste collected in red-lidded bins, known as municipal residual waste, may still contain recyclable and compostable materials. This raises questions about whether all material in the municipal residual waste stream should be considered suitable for waste-to-energy.

39

RECOMMENDATION 10: That the Victorian Government invest in research and trials to identify practical and cost-effective ways of recovering non-residual materials from municipal, red-lidded residual waste streams after collection.

39

RECOMMENDATION 11: That the Victorian Government develop a consistent, public standard for checking that only eligible waste is sent to waste-to-energy facilities. The standard should clearly set out who is responsible, what evidence is required, how compliance is monitored and audited, and how decisions are reviewed as recycling and recovery options improve.

40

FINDING 21: Long-term, minimum guaranteed waste supply commitments were presented as necessary for financing proposed waste-to-energy facilities. International experience shows that the use of minimum guaranteed waste supply commitments has the potential to produce perverse consequences and efforts to reduce the quality of waste going to waste-to-energy facilities.

41

RECOMMENDATION 12: That the Victorian Government develop guidance to assist councils when considering or entering into long-term waste supply agreements with thermal waste-to-energy facilities. The guidance should address how agreements can remain flexible as residual waste volumes change over time, respond to changes in waste policy and resource recovery, and provide appropriate public transparency while protecting confidential and commercially sensitive information.

42

FINDING 22: A cap on waste-to-energy capacity, on its own, does little to uphold the waste hierarchy and may, where genuine residual waste exceeds the capped capacity, increase reliance on landfill.

45

FINDING 23: The introduction of waste-to-energy raises a broader policy question about whether Victoria's economic incentives continue to appropriately support waste avoidance, reuse and recycling ahead of thermal treatment and landfill.

46

FINDING 24: The Committee heard evidence questioning the current Victorian waste policy settings, including the incorporation of thermal waste-to-energy in the circular economy, and its placement in the waste hierarchy.

46

RECOMMENDATION 13: That the Victorian Government consider whether Victoria's economic incentives continue to appropriately support waste avoidance, reuse and recycling ahead of thermal treatment and landfill.

46

5 Regulating what a waste-to-energy facility can emit

FINDING 25: Many of the pollutants that may be emitted by waste-to-energy facilities are already present in the environment from other sources. Emissions from a waste-to-energy facility should be considered in the context of a community's overall cumulative exposure from all sources.

50

FINDING 26: The Victorian Government has not provided communities with sufficient independent guidance about the emissions expected from modern waste-to-energy facilities, the effectiveness of emissions controls, and what this means in practice for nearby communities.

51

RECOMMENDATION 14: That the Victorian Government provide communities with clear, accessible and evidence-based information about waste-to-energy facilities, including how they operate, the emissions they produce, how emissions are controlled, and where uncertainty remains.

51

FINDING 27: The Committee considers that the Victorian Government has an important role in explaining the scientific complexity and the competing interpretations of the evidence. The Committee does not consider that this has occurred to a sufficient extent to date.

54

RECOMMENDATION 15: That the Victorian Government provide clear, evidence-based information to the public regarding thermal waste-to-energy.

54

FINDING 28: Modern waste-to-energy facilities incorporate emissions controls that differ from those used in older facilities. Some stakeholders considered that these differences affect the extent to which findings from studies of older facilities can be applied to modern facilities, while others cautioned against discounting those findings.

55

FINDING 29: Various studies linking waste-to-energy emissions with adverse health impacts have methodological limitations that affect the strength of their conclusions and the extent to which their findings can be applied more broadly.

57

FINDING 30: Stakeholders drew different conclusions from the same body of evidence. Some considered that scientific uncertainty warranted a precautionary approach, while others provided reassurance that modern waste-to-energy facilities are safe.

57

FINDING 31: Differing evidence can make it difficult for the community to understand what may be emitted by a waste-to-energy facility and the extent to which those emissions can be controlled, as the underlying claims are difficult to interrogate without specialist expertise.

57

RECOMMENDATION 16: That the Victorian Government should require operators of waste-to-energy facilities to fund an independently administered community health surveillance program as a condition of planning approval.

57

FINDING 32: Further independent research would strengthen the evidence base by improving the ability to distinguish emissions attributable to waste-to-energy facilities from background environmental contamination. It would also help verify whether emissions from modern facilities are consistent with those identified through current monitoring and reporting practices.

61

FINDING 33: Scientific understanding of emissions continues to evolve. The possibility that future research may identify emissions or impacts that are not yet fully understood may reasonably contribute to community concerns about the safety of waste-to-energy facilities. Maintaining public confidence requires transparent, evidence-based communication that acknowledges both the current evidence and its limitations.

61

RECOMMENDATION 17: That the Victorian Government commission an independent longitudinal study to distinguish emissions attributable to waste-to-energy facilities from background environmental contamination.

61

FINDING 34: Waste-to-energy facilities emit greenhouse gases. Some stakeholders questioned whether these emissions are compatible with Victoria's climate change and net-zero objectives.

63

FINDING 35: Comparisons between waste-to-energy and landfill should consider the full range of waste management options. A lower greenhouse gas footprint than landfill as it is currently practiced (which includes large volumes of organic waste) does not, by itself, establish that waste-to-energy is a low-emissions or environmentally preferable option.

63

FINDING 36: Stakeholders had differing views about the effectiveness of the European Union BREF standards. Concerns focused on the scope of pollutant monitoring, emissions during abnormal operating conditions, and whether the standards achieve the environmental outcomes expected of international best practice.

72

RECOMMENDATION 18: That the Victorian Government ensure that development and operating licence conditions for waste-to-energy facilities require the monitoring and public reporting of emissions at all times including during periods outside normal operating conditions, including start-up, shutdown and maintenance. This monitoring should capture any spikes in emissions released during these periods to ensure they are reflected in the facility's overall emissions profile and are publicly available.

72

RECOMMENDATION 19: That the Victorian Government embed international best practice standards for waste-to-energy facilities within Victoria's regulatory framework to provide certainty for proponents and confidence for communities.

72

FINDING 37: There are likely to be sound scientific and technical reasons why continuous emissions monitoring is feasible for some contaminants but not others. However, without clear and accessible explanations of these limitations, differences in monitoring requirements may contribute to community concern about whether a facility's emissions are being adequately monitored.

74

RECOMMENDATION 20: That the Victorian Government publicly report the basis for emissions monitoring requirements for waste-to-energy facilities, including why continuous monitoring is required for some contaminants but not technically feasible for others. The Government should ensure these reports are transparent, evidence-based and readily accessible to the public.

74

RECOMMENDATION 21: That the Victorian Government independently audit emissions from thermal waste-to-energy facilities rather than rely on self-assessment and reporting.

75

RECOMMENDATION 22: That the Victorian Government require continuous emissions monitoring and real time public reporting of contaminants from waste-to-energy facilities wherever it is technically feasible to do so.

75

FINDING 38: The way emissions monitoring data is reported is an important factor in community confidence. Reporting practices that do not enable the public to identify short-term exceedances, access historical monitoring data, or understand emissions of pollutants of community interest may reduce transparency and undermine confidence in a facility's emissions reporting.

75

FINDING 39: Monitoring emissions from a facility's stack alone may not provide a complete picture of the extent to which emissions are affecting the surrounding environment and community. Biomonitoring of the surrounding environment can complement stack emissions monitoring by providing additional information about environmental contaminant levels over time.

77

RECOMMENDATION 23: That the Victorian Government, in collaboration with proponents and academic experts:

- a. undertake a comprehensive biomonitoring program before construction of any waste-to-energy facility to establish baseline contaminant levels in the surrounding environment; and
- b. continue biomonitoring at regular intervals throughout the operation of a facility, alongside existing stack emissions monitoring and reporting requirements.

The Committee considers that establishing a thorough baseline and undertaking ongoing biomonitoring would strengthen the evidence base on the environmental impacts of waste-to-energy facilities, improve the interpretation of future monitoring results, and help distinguish pre-existing contamination from any changes associated with the operation of a facility.

77

FINDING 40: Effective and timely enforcement is essential to maintaining community confidence in the regulatory framework. A strong regulatory regime depends not only on robust licence conditions and enforcement powers, but also on timely and appropriate action where non-compliance occurs.

78

FINDING 41: Where communities have limited confidence in proponents, relying on proponents alone to explain waste-to-energy facilities is unlikely to build community confidence.

82

FINDING 42: Inconsistent public messaging from the Victorian Government, particularly from its Ministers, has the potential to undermine public confidence in the safety of waste-to-energy technology.

82

6 Regulating where a waste-to-energy facility can be built

FINDING 43: The planning framework provides significant flexibility in how waste-to-energy proposals are assessed. While this enables decisions to reflect the circumstances of individual projects, it can make it difficult to understand how planning considerations will be applied in practice and may contribute to perceptions of inconsistency and regulatory uncertainty.

88

FINDING 44: The current planning framework does not provide a coordinated statewide strategy for the long-term development of waste-to-energy infrastructure. Instead, it relies on project-by-project decision making, including the ability to amend planning schemes to facilitate individual proposals. This makes the framework less predictable and provides limited strategic direction for planning waste infrastructure across Victoria.

88

RECOMMENDATION 24: That the Victorian Auditor-General's Office review whether the regulatory framework applying to waste-to-energy facilities is adequate to address the concerns expressed by the community and the findings and recommendations identified in this Report.

88

RECOMMENDATION 25: That the Victorian Government recognise the critical importance of agriculture and ensure stronger protections for productive agricultural land when assessing development proposals.

88

FINDING 45: For community members who are concerned about the environmental risks of waste-to-energy facilities, the Minister of Planning's decision not to require an Environment Effects Statement (EES) may be difficult to reconcile with their expectations of how those risks should be assessed.

92

FINDING 46: Determining an appropriate buffer between a waste-to-energy facility and nearby residential areas is one of the most significant planning judgements, yet there is no prescribed minimum separation distance to guide communities or proponents.

97

RECOMMENDATION 26: That the Victorian Government provide communities with clear, accessible information explaining how buffer distances for waste-to-energy facilities are determined, the factors considered in setting them, and why those distances are considered appropriate.

97

FINDING 47: As residential development expands closer to established waste management and industrial areas, the potential for land use conflicts increases. **99**

FINDING 48: The co-location of proposed waste-to-energy facilities with existing waste management or industrial infrastructure did not, in itself, determine community acceptance of those proposals. **99**

FINDING 49: For many community members, the transport of waste to and from a waste-to-energy facility was a concern in its own right. Concerns focused on congestion, road safety, local amenity and the suitability of existing road infrastructure. **102**

RECOMMENDATION 27: That the Victorian Government give careful attention to truck routes, road capacity, air quality and surrounding land uses to minimise impacts of waste-to-energy facilities on residential communities. **102**

RECOMMENDATION 28: That the Victorian Government require proponents of waste-to-energy facilities to contribute an appropriate share of the costs of any road or transport infrastructure upgrades required to support their proposal. **102**

RECOMMENDATION 29: That the Victorian Government consider exhaust emissions from trucks transporting waste to and from waste-to-energy facilities as part of the health and environmental risk assessment. **102**

FINDING 50: Locating major waste infrastructure near rapidly growing residential communities requires careful consideration of the long-term character and amenity of those communities. **104**

FINDING 51: Access to affordable housing should not require communities to accept disproportionate impacts from major waste infrastructure. **104**

RECOMMENDATION 30: That the Victorian Government consider the equitable distribution of waste infrastructure and its cumulative impacts, as an important consideration when assessing suitable locations for waste-to-energy facilities **106**

FINDING 52: Employment and regional economic benefits are an important consideration in assessing some waste-to-energy proposals, particularly in regions undergoing industrial transition. Benefits should be balanced against alternative waste management options, and environmental, health and community considerations. **107**

FINDING 53: The opportunities for communities to have a say on a waste-to-energy proposal depend on the planning pathway used. For some proposals, the Minister for Planning decides which planning pathway applies. This decision can affect whether the community is notified, consulted, or able to seek a review through VCAT. **109**

FINDING 54: Uncertainty about the assessment pathway and consultation requirements that will apply to a waste-to-energy proposal risks undermining community confidence and encourages communities to seek engagement before formal planning processes begin. **109**

FINDING 55: Environment Protection Authority Victoria assured the Committee that many of the opportunities for community engagement sought during this Inquiry are built into the development licence process. However, it also acknowledged that many proposed waste-to-energy projects have not yet reached that stage, meaning those consultation processes have not yet commenced. **110**

FINDING 56: Although most proposed waste-to-energy projects are still at an early stage and require several approvals before they can proceed, the current sequencing of the approvals process can create the perception that projects have already been approved, undermining confidence in subsequent consultation. **112**

RECOMMENDATION 31: That the Victorian Government review how the waste-to-energy approvals process is communicated to communities to ensure the sequencing of approvals does not inadvertently undermine confidence in subsequent consultation and decision-making. **112**

FINDING 57: Effective community consultation requires more than the provision of information. Communities expect genuine two-way engagement in which their concerns are heard and meaningfully considered. **113**

FINDING 58: Consultation should be designed around the needs of the community it is intended to reach. In communities with large culturally and linguistically diverse populations, consultation should use accessible information and appropriate engagement methods so everyone has a genuine opportunity to participate. **115**

RECOMMENDATION 32: That the Victorian Government require any organisation responsible for consulting on a proposed waste-to-energy facility to prepare a community engagement plan that explains how it will ensure affected communities are aware of the proposal and have a genuine opportunity to participate. This should include culturally appropriate engagement, translated materials where appropriate, and communication methods that reflect the characteristics of the local community. **115**

FINDING 59: Community confidence is undermined when the Victorian Government does not take a clear leadership role in explaining proposed waste-to-energy projects and the approvals process, leaving communities to rely on proponents, community groups or their own research. **117**

RECOMMENDATION 33: That the Victorian Government ensure planning decisions for waste-to-energy facilities are:

- informed by independent scientific evidence,
- rigorous environmental and public health assessments,
- strategic waste planning,
- meaningful community and stakeholder consultation,
- consideration of surrounding property uses, and
- consistent with best-practice regulatory standards

to provide clarity and consistency for proponents and confidence for communities. **117**

What happens next?

There are several stages to a parliamentary inquiry.

The Committee conducts the Inquiry

This report on the Inquiry into the development and expansion of waste-to-energy (WtE) infrastructure in Victoria is the result of extensive research and consultation by the Legislative Council Economy and Infrastructure Committee.

The Committee received written submissions, spoke with people at public hearings, reviewed research evidence and deliberated over a number of meetings. Experts, government representatives and individuals expressed their views directly to us as Members of Parliament.

A Parliamentary Committee is not part of the Government. The Committee is a group of members of different political parties (including independent members). Parliament has asked us to look closely at an issue and report back. This process helps Parliament do its work by encouraging public debate and involvement in issues.

You can learn more about the Committee's work at: <https://new.parliament.vic.gov.au/get-involved/committees/legislative-council-economy-and-infrastructure-committee>.

The report is presented to Parliament

This report was presented to Parliament and can be found at: <https://www.parliament.vic.gov.au/get-involved/inquiries/wastetoenergyinquiry/reports>.

A response from the Government

The Government has six months to respond in writing to any recommendations made in this report.

The response is public and put on the inquiry page of Parliament's website when it is received at: <https://www.parliament.vic.gov.au/get-involved/inquiries/wastetoenergyinquiry/reports>.

In its response, the Government indicates whether it supports the Committee's recommendations. It can also outline actions it may take.

Chapter 1

Introduction

1.1 The Terms of Reference

On 27 August 2025, the Legislative Council agreed to the following motion:

That this House requires the Economy and Infrastructure Committee to inquire into, consider and report, by August 2026, on the development and expansion of waste-to-energy (WtE) infrastructure in Victoria, including —

- (1) the suitability of existing WtE infrastructure plans and policies, including —
 - (a) the impact of WtE projects on residential communities and transport infrastructure;
 - (b) annual caps on waste that can be used in thermal WtE processing;
 - (c) the regulatory framework to establish and manage WtE facilities;
- (2) the impact of WtE, including from –
 - (a) separating recycling and organic material from WtE streams;
 - (b) nature and management of emissions, waste and ash byproducts;
 - (c) the cost-benefit of WtE generation to consumers and businesses;
- (3) alternative waste management approaches and emerging technologies that also align with circular economy principles, having regard to the recommendations of the Environment and Planning Committee’s 2020 Inquiry into recycling and waste management and the role of WtE in the Victorian Government’s circular economy plan, including Victoria’s landfill management, capacity and strategy;
- (4) the adequacy of community consultation; and
- (5) any other related matters

Due to the Committee having two active inquiries at the time of receiving the reference, the Inquiry was not commenced until February 2026. The required tabling date of August 2026 was not extended.

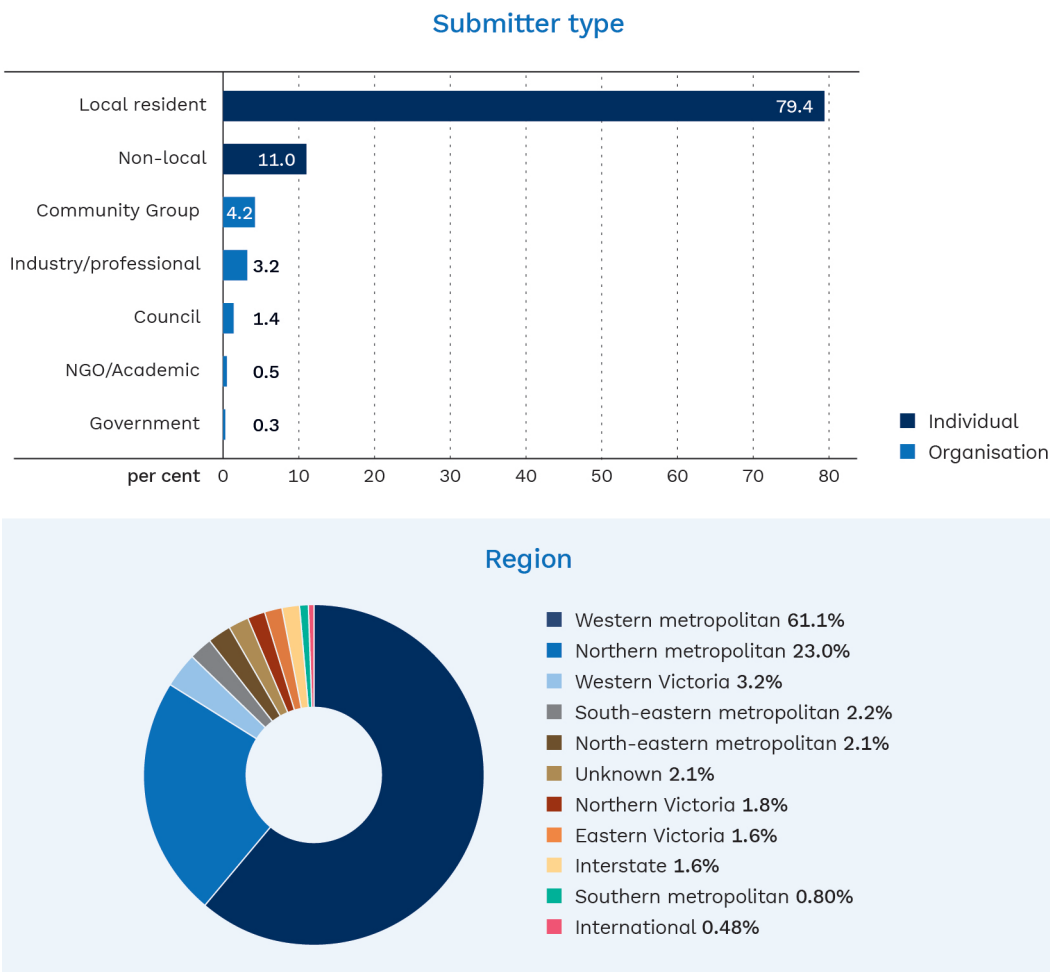
1.2 Submissions

On 13 February 2026, the Committee wrote to 117 stakeholders seeking their input into the Inquiry by way of a formal submission. At the same time, the Committee advertised widely on the Parliament’s various social media platforms.

By the time the submission period ended, the Committee had received 627 submissions from organisations and individuals. These submissions were progressively published on the Inquiry website. The only exceptions were submissions requesting confidentiality. These were accepted but were not published.

The majority of submissions received were from individuals and community groups located in areas which have planned waste-to-energy facilities. Below is a brief overview of the breakdown of submissions by submitter type and location.

Figure 1.1 Submission demographic breakdown



This breakdown shows that more than 90% of submissions came from individual community members, and around the same ratio came from areas that have facilities either formally proposed or planned. The majority of the submissions opposed the facilities, either as a general position or on a local basis.

A full list of submissions can be found at Appendix A, and the submissions are available for viewing at the Committee’s Inquiry website at <https://www.parliament.vic.gov.au/get-involved/inquiries/wastetoenergyinquiry/submissions>.

1.3 Public Hearings

The Committee commenced its series of three days of public hearings on 7 May 2026, with subsequent hearings being held on 8 May and 26 May. The initial hearing was held in Sunbury, close to the site of a proposed waste-to-energy facility and the area from which the majority of the submissions had been received. These hearings were also attended by a significant number of people in the public gallery, which was an illustration of the interest in the issue within the Sunbury community.

The subsequent hearings were held at the Committee's hearing rooms in the Parliamentary precinct in Melbourne.

In all, the Committee heard from 59 individual witnesses representing government, regulators, companies and community organisations. The full list of witnesses can be found at Appendix A and transcripts of their evidence can be found on the website at <https://www.parliament.vic.gov.au/get-involved/inquiries/wastetoenergyinquiry/hearings>.

1.4 Scope of the Report

This Inquiry examined issues that are technically, environmentally and socially complex. The views expressed in submissions and during public hearings were polarised and there was little middle ground between opponents and supporters of waste-to-energy facilities. There was general agreement that the increasing pressure on landfill, with its environmental concerns, needs to be addressed urgently. However, there was disagreement about the most appropriate and safe ways to do this.

In this Report, it is not the Committee's intention to definitively determine the appropriateness of particular proposed facilities or even the waste-to-energy technologies themselves. Such judgments are beyond the technical capacity of a Parliamentary Committee. This Report seeks to canvas and analyse the evidence presented to the Committee during the Inquiry and identify issues and concerns that need to be addressed when planning and regulatory decisions are made.

Chapter 2 provides an overview of the challenges Victoria faces in managing its growing waste. It examines the types of waste generated, what constitutes residual waste, and projections for future waste generation. The Chapter also considers Victoria's waste policy framework and waste hierarchy, including opportunities to reduce waste at its source through product stewardship and behaviour change, improve reuse, recycling and resource recovery, and reduce reliance on landfill.

Chapter 3 explores Victoria's proposed response to these waste management challenges through the development and expansion of waste-to-energy. It focuses on thermal waste-to-energy, as this was the technology most discussed throughout the Inquiry. The Chapter outlines how waste is received and prepared for combustion, the combustion process itself, the by-products generated, and the energy produced. It also considers alternatives to thermal waste-to-energy across the waste hierarchy,

including waste avoidance, improved source separation, food and garden organics collection, mechanical recovery biological treatment, and other waste-to-energy technologies.

Chapter 4 examines how Victoria's waste-to-energy framework seeks to ensure waste-to-energy complements, rather than undermines, higher-order waste management. It focuses on the policies that determine how much waste can be sent to waste-to-energy facilities and what types of waste are eligible. The Committee heard differing views about whether these safeguards are sufficient to ensure waste-to-energy is limited to genuine residual waste. Stakeholders also argued that greater transparency is needed about how key decisions, such as allocating waste-to-energy capacity, are made so the community can understand whether the framework is achieving its intended purpose.

Chapter 5 synthesises the evidence on what waste-to-energy facilities may emit, the potential health impacts of those emissions, and how Victoria's regulatory framework seeks to manage them. The Committee found that the evidence is complex and, in some areas, highly contested, with stakeholders reaching different conclusions about both the nature of emissions and the effectiveness of emissions controls.

The final Chapter considers where waste-to-energy facilities should be located and how Victoria's planning framework manages those decisions. The Committee found that the proposed location of facilities was the primary concern for many community members, with submissions focusing on land use compatibility, traffic impacts, local amenity and the distribution of waste infrastructure. The Chapter also examines concerns about Victoria's planning approvals process, including the Minister for Planning's discretion over assessment pathways and Environment Effects Statements (EES), and the adequacy of community consultation.

Chapter 2

Victoria's waste challenges

This Chapter provides an overview of the current waste management situation in Victoria but does not address waste-to-energy explicitly. That is considered in the subsequent Chapters.

2.1 What waste does Victoria create?

Victoria produces a lot of waste — more than 14 million tonnes annually. While roughly three-quarters of this can be recovered through recycling and reuse initiatives, what remains is currently destined for landfill. This is known as residual waste, which is what waste-to-energy plants seek to process.

The Committee heard that Victoria currently generates around 5.7 million tonnes of residual waste each year. This is equivalent to around 2 kilograms of residual waste per person each day. Residual waste generation is projected to increase significantly over the coming decades, reaching an estimated 8.9 million tonnes per annum by 2053 — enough to fill approximately 8.2 Melbourne Cricket Grounds (MCGs).¹

2.1.1 Types of waste

Victoria generates different types of waste, including:

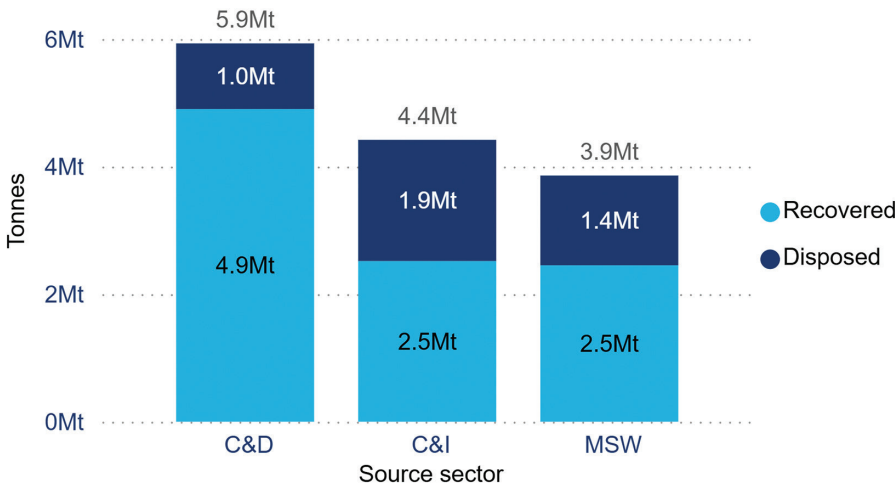
- **Municipal Solid Waste (MSW)** — which is managed predominantly from domestic premises (residual and hard waste) and council activities such as street sweeping, litter collection and street tree lopping. Municipal waste also includes waste dropped off at transfer stations and construction waste from residential owner/occupier renovations.
- **Commercial and Industrial (C&I)** — which are solid materials and waste generated from trade, commercial and industrial activities, including the government sector. It includes waste from offices, manufacturing, factories, schools, universities, state and government operations, and small to medium enterprises – for example, food organics.
- **Industrial, construction & demolition (C&D)** — these are solid materials and waste generated from residential and commercial construction and demolition activities, for example bricks and concrete.²

¹ Lance Ingrams, Chief Strategy Officer, HiQ, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 17.

² Environment Protection Authority Victoria, *Victoria's Waste Performance and Projection Model Dashboard*, <<https://app.powerbi.com/view?r=eyJrjoINDRkNzlhNTEtYjIhYS00YTkyLWVhYmMtZGM4NzA0YjJhY2VliwidCI6ImU4YmRkNmY3LWZlMTgtNGU0OC1hNTU0LTdmNTQ3OTI3MjIzYjI9>> accessed on 1 July 2026.

The industrial, construction & demolition waste sector has the largest waste volumes by tonne, simply by virtue of the weight and mass of the waste generated. Figure 2.1 shows the breakdown of waste recovery and disposal by sector.

Figure 2.1 Waste recovery and disposal 2023–24 by sector

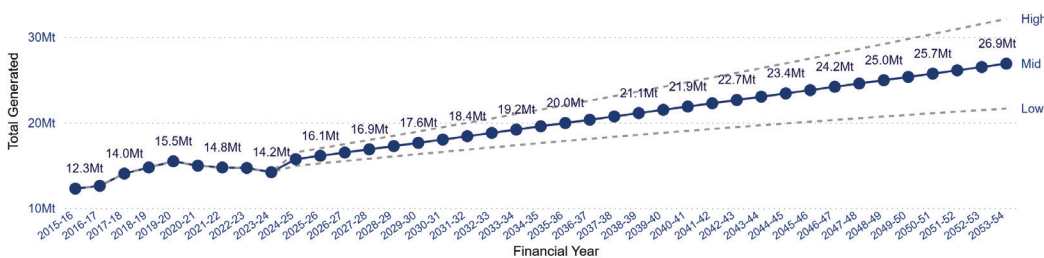


Source: The Environmental Protection Authority Victoria, *Victoria's Waste Performance and Projection Model Dashboard*, <<https://app.powerbi.com/view?r=eyJrIjoibDRkNzlhNTU0OTI3MjIzYjI9>> accessed 10 July 2026.

2.1.2 Trends over time and projected growth

As the population of Victoria grows, an increase in waste generation is highly likely. The ways this increase can be mitigated are many and varied, from waste reduction programs, increased focus on re-use and recycling and alternatives to landfill for residual waste, including waste-to-energy technologies.

Figure 2.2 Projected Waste Generation 2015–16 to 2053–54



Source: The Environmental Protection Authority Victoria, *Victoria's Waste Performance and Projection Model Dashboard*, <<https://app.powerbi.com/view?r=eyJrIjoibDRkNzlhNTU0OTI3MjIzYjI9>> accessed 10 July 2026.

2.1.3 Residual waste

As previously stated, residual waste is the waste that cannot be recycled, repurposed or reused. It is this waste that currently will find its way to landfill. The exact definition of residual waste is somewhat dependent on location and the capacity of the location to sort and recycle, reuse or repurpose materials. What waste is considered residual for the purpose of waste-to-energy is discussed in Section 4.3.

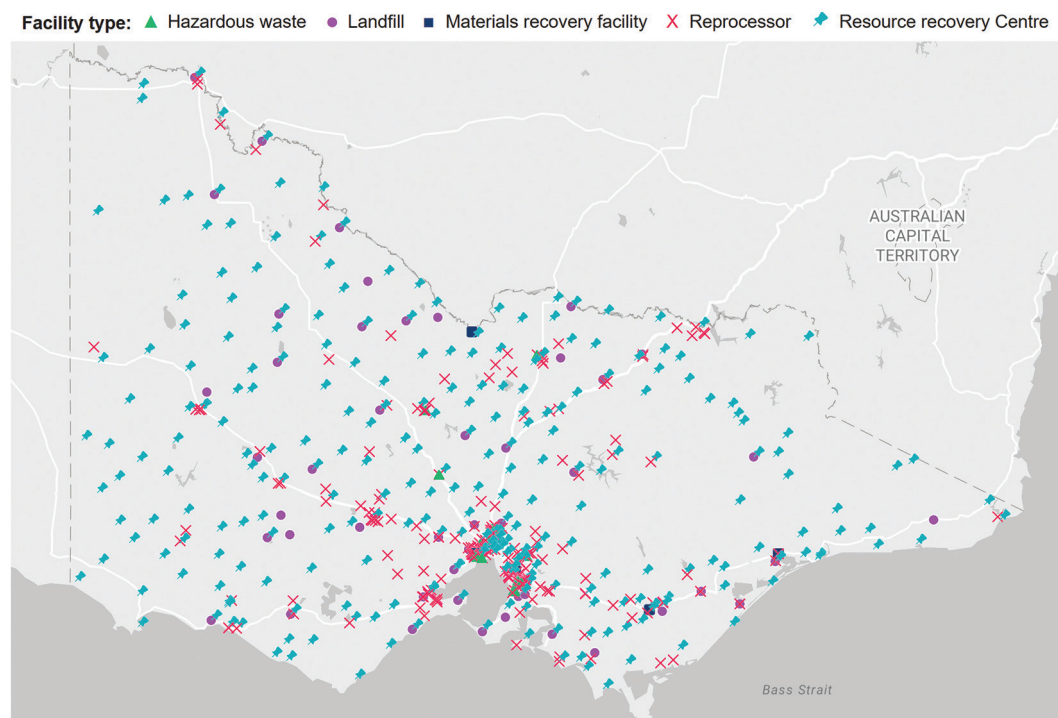
The Committee heard that, despite improvements in recycling and other higher-order waste management practices, the volume of residual waste generated in Victoria continues to grow:

- in 2024, Victoria's total residual waste was approximately 5.7 million tonnes
- in 2053, Victoria's total residual waste is projected to grow to approximately 8.9 million tonnes.³

A key issue throughout the Inquiry, and a major driver of interest in waste-to-energy, is concern that Victoria's existing landfill capacity is becoming increasingly constrained and that developing new landfill sites is difficult.

Carolyn Jackson, Deputy Secretary, Regions, Environment, Climate Action and First Peoples, Department of Energy Environment and Climate Action, told the Committee that 'our landfills are filling up, and we are projected to begin running out of capacity in the mid-2030s'.⁴ The current landfill and waste disposal map is re-produced in Figure 2.3 and 2.4:

Figure 2.3 Infrastructure map

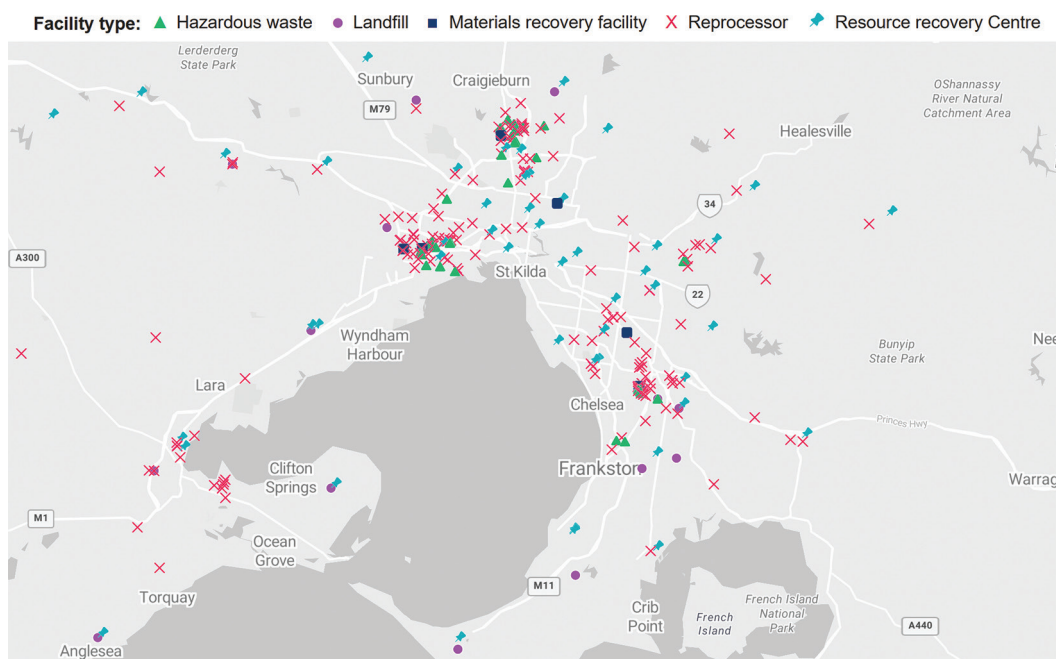


Source: The Environmental Protection Authority Victoria, *Infrastructure Map – overview*, <<https://app.powerbi.com/view?r=eyJrJoiMTIINTliZDctN2Q0NS00N2QyLTk4NjAtMzg5NzlhODJINzhliiwidCI6ImU4YmRkNmY3LWZjMTgtNGU0OC1hNTUOLTdMNTQ3OTI3MjIzYiJ9>> accessed 5 August 2026.

³ Carolyn Jackson, Deputy Secretary, Regions, Environment, Climate Action and First Peoples, Department of Energy Environment and Climate Action, Presentation at a public hearing, Melbourne, 26 May 2026, p. 6.

⁴ Carolyn Jackson, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, pp. 33–34.

Figure 2.4 Infrastructure map, metropolitan Melbourne



Source: The Environmental Protection Authority Victoria, *Infrastructure Map – overview*, <<https://app.powerbi.com/view?r=eyJrJoiMTIjZDctN2Q0NS00N2QyLTk4NjAtMzg5NzlhODJINzhliiwidCI6ImU4YmRkNmY3LWZjMTgtNGU0OC1hNTUOLTdMNTQ3OTI3MjIzYiJ9>> accessed 5 August 2026.

In addition to affecting local amenity, landfills can have a range of broader environmental and community impacts, including:

- **toxins** — waste in landfill often contains toxic substances. These toxins can leach into the soil and groundwater, which can have very long-term impacts on the environment. Examples of these toxic substances include electronic waste which can contain ‘a long list of hazardous substances, including mercury, arsenic, cadmium, PVC, solvents, acids and lead’.⁵
- **leachate** — when waste breaks down it forms leachate, and water filters through that waste. This liquid is highly toxic and can pollute the land, ground water and water ways.⁶
- **greenhouse gas** — landfill also has implications for global warming and climate change as it releases methane, a greenhouse gas 25 times the Global Warming Potential than carbon dioxide. Methane is also a flammable gas that can become dangerous if allowed to build up in concentration:
 - when organic material such as food scraps and green waste is put into landfill, it is generally compacted down and covered. This removes the oxygen and causes it to break down in an anaerobic process. Waste buried in landfill breaks down at a very slow rate and remains a problem for future generations.

⁵ Environment Victoria, *The problem with landfill*, 2013, <<https://environmentvictoria.org.au/resource/problem-landfill>> accessed on 9 July 2026.

⁶ Ibid.

- one of the reasons for the introduction of Food Organics and Garden Organics (FOGO) bins in roadside waste collections has been to divert this organic material from landfill. Composting food scraps and green waste will reduce greenhouse gas emissions.⁷

Operating a landfill also involves significant costs. These include acquiring land, obtaining approvals, constructing environmental protection systems such as liners, leachate and gas collection, managing amenity impacts, operating the site, and ongoing capping, rehabilitation and post-closure maintenance. Costs vary depending on factors such as location, climate and site conditions. In addition to these direct costs, landfills also impose broader environmental and social costs, including greenhouse gas emissions, other air emissions, leachate management and local amenity impacts.

In Victoria, landfill disposal attracts a state waste levy in addition to gate fees. As at 2026, the metropolitan levy for municipal and industrial waste is \$169.79 per tonne, compared with \$84.78 per tonne in regional Victoria, with councils and private operators applying additional disposal and processing charges.

The Committee considers that landfill is both environmentally and economically costly. Reducing the amount of waste sent to landfill, while ensuring genuine residual waste is managed safely and in accordance with the waste hierarchy, remains an important objective of Victoria's waste management system.

FINDING 1: Victoria generates millions of tonnes of residual waste each year that is not currently recycled or reused. In 2024, the State generated 5.7 million tonnes of residual waste, which is projected to increase to 8.9 million tonnes by 2053. Managing and reducing this waste safely and sustainably is one of Victoria's most significant waste management challenges.

2.2 Where does waste currently go in Victoria?

Victoria currently recovers around 69% of the waste it generates, with the remainder sent to landfill (see Figure 2.5). The Committee notes that a recent Victorian Auditor-General's Office (VAGO) report found that this recovery rate has remained largely unchanged since the introduction of Victoria's circular economy policy.⁸

⁷ Ibid.

⁸ Victorian Auditor-General's Office, *Recycling Resources from Waste*, Parliament of Victoria, 2025, p. 16.

Financial Year	Recovered (%)	Landfill (%)
2018-19	69.3%	30.7%
2019-20	69.3%	30.7%
2020-21	70.4%	29.6%
2021-22	68.8%	31.2%
2022-23	69.0%	31.0%

Figure 2.6 shows that organics, plastics and textiles have the lowest recovery rates, with more than half of these materials being sent to landfill. The introduction of Food Organics and Garden Organics collections is intended to divert organic waste from landfill so it can be composted and used in agriculture, landscaping and other growing markets.

Material	Recovered (Mt)	Disposed (Mt)	Total (Mt)
Aggregate, masonry and soils	5.43	1.14	6.6
Metals	1.55	0.16	1.7
Organics	1.43	1.49	2.9
Paper and Cardboard	0.92	0.60	1.5
Glass	0.22	0.13	0.3
Plastic	0.18	0.59	0.8
Textiles	0.07	0.21	0.3
Tyres and rubber	0.06	0.01	0.1

10

2.2.1 The Victorian Circular Economy Strategy

In 2020, the Victorian Government released *Recycling Victoria: A New Economy*, a 10-year strategy and action plan to transition Victoria to a circular economy. The strategy aims to reduce waste, increase resource recovery, strengthen domestic recycling markets and reduce reliance on landfill. It was followed by the *Circular Economy (Waste Reduction and Recycling) Act 2021* (Vic), which establishes the legislative framework for Victoria's transition to a circular economy.

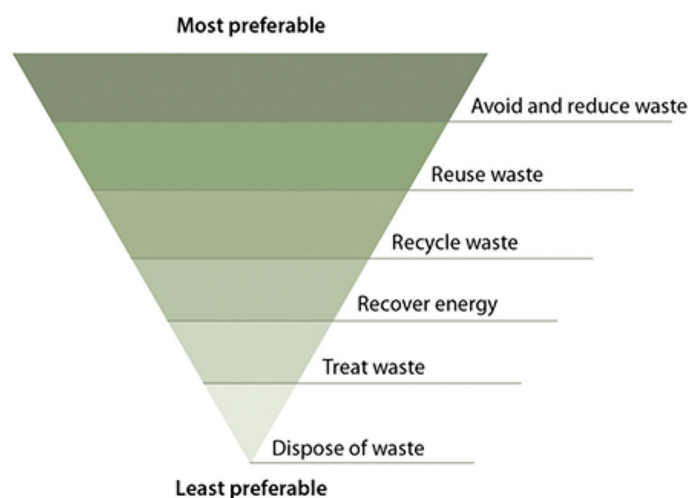
The policy is built around four broad objectives:

- reducing waste through better product design and innovation
- supporting reuse, repair and sharing
- increasing recycling and resource recovery, and
- improving the management of hazardous and high-risk waste.

Victoria's circular economy objectives are underpinned by the waste hierarchy — a globally recognised framework that sets out the preferred order for managing waste to maximise resource recovery while minimising impacts on human health and the environment. The waste hierarchy prioritises:

- **waste avoidance** — reducing the amount of waste generated by households, industry and government
- **resource recovery** — including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of recovered resources
- **disposal** — managing the remaining waste in the most environmentally responsible manner.

Figure 2.7 The Waste Hierarchy



Source: New South Wales Environmental Protection Authority, *The waste hierarchy*, 20 October 2022, <<https://www.epa.nsw.gov.au/Your-environment/Recycling-and-reuse/warr-strategy/The-waste-hierarchy>> accessed 10 July 2026.

The waste hierarchy recognises that waste-to-energy can play a role in managing genuine residual waste. However, that role is intended to be limited to circumstances where it complements recycling and other higher-order waste management options, meets strict environmental standards, and does not result in over-investment in thermal waste-to-energy capacity. To support this objective, the Victorian Government introduced limits on both the types and quantities of waste that can be processed by thermal waste-to-energy facilities. Initially the policy capped statewide thermal waste-to-energy capacity at 1 million tonnes of residual waste per year until 2040. As discussed later in this report, the cap has since been increased to 2.5 million tonnes per year, excluding facilities that qualify for existing operator exemptions (see Section 4.2).

To support its transition to a circular economy, Victoria has also set a number of ambitious targets, including:

- diverting 80% of waste from landfill by 2030
- reducing waste generation per person
- halving the amount of organic waste sent to landfill, and
- providing all Victorian households with access to Food Organics and Garden Organics services.

To achieve these targets, the Victorian Government has committed to major reforms including a four-stream kerbside collection system, the Container Deposit Scheme, improved waste data and planning. The development of waste-to-energy capacity also forms part of the Victorian Government's broader approach to achieving these targets, particularly the target of diverting waste from landfill.

In 2025, the VAGO Report, *Recycling Resources from Waste*, found that, while the Victorian Government had made significant progress in expanding waste recovery and reprocessing capacity, it was on track to achieve only one of its three principal waste diversion targets. The audit found that:

- **Victoria is on track** to provide all households with access to FOGO services by 2030
- **Victoria is not on track** to divert 80 per cent of waste from landfill by 2030, with landfill diversion rates remaining largely unchanged since the strategy commenced, and
- **It is unclear** whether the target to halve organic waste sent to landfill will be achieved because of limitations in the available data.

The Auditor-General concluded that better data on waste flows, particularly the composition of waste sent to landfill, is needed to accurately measure progress against the Government's targets and improve future waste projections.⁹

⁹ Victorian Auditor-General's Office, *Recycling Resources from Waste*, Parliament of Victoria, 2025, p. 1.

The Auditor-General also noted that should the waste-to-energy projects which have received cap licences from Recycling Victoria 'come online and reach full operating capacity, up to 87 per cent of waste could be diverted from landfill based on current waste generation according to the waste projection model.'¹⁰ This could alter Victoria's trajectory towards achieving its target of diverting 80 per cent of waste from landfill.

The Committee notes that it has not sought to evaluate the overall performance of the Victorian circular economy policy. Its focus is limited to those elements relevant to waste-to-energy.

FINDING 2: Through the *Circular Economy (Waste Reduction and Recycling) Act 2021* (Vic), the Victorian Government has committed to transitioning to a circular economy, with a target of diverting 80 per cent of waste from landfill by 2030. Since the strategy commenced in 2020, landfill diversion rates have remained largely unchanged. Note that the Victorian Government considers waste-to-energy as a method to achieve this target.

FINDING 3: While Victoria has made progress in expanding waste recovery and reprocessing capacity, it is not currently on track to achieve its headline target of diverting 80 per cent of waste from landfill by 2030.

2.3 Reducing waste in Victoria

The highest priority in the waste hierarchy is to avoid generating waste in the first place. Throughout the Inquiry, stakeholders from across the debate agreed that reducing waste at its source should be the primary objective, rather than focusing solely on how waste is managed after it has been created. At the same time, the Committee recognises that eliminating residual waste entirely is not realistic and that some level of residual waste management will always be required.

2.3.1 Product stewardship

A key way to reduce waste at its source is through product stewardship. Product stewardship recognises that everyone involved in a product's life cycle, from designers and manufacturers to retailers and consumers, shares responsibility for reducing its environmental and health impacts. This includes considering whether a product is necessary, how it is designed and packaged, whether it can be repaired or recycled, and how it will be managed at the end of its useful life.

Because products are often manufactured, sold and disposed of across different jurisdictions, product stewardship is largely coordinated at the national level. The Commonwealth Government supports a range of mandatory and voluntary product stewardship schemes covering products such as oil, televisions and computers,

¹⁰ Ibid., p. 16.

tyres, mobile phones, and plastics and packaging.¹¹ These schemes encourage manufacturers to design products that use fewer resources, contain fewer hazardous materials, are easier to recycle, and generate less waste.

Packaging is a particular focus because it makes up a significant proportion of the waste stream. The Australian Packaging Covenant Organisation works with industry to improve packaging design, increase recovery and recycling, and reduce the environmental impacts of packaging. A nationally consistent approach is important because much of the packaging and other products managed as waste in Victoria are manufactured outside the State.

The Committee also heard that further work is underway to strengthen product stewardship arrangements. Carolyn Jackson told the Committee that governments are considering a national product stewardship scheme for plastics and packaging that would require manufacturers to take greater responsibility for products at the end of their life.¹²

RECOMMENDATION 1: That the Victorian Government advocate to the Commonwealth Government to consider a national product stewardship scheme for plastics and packaging that would require manufacturers to take greater responsibility for products at the end of their life.

2.3.2 Behaviour change initiatives

Reducing waste also depends on changes in how households and businesses use and dispose of products. Throughout the Inquiry, the Committee heard that waste reduction is not solely the responsibility of governments and industry, but also relies on individuals making informed choices about purchasing, reusing, repairing and correctly disposing of products. Even small actions, such as using reusable items, placing waste in the correct bin and avoiding food waste, can improve resource recovery and reduce the amount of waste sent to landfill.

Victoria has introduced a range of initiatives to encourage these behaviours. One example is the Container Deposit Scheme, introduced in 2024, which provides a financial incentive for Victorians to return eligible drink containers for recycling. Funded by the beverage industry, the scheme aims to increase recycling, reduce litter and support Victoria's target of diverting 80% of waste from landfill by 2030.

The Committee considers that initiatives such as the Container Deposit Scheme demonstrate how behavioural incentives can complement broader waste management policies by encouraging resource recovery and reducing the amount of waste requiring disposal.

¹¹ Department of Climate Change, Energy, the Environment and Water, *Product stewardship schemes and priorities*, 2026, <<https://www.dcceew.gov.au/environment/protection/waste/product-stewardship/products-schemes>> accessed 10 July 2026.

¹² Carolyn Jackson, *Transcript of evidence*, p. 42.

RECOMMENDATION 2: That the Victorian Government develop and deliver a public education campaign on waste reduction.

2.3.3 Recycling markets

In 2017, China banned the import of many recyclable materials due to concerns about contamination and poor-quality recycling streams. The policy had a significant impact on Australia, which at the time relied heavily on overseas markets to process paper, cardboard and plastics and had limited domestic recycling capacity.

The Legislative Council Environment and Planning Committee's 2019 *Inquiry into recycling and waste management* found that the ban significantly disrupted recycling markets and reduced the value of recyclable materials. It noted that the decline in the value of mixed paper alone accounted for around \$50 per tonne, or 67%, of the loss in value of kerbside co-mingled recyclables.¹³

Despite these challenges, Victoria's recycling and circular economy sector has continued to grow. The *Circular Economy Market Report* (2026) estimated that the sector was worth more than \$4 billion in 2023–24, with around \$3 billion in materials recovered, reprocessed and returned to the economy. However, the report also estimated that materials worth approximately \$1.2 billion were still being disposed of in landfill, representing a significant loss of economic value and recoverable resources (See Figure 2.8).¹⁴

Opal's submission states that:

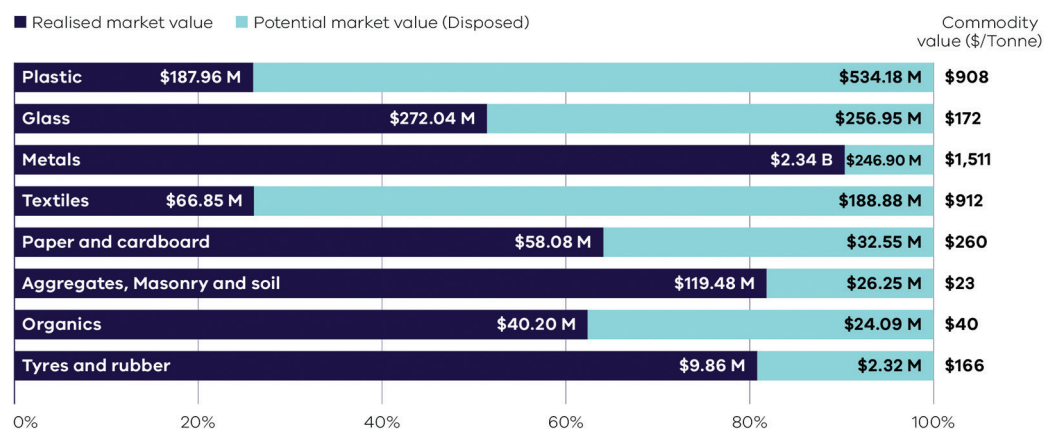
WtE is currently not commercially viable at scale in Victoria, despite delivering higher-order environmental outcomes than landfill. This reflects a structural imbalance where landfill remains economically advantaged due to lower capital requirements and established pricing. Without intervention, the economics will continue to favour landfill and constrain WtE.¹⁵

¹³ Parliament of Victoria, Environment and Planning Committee, *Inquiry into recycling and waste management*, November 2019, p. 46.

¹⁴ Recycling Victoria, *Circular Economy Market Report*, 2026, p. 12.

¹⁵ Opal, *Submission 504*, p. 3.

Figure 2.8 Realised and Potential Market Value and Commodity Value for Waste in 2023–24



Source: The Environmental Protection Authority Victoria, *Circular Economy Market Report*, April 2026, p. 13.

Chapter 3

Waste-to-energy technology

3.1 What is waste-to-energy?

Waste-to-energy is a lower-order waste management option. It is intended to manage only the waste that cannot reasonably be avoided, reused, recycled or composted. The Committee heard that, under current policy settings, waste-to-energy is generally regarded as a last resort before landfill, providing a final opportunity to recover value from waste that would otherwise be disposed of.¹

Waste-to-energy is not a single technology. It is a broad category of technologies that converts waste into useful energy, including heat, electricity, gas and fuels.² In addition to combustion, these technologies include gasification, pyrolysis, anaerobic digestion and landfill gas capture. Each treats different waste streams, operates in different ways and produces different outputs.

While the Victorian *Waste to Energy Framework* covers this broad range of technologies, the proposals considered by the Committee throughout this Inquiry were predominantly large thermal facilities that process residual waste through combustion.³ Therefore, the Committee has focused its discussion on thermal waste-to-energy facilities.

3.1.1 Waste reception and combustion preparation

Residual waste arriving at a waste-to-energy facility by truck is tipped into an enclosed bunker, before being mixed to create a more consistent fuel. The mixed waste is fed into a furnace, where it is burned at high temperatures to produce heat, which is used to generate electricity. Although the process substantially reduces the volume of waste sent to landfill, it also produces emissions and ash that require ongoing management. The Committee heard that waste-to-energy operators are required to carefully control the combustion process by adjusting the waste feed, air supply and furnace temperature to ensure the waste burns efficiently and complies with environmental requirements.

¹ Carolyn Jackson, Deputy Secretary, Regions, Environment, Climate Action and First Peoples, Department of Energy, Environment and Climate Action, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 34.

² Recycling Victoria, *Victorian waste to energy framework: Supporting sustainable and appropriate investment*, 2021, p. 27.

³ Carolyn Jackson, *Transcript of evidence*, p. 34; David Jettner, General Manager, Environment and Sustainability, Opal, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, pp. 15–16; Lance Ingrams, Chief Strategy Officer, HiQ, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 22.

Receiving and mixing the load

Victoria's framework limits thermal waste-to-energy to residual waste.⁴ Recyclable material, including food and garden organics, household mixed recycling, glass and eligible container deposit scheme containers, is banned from thermal waste-to-energy facilities.⁵ However, the Committee heard that what is considered 'residual' depends on how effectively waste is separated before collection and how recovery markets operate. By the time waste reaches a waste-to-energy facility, it has already been shaped by collection systems, sorting practices and recycling services. (This is discussed further in Section 4.3)

Once the residual waste reaches the facility by truck, each load is weighed, recorded and directed to the tipping area. Loads may be inspected, sampled or rejected if they contain material outside the facility's licence or design. Trucks reverse to the tipping edge, tailgates open and waste falls into the bunker.

The bunker may also form part of the facility's odour control. Air can be drawn into the bunker rather than allowed to escape from it, then directed to the furnace for combustion.⁶ Some stakeholders questioned the effectiveness of these controls, expressing concern that they did not always prevent odour from waste-to-energy facilities.

The accepted waste then collects in an enclosed pit before it reaches the furnace. Accepted waste can include wet organic material, dry paper and cardboard, plastics, textiles, timber, glass, metal and grit. Some material burns readily; some passes through the furnace and leaves as residue. Its composition on the grate has already been shaped by collection, sorting and transfer before the truck reaches the tipping hall.

An overhead crane moves across the bunker, lifting and dropping waste, breaking up compacted loads and blending wetter material with drier material. The furnace is not fed in the order trucks arrive; it is fed from the mixed waste drawn from the bunker.

From bunker to grate

A crane lifts mixed waste from the bunker into a hopper, which controls the flow of waste into a feed chute leading to the furnace. The waste then falls onto the moving grate, the floor of the furnace, which slowly carries it through the combustion chamber.

Moving grate combustion is generally used for municipal residual waste because the stream is variable. The Committee heard that facilities can carry mixed material through a furnace without requiring the feedstock to be as uniform as a conventional fuel. Lance Ingrams, Chief Strategy Officer, HiQ, told the Committee that moving grate systems were robust and able to handle variable material in red-bin waste.⁷

⁴ Recycling Victoria, *Victorian waste to energy framework*, pp. 11–12.

⁵ Recycling Victoria, response to questions on notice received 26 June 2026, p. 4.

⁶ Frederik Neuwahl et. al., *Best Available Techniques (BAT) Reference Document for Waste Incineration*, report for the European Commission, Luxembourg, 2019.

⁷ Lance Ingrams, *Transcript of evidence*, p. 22.

Sunbury Clean Future submitted that moving grate technology is a bulk-burn system engineered for heterogeneous, minimally sorted municipal waste streams. It argued that this creates tension with a scheme that confines thermal waste to energy to waste that cannot reasonably be further recycled.⁸

Through the furnace

Heat first removes moisture from the waste. Paper and cardboard dry, food waste loses water, while plastics, textiles and timber heat up and release combustible gases. These gases mix with air and ignite above the waste bed, while the waste itself continues to burn as it moves slowly through the furnace.

Combustion control

The Committee heard that maintaining stable combustion is challenging because the composition of waste changes from load to load. Mixing waste in the bunker helps to reduce this variation but does not eliminate it. Wetter waste absorbs heat as moisture evaporates, while drier materials such as paper, cardboard and plastics release more heat. This affects the waste's calorific value — the amount of energy available as it burns.⁹

Operators seek to manage these variations by adjusting the waste feed rate, grate speed, air supply and furnace temperature. Primary air is supplied through the grate to support combustion within the waste bed, while secondary air is injected above the bed to burn the gases released during combustion. Stable operation depends on maintaining the required oxygen levels, temperature and gas residence time.

At start-up, auxiliary burners heat the combustion chamber to its operating temperature and may also be used to support combustion when required. Once the furnace is operating normally, the waste provides most of the energy needed to sustain combustion.¹⁰

Environment Protection Authority (EPA) Victoria's guideline requires combustion gases to be maintained at 850°C or above for at least 2 seconds after the final injection of air. Where waste contains more than 1% halogenated organic substances (expressed as chlorine), the minimum temperature increases to 1100°C for at least 2 seconds.¹¹

Heat, gas and residue

Heat from the furnace is transferred to a boiler, where water in tubes is converted into steam. The steam can be used to generate electricity.

⁸ Sunbury Clean Future Inc, *Submission 362*, p. 13.

⁹ Environment Protection Authority Victoria, *Guideline: Energy from waste*, 2017, p. 3.

¹⁰ Marian Banaś et. al., 'Municipal Solid Waste Incineration with Energy Recovery: A Critical Review of Process Performance, Emissions, Residues, and System Integration', *Energies*, vol 2698, no. 19, 2026, p. 11.

¹¹ Environment Protection Authority Victoria, *Guideline: Energy from waste*, p. 5.

3.1.2 Outputs of waste-to-energy incineration

One of the main outcomes of incineration is a significant reduction in the volume of waste requiring disposal. However, the process does not eliminate waste completely. Instead, it converts it into energy and by-products, including bottom ash and fly ash, which require further management according to their composition. The Committee heard concerns about how these by-products would be managed and whether they could pose risks to the environment or surrounding communities.¹²

The technical literature generally supports the contention that incineration substantially reduces waste volume, although estimates of the reduction vary. Some research describes the process as capable of reducing waste bulk volume by 70 to 90%,¹³ whilst others give an indicative range of 80 to 85%.¹⁴ These figures provide useful context, but the actual reductions achieved by Victorian facilities may differ. Proponents of proposed facilities will need to show, as part of a development licence application, expected tonnes of bottom ash, fly ash, air pollution control residues, wastewater and other residues, as well as how each stream would be classified, where it would be treated, reused or disposed of and what fallback destination would apply if proposed reuse was not approved.

Treated gas and captured residues

After leaving the furnace, flue gas follows a separate treatment path from the solid material remaining on the grate. As it passes through the boiler, it carries fine particles, acid gases, metals and other contaminants into the emissions treatment system. Depending on the facility's design, this may include filters, scrubbers, injected reagents and activated carbon to remove particles, neutralise acid gases and capture contaminants before the treated gas is released through the stack.¹⁵

The Committee heard that the treatment process removes contaminants from the gas stream rather than destroying them. While the treated gas is discharged through the stack, the captured material remains as fly ash, air pollution control residues, wastewater or other treatment by-products that require further management.

¹² Paul Ross, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 25.

¹³ Sunita Varjani et. al., 'Sustainable management of municipal solid waste through waste-to-energy technologies', *Bioresource Technology*, 2022, p. 6.

¹⁴ Shivaraj Patil et. al., 'Current and emerging waste-to-energy technologies: A comparative study with multi-criteria decision analysis', *Smart Energy*, vol. 100157, no. 16, 2024, p. 9.

¹⁵ Neuwahl et. al., *Best Available Techniques (BAT) Reference Document for Waste Incineration*, pp. 92-136.

Chapter 5 examines the evidence on what may be emitted from waste-to-energy facilities, the effectiveness of emissions controls, and the potential health and environmental impacts of those emissions.

Bottom and fly ash

Incineration produces two main solid residues: incinerator bottom ash (**IBA**), which remains on the grate after combustion, and air pollution control residues (**APCr**), which are captured from the flue gas during the emissions treatment process.

IBA is the heavier residue left on the grate.¹⁶ It can include mineral material, glass, ceramics, grit and metals. The Committee heard that metals can be separated from the ash and sent for recycling. IBA can also be treated and used as an aggregate, such as in concrete or construction in place of virgin materials. Treated IBA requires a permit before material can be used in this way, otherwise it must be taken to a place authorised to receive it.¹⁷

The Committee heard concerns from some community members about whether IBA can be safely stabilised for use as an aggregate.¹⁸ For example, Janek Vähk, Zero Waste Europe, argued that IBA is neither chemically inert nor stable over the long term, and that contaminants may leach into soil and groundwater.¹⁹ He also argued that the only clearly validated reuse pathway in Europe is extraction of ferrous and non-ferrous metals, rather than use of the remaining mineral fraction as aggregate in roads or concrete.²⁰

APCr, or fly ash, comes from the gas-treatment system rather than the grate. These are finer materials that are captured before treated gas is released. The Committee heard evidence that APCr may also be capable of being treated and recovered into aggregate products rather than requiring disposal to hazardous landfill.²¹ However, stakeholders argued that Victoria's current regulatory framework makes it difficult to pursue these recovery pathways.²²

O.C.O. Technology told the Committee that it already treats around 35% of the United Kingdom's APCr, converting it into construction aggregate.²³ It argued that, under the right regulatory and market conditions, APCr can be safely treated and recovered rather than sent to hazardous landfill.

¹⁶ Environment Protection Authority Victoria, *Incinerator bottom ash*, 2026, <<https://www.epa.vic.gov.au/incinerator-bottom-ash>> accessed 7 July 2026.

¹⁷ Ibid.

¹⁸ Chris Wilson, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 31; Tracey Anton, Friends of Latrobe Water, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 45.

¹⁹ Janek Vähk, Zero Pollution Policy Manager, Zero Waste Europe, response to questions on notice received 16 June 2026, pp. 1–2.

²⁰ Ibid, p. 6.

²¹ Andrew Short, Director, Project Development, Australia New Zealand, O.C.O. Technology, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 16.

²² Ibid, p. 21.

²³ Ibid, p. 16.

Andrew Short, Director of Project Development for Australia and New Zealand at O.C.O Technology, told the Committee that current EPA Victoria requirements create a commercial barrier by requiring treated APCr to remain classified as ‘hazardous’ or ‘reportable priority waste’.²⁴ He argued that this makes the material difficult to market, even where treatment has rendered it ‘certainly not hazardous waste’.²⁵ He called for an end-of-waste framework, similar to those used in the United Kingdom and some Australian jurisdictions, to allow suitably treated materials to be reclassified as products.²⁶

The Committee heard concerns about how IBA and APCr would be managed if they remained hazardous or were unsuitable for beneficial reuse, such as in aggregate products. It also heard concerns that, where disposal facilities were not co-located with a waste-to-energy facility, transporting hazardous residues could create additional risks if material were released during transport or in the event of a traffic accident.

Some stakeholders considered that the long-term management and final destination of IBA and APCr residues had not been adequately explained.²⁷ These stakeholders sought clearer information about how any hazardous residues would be managed, where they would ultimately be disposed of and how risks to the community would be minimised. The Committee considers that these questions were not fully addressed by the evidence before it.

Opal’s submission states:

Modern WtE facilities operate under continuous emissions monitoring and achieve high diversion from landfill. Residual ash streams can support recovery of metals and reuse of mineral fractions, in line with the principles of the circular economy. Victoria currently lacks a clear framework to enable these materials to be reclassified for productive use.

Well-regulated jurisdictions consider waste residues as potential inputs into new products and materials consistent with recovery and recycling principles. They seek to re-classify approved residues out of the waste regulatory framework by applying “end of waste principles”. The EU End-of-Waste (EoW) policy, anchored in the Waste Framework Directive, aims to boost the circular economy by establishing clear, high-safety criteria for converting waste into safe, secondary raw materials. It removes bureaucratic barriers (red tape) for recycled materials, ensuring they enjoy the same internal market freedoms as virgin materials, ensuring non toxicity and environmental protection.²⁸

FINDING 4: Waste-to-energy does not eliminate waste completely. It converts residual waste into energy and solid residues that require ongoing management through reuse or disposal.

²⁴ Ibid, p. 21.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Tracey Anton, *Transcript of evidence*, p. 40.

²⁸ Opal, *Submission 504*, pp. 2–3.

FINDING 5: Both incinerator bottom ash and fly ash may have beneficial reuse pathways, but stakeholders disagreed about the safety and long-term suitability of some of these applications.

FINDING 6: Victoria's current regulatory framework may create barriers to recovering treated fly ash as a product, with some stakeholders advocating for an end-of-waste framework similar to those operating in other jurisdictions.

FINDING 7: The long-term management, transport and final destination of incinerator bottom ash and fly ash are important concerns for many community members and should be clearly explained as part of any waste-to-energy proposal. These matters have not yet been clearly explained as part of proposed waste-to-energy projects.

RECOMMENDATION 3: That the Victorian Government update the Environment Protection Authority Victoria's *Energy from Waste Guideline* (Publication 1559.1) to clarify that proponents should provide detailed plans for the long-term management, transport and final destination of bottom ash and fly ash as part of any development and operating licence applications.

RECOMMENDATION 4: That the Victorian Government develop an end-of-waste framework to enable the recovery of suitably safe materials to support their safe commercial reuse.

3.1.3 The energy produced by waste-to-energy facilities

Energy recovery begins with the heat generated during combustion. The furnace transfers this heat to a boiler, where water is converted into steam. The steam can be used to generate electricity or thermal energy. In this way, energy is recovered from residual waste that would otherwise be disposed of.

The Committee heard that industry views energy recovery as part of managing residual waste rather than as a standalone electricity generation project. Waste Management and Resource Recovery contended that waste-to-energy can support local energy generation, recover metals and improve the resilience of Victoria's waste management system.²⁹ The proposed Maryvale facility was cited as an example, with Opal advising that energy recovered from residual waste would be supplied directly to the adjoining paper mill.³⁰

²⁹ Gayle Sloan, Chief Executive Officer, Waste Management and Resource Recovery Association Australia, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 2.

³⁰ David Jettner, *Transcript of evidence*, p. 16.

The Committee also heard that the value of recovered energy depends on how it is used. Heat is generally more valuable when it can be supplied directly to a nearby industrial customer than when it is first converted into electricity, as electricity generation involves conversion losses and the facility itself consumes energy during operation.

For other proposed facilities, the Committee did not receive sufficient evidence to assess the amount of useful energy that would be exported, how much would be used on site or as industrial heat, the certainty of long-term energy offtake, or which energy sources would ultimately be displaced.

Efficiency

The EPA Victoria's guideline makes efficiency part of the test for energy recovery. For thermal processes, proponents must show the plant's overall efficiency after allowing for the energy required to run the process.³¹ For dedicated waste-to-energy plants, the EPA Victoria expects proponents to demonstrate thermal efficiency using the R1 Efficiency Indicator. A plant is expected to reach at least 0.65 to be considered a genuine energy recovery facility unless a lower value is justified.³² Producing heat is not enough. The useful recovery has to remain after conversion losses and the plant's own energy use are allowed for.

Whether energy should be characterised as 'renewable'

The Committee heard differing views about whether energy recovered from mixed residual waste should be considered renewable.³³ Stakeholders noted that residual waste contains both biogenic and fossil-derived materials, raising questions about how renewable energy should be defined and supported.

The Committee also heard that the greenhouse gas performance of waste-to-energy depends on what it replaces, including landfill and fossil fuel electricity. Stakeholders also argued that these benefits may diminish over time as renewable energy and higher recycling rates increase.³⁴

How the energy produced by waste-to-energy facilities should be characterised, particularly in light of the greenhouse gas emissions associated with its generation, is discussed further in Section 5.4.2.

3.2 Alternatives to waste-to-energy

Residual waste is not a fixed quantity waiting to be either landfilled or sent to a waste-to-energy facility. Rather, residual waste is shaped by choices made far earlier

³¹ Environment Protection Authority Victoria, *Guideline: energy from waste*, p. 6.

³² Ibid.

³³ Jane Bremmer, Chair, Toxics Free Australia, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 19.

³⁴ Dr Peter Tait, Public Health Association of Australia, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 55.

in the system — including what waste is created, what households and businesses are asked to separate, what councils collect, what transfer stations sort, what markets accept and what treatment options are available before final disposal.

3.2.1 Create less waste

Throughout the Inquiry, many submitters argued that Victoria should focus more strongly on reducing the amount of waste generated in the first place, contending that waste-to-energy, recycling and landfill all address waste after it has been created, whereas the priority should be on reducing the amount of waste generated in the first place.³⁵

The Committee heard that too much responsibility is currently placed on consumers to sort, recycle and dispose of waste appropriately, despite having little control over how products are designed, packaged or sold. Witnesses submitted that many products are sold with excessive or unnecessary packaging, leaving consumers with limited opportunities to avoid generating waste.³⁶

The Committee heard that shifting responsibility further upstream, particularly towards manufacturers, producers and retailers, could reduce the amount of waste requiring management. Stakeholders argued that better product design, including less packaging, greater durability, improved repairability and easier recyclability, would reduce the amount of residual waste requiring disposal or thermal treatment.³⁷

FINDING 8: Reducing waste at its source decreases the amount of waste that needs to be managed through recycling, thermal waste-to-energy or landfill.

3.2.2 Improved source separation

Several stakeholders emphasised the importance of separating recoverable materials before waste reaches a waste-to-energy facility. Mariel Vilella, for the Global Alliance for Incinerator Alternatives, pointed to source separation, organics recovery, composting, anaerobic digestion and recycling systems, drawing on examples from Wales, San Francisco, Milan and the European Union.³⁸ Jane Bremmer, for Toxics Free Australia, similarly described a system focused on waste reduction, improved source separation, advanced sorting and pre-treatment, including the use of AI-assisted sorting technologies in some Nordic countries.³⁹

³⁵ Alison Medforth, No Sunbury Waste Incinerator, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 3; Allana Bedggood, Manager, Waste Services, Greater Geelong City Council, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 17.

³⁶ Tracey Anton, *Transcript of evidence*, p. 49; Arabella Daniel, Clean Air Communities, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 19.

³⁷ Sue Lanigan, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 44.

³⁸ Mariel Vilella, Director, Global Climate Program, Global Alliance for Incinerator Alternatives, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 52.

³⁹ Jane Bremmer, *Transcript of evidence*, pp. 17–18.

The Committee heard that recovering materials earlier in the waste management process reduces the amount of residual waste requiring treatment and avoids the need to recover materials later from ash or flue gas.

FINDING 9: Maximising source separation and material recovery is essential to ensuring that only genuine residual waste is directed to thermal treatment.

3.2.3 Separating Food and Garden Organics

Despite differing views on incineration, several witnesses emphasised the importance of source separation. Mariel Vilella highlighted organics recovery, composting and anaerobic digestion as key parts of managing residual waste.⁴⁰ Jane Bremmer pointed to food and garden organics, advanced sorting and pre-treatment as part of a broader waste management system.⁴¹ Gayle Sloan similarly told the Committee that the highest resource recovery outcomes are achieved through separation at source and that source-separated organics are not suitable feedstock for waste-to-energy facilities because of their lower calorific value.⁴²

The Committee heard that the same food waste can have very different outcomes depending on how it is managed. When separated before entering the residual waste stream, it can be recovered through biological treatment rather than being sent to landfill or a waste-to-energy facility.

FINDING 10: Separating food and garden organics at the source supports the waste hierarchy by enabling composting and anaerobic digestion in place of lower-order waste management options.

3.2.4 Advanced sorting after collection

Source separation is the first intervention point, but it is not the only one. The Committee heard that mechanical recovery biological treatment (**MRBT**) was characterised by some stakeholders as an emerging best practice approach because it enables additional recyclable materials and organics to be recovered from mixed municipal waste before only the remaining residual waste proceeds to treatment.⁴³

MRBT treats mixed residual waste as material that may still contain recoverable resources. EPA Victoria describes MRBT as combining mechanical sorting with biological treatment and notes that it can remove recyclables and contaminants, reduce moisture, improve calorific value and prepare waste for energy recovery

⁴⁰ Mariel Vilella, *Transcript of evidence*, p. 51.

⁴¹ Jane Bremmer, *Transcript of evidence*, p. 19.

⁴² Gayle Sloan, *Transcript of evidence*, p. 6.

⁴³ Janek Vähk, *Transcript of evidence*, p. 61.

where appropriate.⁴⁴ The process produces several outputs, including recovered materials, treated organics, rejected items and a smaller residual waste stream.

The Committee heard that MRBT has been implemented at scale in several European countries, including Spain, Portugal, Italy, Germany and Austria.⁴⁵ Janek Vähk, for Zero Waste Europe, described it as a means of recovering additional recyclable materials and treating organic waste before only the remaining residual waste proceeds to treatment.⁴⁶ Some stakeholders characterised this approach as emerging best practice because it further reduces the amount of waste requiring thermal treatment or landfill.

The Committee also heard that MRBT is not a substitute for source separation. Recovering materials after they enter the residual waste stream can be more difficult, and the process still produces treatment residues that require appropriate management.

FINDING 11: Improved sorting, including through mechanical recovery biological treatment (MRBT), can increase resource recovery and reduce the amount of waste requiring disposal through thermal treatment or landfill.

3.2.5 Other waste-to-energy technologies

Stakeholders sought to distinguish non-combustion technologies from thermal moving-grate incineration. Toxics Free Australia referred to technologies such as advanced sorting, anaerobic digestion, gas-phase chemical reduction and supercritical water oxidation.⁴⁷

BlueGas Technologies argued that combustion-based waste-to-energy and non-combustion resource recovery technologies are often grouped together despite having different processes and emissions profiles.⁴⁸ Xseed Solutions similarly submitted that plasma-assisted gasification and waste-to-hydrogen technologies should be considered separately from incineration.⁴⁹

Toxics Free Australia, however, argued that thermal technologies should be grouped together, given they all use heat and generate toxic outputs:

... but chemical recycling, usually via pyrolysis or gasification, has its own problems and tends to have highly contaminated outputs which do not have much economic value.⁵⁰

⁴⁴ Environment Protection Authority, *Guideline: Energy from waste*, p. 1.

⁴⁵ Janek Vähk, response to questions on notice, p. 5.

⁴⁶ Ibid.

⁴⁷ Toxics Free Australia, *Submission 397*, p. 2, 7.

⁴⁸ BlueGas Technologies, *Submission 510*, p. 2.

⁴⁹ Xseed Solutions, *Submission 182*, pp. 2, 10–11.

⁵⁰ Lee Bell, Toxics Free Australia, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 21.

Similarly, Chaz Street from No Waste Incinerators in Lara and Greater Geelong Incorporated highlighted that the USA considers pyrolysis and gasification forms of combustion:

When you look at their definition of what a waste incinerator is, they use the term ‘municipal waste combustor’, and that includes all forms of incinerators, all forms of waste pyrolysis and gasification and so forth.⁵¹

The Committee heard that technologies such as gasification, pyrolysis, plasma-assisted gasification and waste-to-hydrogen differ from moving-grate combustion in their feedstock requirements, operating processes, outputs and residues. However, the Committee considers that the use of a different technology does not, in itself, establish its suitability. Each proposal should be assessed on its own merits, including its feedstock requirements, operating scale, environmental performance, useful outputs and management of residual by-products.

Regardless of the technology used, the Committee considers that the central policy challenge remains the same.

FINDING 12: Waste-to-energy is not a single technology. It includes technologies such as moving-grate incineration, gasification, pyrolysis, plasma-assisted gasification and waste-to-hydrogen, each with different feedstock requirements, processes, outputs and environmental considerations.

RECOMMENDATION 5: That the Victorian Government develop a strategy to ensure that only genuine residual waste is managed through lower-order waste management options, while higher-order strategies such as waste avoidance, reuse and recycling, can recover as much waste as possible.

⁵¹ Chaz Street, Secretary, No Waste Incinerators in Lara and Greater Geelong Incorporated, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 29.

Chapter 4

Regulating what a waste-to-energy facility can incinerate

4.1 Introduction

Victoria's *Waste-to-Energy Framework* is intended to divert residual waste from landfill while ensuring that waste-to-energy complements, rather than undermines, recycling and other higher-order waste management activities. A range of policy settings shape how effectively this balance is achieved, including those that determine:

- how much waste can be sent to waste-to-energy facilities
- what kind of waste is eligible to be sent to waste-to-energy facilities.

Stakeholders expressed differing views about whether the current policy settings provide sufficient safeguards to give effect to the objects of the *Circular Economy (Waste Reduction and Recycling) Act 2021*.

Stakeholders contended that there is not enough publicly available information that explains how and why important decisions are made, such as how waste-to-energy capacity is allocated. They argued that, without this information, it is difficult to assess whether the policy is achieving its intended purpose of ensuring that waste-to-energy complements, rather than undermines, higher-order waste management options.

4.2 Limiting how much waste can be sent to waste-to-energy facilities

4.2.1 The Recycling Victoria waste-to-energy cap

The Recycling Victoria waste-to-energy cap sets a statewide limit on the amount of waste that can be processed by thermal waste-to-energy facilities each year. Thermal facilities that want to process eligible waste must apply for a share of that statewide limit.

A cap licence, which sets the maximum amount of permitted waste a facility can process each year, is a separate approval requirement and does not replace the need for planning approval, EPA Victoria permissions or other statutory approvals.¹

¹ Victorian Government, *Victorian waste to energy framework: Supporting sustainable and appropriate investment*, 2021, p. 14.

The statewide cap has increased in stages, from a total of 1 million tonnes per year to a total of 2.5 million tonnes per year:

- The 2021 Framework proposed 1 million tonnes a year.
- On 10 December 2024, the Government announced that it intended to increase the cap to 2.5 million tonnes, subject to a further Regulatory Impact Statement.
- The *Circular Economy (Waste Reduction and Recycling) (Waste to Energy Scheme) Amendment Regulations 2024* prescribed 2 million tonnes per financial year on 17 December, when the expression-of-interest process opened.
- The Regulatory Impact Statement was released for consultation on 20 March 2025, consultation closed on 17 April and the legal increase to 2.5 million tonnes took effect in July.²

The Committee heard that in deciding to cap capacity at 2.5 million tonnes per year, Recycling Victoria compared cap options of 2 million, 2.5 million and 3 million tonnes. The preferred 2.5 million-tonne option was modelled to have sufficient permitted feedstock to 2050, while the 3 million tonne option risked a shortfall during part of the 2040s.³ This modelling considered projected residual-waste growth, pressure on approved landfill capacity, updated data on feedstock availability, resource recovery and emissions and the potential to preserve landfill airspace.⁴ Recycling Victoria said the modelling allowed for further diversion through kerbside food and garden organics, the container deposit scheme, source separation, recycling infrastructure, soft-plastics recycling and product stewardship.⁵

Stakeholders criticised the size of the cap being increased on multiple occasions, arguing that it could not be considered a true cap if it could be raised whenever needed. They contended that increasing the cap undermined its original policy purpose and raised concerns that these protections could be weakened over time. Chaz Street, from No Waste Incinerators in Lara and Greater Geelong, described the cap as a ‘movable feast’ and ‘window-dressing’.⁶

The Minister for Energy, Environment and Climate Change may direct a review of the waste-to-energy cap at any time, and there is no prescribed review cycle or clear criteria for changing the cap if the residual waste stream changes.⁷ This creates uncertainty about how the cap may be amended over time and how it will continue to support its intended policy objectives.

² Recycling Victoria, response to questions on notice received 26 June, p. 3.

³ Department of Energy, Environment and Climate Action, *Waste to Energy Regulatory Impact Statement: Amending Regulations to Increase Waste to Energy Cap Limit*, 2025, pp. 2, 4, 27.

⁴ Ibid, pp. 1–2, 6.

⁵ Recycling Victoria, response to questions on notice, p. 4.

⁶ Chaz Street, Secretary, No Waste Incinerators in Lara and Greater Geelong Incorporated, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 30.

⁷ Victorian Government, *Victorian waste to energy framework*, p. 22.

Of the cap, the Victorian Government states that:

It is designed to strike the right balance between support for sustainable and appropriate industry investment to develop new technologies, and a focus on waste avoidance and recycling in Victoria's transition to a circular economy.⁸

However, the Committee questions whether the cap actually achieves this purpose (See Section 4.4.1).

Similar concerns were expressed by stakeholders, who considered that the cap could have unintended consequences by discouraging investment in waste-to-energy and increasing reliance on landfill.⁹ Gayle Sloan, Chief Executive Officer of Waste Management and Resource Recovery Association Australia, argued that the additional cap allocation process was 'onerous, administrative and expensive', particularly because proponents must also obtain planning approvals and EPA Victoria permissions.¹⁰ As a result, she suggested that the cap could make it harder for waste-to-energy facilities to process genuine residual waste, meaning that more waste would end up in landfill, which is not subject to equivalent capacity caps.¹¹

FINDING 13: Victoria's waste-to-energy cap is intended to strike a balance between encouraging investment in waste-to-energy for genuine residual waste and ensuring it does not undermine recycling and other higher-order waste management activities. The Committee questions whether it achieves this purpose.

FINDING 14: The *Victorian Waste-to-Energy Framework* allows cap licences to be extended, revoked and reallocated, but it does not establish a recurring review cycle or a published test for amending the cap if residual waste volumes change.

⁸ Victorian Government, *Waste to energy: A framework for sustainable and appropriate investment*, 2025, <<https://www.vic.gov.au/waste-energy>> accessed 9 July 2026.

⁹ Gayle Sloan, Chief Executive Officer, Waste Management and Resource Recovery Association Australia, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, pp. 5–6.

¹⁰ Ibid.

¹¹ Ibid.

RECOMMENDATION 6: That the Victorian Government amend the *Victorian Waste-to-Energy Framework* to require periodic public review of the waste-to-energy cap. Each review should consider factors such as:

- actual and projected residual waste generation
- progress in avoidance, reuse, recycling and organics recovery
- actual facility throughput
- licensed projects that have not reached financial close or commissioning
- capacity that has been extended, revoked or reallocated
- whether different licence applicants or facilities rely on the same available feedstock.

The review process should allow the cap to be reduced as well as increased, and its findings and decisions should be published.

4.2.2 Projects allocated a Recycling Victoria cap licence

On 17 August 2025, Recycling Victoria allocated 2.35 million tonnes, or 94% of the new statewide cap, to seven operators:

- Cleanaway Operations Pty Ltd – 760,000 tonnes per annum
- HiQ EFW Victoria Pty Ltd – 750,000 tonnes per annum
- Knox Transfer Station Pty Ltd – 15,000 tonnes per annum
- Liquid Power Co Pty Ltd – 50,000 tonnes per annum
- Melbourne Water Corporation – 450,000 tonnes per annum
- Recovered Energy Laverton Pty Ltd – 280,000 tonnes per annum
- Zerogen Holdings Pty Ltd – 450,00 tonnes per annum.¹²

Tony Circelli, Head of Recycling Victoria, told the Committee that Recycling Victoria could not allocate further new capacity above the cap.¹³

Cleanaway and HiQ together hold 1.51 million tonnes of the 2.35 million tonnes allocated in 2025, representing just over 60% of the Victorian cap allocation.¹⁴ Both HiQ and Cleanaway had originally sought lower tonnages but increased the cap allocation they were seeking. The Committee heard that HiQ had previously discussed a facility of approximately 400,000 or 450,000 tonnes a year before receiving 750,000 tonnes. HiQ Chief Executive Officer Mark Rodgers said waste infrastructure

¹² Victorian Government, *Waste to Energy Scheme licences*, 2026, <<https://www.vic.gov.au/waste-energy-scheme-operating-licences>> accessed 8 July 2026.

¹³ Tony Circelli, Head, Recycling Victoria, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, pp. 47–48.

¹⁴ Victorian Government, *Waste to Energy Scheme licences*.

depends on economies of scale and described the proposal as an investment of about \$2 billion, whose bankability depended on contracted waste.¹⁵ Similarly, Cleanaway's project was first proposed at 380,000 tonnes a year, while the company said its 760,000-tonne allocation would improve economic and operational viability.¹⁶

The 2.5 million-tonne per year cap does not include allocations made to eligible existing thermal waste-to-energy operators.¹⁷ During a public hearing Carolyn Jackson, Deputy Secretary of Regions, Environment, Climate Action and First Peoples at Department of Energy, Environment and Climate Action, explained that Recycling Victoria had issued four existing operator licences through a separate process, bringing the total licensed capacity to just over 3.5 million tonnes per year.¹⁸ Carolyn Jackson also noted that issuing a cap allocation does not mean all of that capacity will be built or used, as projects must still obtain other approvals before they can operate.¹⁹

The four existing-operator licence holders are:

- Paper Australia Pty Ltd, Maryvale, 3840
- Visy Industries Australia Pty Ltd, Coolaroo, 3048
- Great Southern Waste Technologies Pty Ltd, Dandenong South, 3175
- Recovered Energy Laverton Pty Ltd, Laverton North, 3026.²⁰

The licensed quantities attached to these existing operators has not been published.²¹

The Prospect Hill International project proposed for Lara has not received a waste-to-energy cap allocation from Recycling Victoria. Although it has obtained other approvals, including an EPA Victoria development licence, it cannot operate without a cap allocation. The Committee heard that the project's uncertain status has caused ongoing concern in the local community, with many residents unsure whether the project will proceed. When asked whether the Prospect Hill project could still proceed without a cap allocation, the Committee heard that, although no additional cap is available, the project could apply to acquire an existing allocation through a transfer process.²² Recycling Victoria noted that any transfer would require further assessment and that 'nothing is impossible', reinforcing that the project's future remains uncertain.²³

¹⁵ Mark Rodgers, Chief Executive Officer, HiQ, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 18.

¹⁶ Cleanaway, *Melbourne Energy and Resource Centre*, 2026, <<https://www.cleanaway.com.au/melbourne-energy-and-resource-centre>> accessed 9 July 2026.

¹⁷ Victorian Government, *Waste to Energy Scheme licences*.

¹⁸ Carolyn Jackson, Deputy Secretary, Regions, Environment, Climate Action and First Peoples, Department of Energy, Environment and Climate Action, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 47.

¹⁹ Ibid.

²⁰ Victorian Government, *Waste to Energy Scheme licences*.

²¹ Ibid.

²² Tony Circelli, *Transcript of evidence*, p. 48.

²³ Ibid.

The framework contemplates a licence lasting for the projected life of the facility, with provision for renewal.²⁴ It also allows the regulator to extend an agreed project timeframe or revoke a licence and reallocate its capacity where the operator did not reach financial close or commissioning in time.²⁵ The evidence before the Committee did not identify the deadlines attached to the licences issued in 2025 or when delay would lead to an extension rather than revocation.

The Committee notes that the amount of publicly available information varies between projects (see Appendix B). More information was available for some proposals, such as Maryvale, Cleanaway and HiQ, than for others. For example, the Maryvale project has published details about its project's location, technology, waste sources and intended energy use. By contrast, there is much more limited public information about other projects such as Knox Transfer Station, Liquid Power and Zerogen, beyond the licence holder name and the amount of cap allocated.

It can be difficult to understand the status and details of waste-to-energy projects because information is spread across multiple government agencies and approval processes. Cap allocations, planning approvals, EPA Victoria permissions, council procurement and waste supply arrangements are recorded separately and at different stages of a project's development. There is also no fixed order in which these approvals must be obtained, meaning some projects receive a cap allocation before other approvals, while others obtain planning or EPA Victoria approvals first. This makes the overall approvals process difficult to follow.

The Committee understands that receiving a cap licence does not mean a project has approval to operate. Projects must still obtain other approvals, such as planning permits and EPA Victoria permissions, before they can proceed. However, the Committee considers that issuing a cap licence early in the approval process may create the impression that a project has already been approved, even though significant approvals are still required. Sequencing approvals in this way can cause unnecessary concern in the community and undermine confidence in consultation processes before they have even begun. This issue is discussed further in Section 6.3.

FINDING 15: Recycling Victoria allocated 94% of the available statewide waste-to-energy cap capacity on 17 August 2025.

FINDING 16: The 2.5 million-tonne per year waste-to-energy cap does not include capacity held under existing operator licences and therefore does not describe all licensed thermal waste-to-energy capacity in Victoria.

²⁴ Victorian Government, *Victorian waste to energy framework*, p. 16.

²⁵ Ibid, pp. 3, 19.

FINDING 17: Information about waste-to-energy projects is spread across multiple sources and is not consistently reported. This makes it difficult to understand how projects are progressing, why cap allocations have been made, and how they fit within Victoria's broader waste management system.

RECOMMENDATION 7: That the Victorian Government establish a central public register for licensed thermal waste-to-energy projects that includes information on licence holders, capacity allocations, project progress, planning and environmental approvals, feedstock arrangements, operational performance, and licence variations or compliance actions.

4.2.3 How Recycling Victoria allocated cap licences

According to Recycling Victoria, each waste-to-energy cap licence application was assessed on its merits, taking into consideration the following mandatory assessment criteria:

- If the application related to a specified critical waste infrastructure project, the desirability of that project meeting the critical need set out in the Regulations.
- The extent to which the facility would contribute to an efficient waste infrastructure system, including in relation to the facility's proximity to:
 - sources of suitable feedstock
 - offtake destinations for energy and other output products.
- The commercial viability of the facility.
- Any information provided to the Head, Recycling Victoria regarding whether the applicant has obtained environmental, planning, safety and other permits or licences associated with operating or developing the facility.
- Any economic benefits associated with the facility, including employment opportunities created by the construction and operation of the facility.
- The energy outputs and offtakes of the facility and how the outputs and offtakes contribute to efficient energy fuels or products.
- Any other relevant information provided in the applicant's expression of interest or in the full stage application for a cap licence.
- Whether the applicant is a fit and proper person to operate a thermal waste to energy facility.
- Climate change as required under the *Climate Action Act 2017*.
- Other matters as considered appropriate by the Head, Recycling Victoria.²⁶

²⁶ Victorian Government, *Waste to Energy Scheme licences*.

Tony Circelli told the Committee that the assessment process also drew on advice from EPA Victoria, the Department of Transport and Planning, commercial advisers and technical experts, and included an independent executive panel to help ensure the process was ‘fair and equitable across all proponents’.²⁷

Tony Circelli stated that demand for cap allocations exceeded the available capacity, with applications totalling around 3.8 million tonnes for a 2.5 million tonne cap.²⁸ He described the allocation process as ‘a very strong competitive market’, noting that the high cost of developing waste-to-energy facilities limited the number of proponents able to participate.²⁹

Stakeholders described Recycling Victoria’s decision to allocate 94% of the new statewide cap as a ‘gateway decision’ in Victoria’s thermal waste-to-energy rollout.³⁰ Despite the importance of this decision, the Committee heard criticisms that there is very little publicly available information explaining how Recycling Victoria reached it or how the mandatory assessment criteria were applied.

Sunbury Clean Future submitted that, despite pursuing a range of avenues, including freedom of information requests, it had been unable to obtain material from Recycling Victoria explaining how the cap licence decisions were made.³¹ In particular, it questioned how the statutory fit-and-proper test had been applied, noting that the two largest cap licences were awarded to proponents with documented EPA Victoria enforcement histories.³² Sunbury Clean Future also argued that the cap setting and allocation process raised several unresolved questions. It pointed to the increase in the cap shortly before applications opened, the allocation of 94% of the cap in the first round and the lack of publicly available information explaining how the cap and final allocations were determined.³³ It suggested that the records that explain these decisions have not been made public but should be before waste-to-energy projects progress any further.³⁴

Recycling Victoria told the Committee that individual applications had been provided in confidence and contained commercially sensitive information that it was required to protect under section 55 of the *Circular Economy (Waste Reduction and Recycling) Act 2021* (Vic). It also said exemptions had been applied to documents sought under freedom of information legislation.³⁵ The Committee does not understand stakeholders to be seeking access to confidential information; rather, they are seeking a clear explanation from Recycling Victoria of how the decision was made, including assurance that the relevant statutory matters were properly considered.

²⁷ Tony Circelli, *Transcript of evidence*, p. 35.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Dan Kenney, President, Sunbury Clean Future Inc, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 3.

³¹ Sunbury Clean Future, *Submission 362*, p. 9.

³² Ibid, pp. 5–8.

³³ Ibid, p. 10.

³⁴ Ibid, p. 26.

³⁵ Recycling Victoria, response to questions on notice, p. 2.

The Committee notes a concerning pattern in which requests for information explaining the basis of the cap allocation decision have not been met, including through Victorian Parliamentary documents motions and freedom of information processes.³⁶ Shortcomings in the public record matter not only because they may expose decisions to judicial review, potentially delaying the delivery of needed waste infrastructure, but also because public confidence depends on decisions being transparent and meeting appropriate standards of accountability and good governance. Even where a decision has been made lawfully and in accordance with the required process, confidence can be undermined if the reasons for the decision and how the relevant criteria were applied are not clearly explained.

The Committee considers that, given the significance of the cap allocation decision and its role in commencing the rollout of a new technology in Victoria, ‘a table on a government website and a media release’ does not provide the level of transparency and accountability the community reasonably expects.³⁷ The Committee considers that greater transparency is needed.

FINDING 18: The public information that was released about Recycling Victoria’s waste-to-energy cap allocation decision was insufficient to explain how the statutory assessment criteria were applied. While commercially sensitive information must be protected, greater transparency about the basis for these decisions is needed to support public confidence and accountability.

RECOMMENDATION 8: That the Victorian Government publish a statement of reasons within the next six months explaining how Recycling Victoria applied and satisfied the mandatory statutory criteria when allocating waste-to-energy cap licences. A statement of reasons should also accompany any future allocation of further cap licences. There is no expectation that these statements disclose confidential or commercially sensitive information.

RECOMMENDATION 9: If the Victorian Government declines to publish a decision summary within the next six months, Recycling Victoria’s decision-making process should be referred to the Victorian Auditor-General’s Office for review to confirm that all mandatory statutory considerations were properly considered.

4.3 Limiting what kind of waste can be sent to waste-to-energy facilities

While a waste-to-energy cap licence sets the maximum amount of waste a facility can process, the feedstock rules determine what types of waste can be processed under that licence. The Committee considers that the feedstock rules are an important policy

³⁶ Sunbury Clean Future, *Submission 362*, p. 9.

³⁷ *Ibid*, p. 2.

mechanism for ensuring that waste-to-energy complements, rather than undermines, the waste hierarchy (see Section 4.4.1). These rules should be supported by audit and review requirements that assist in ensuring only genuine residual waste is eligible for thermal treatment.

Recycling Victoria told the Committee that thermal waste-to-energy facilities with a cap licence may only process permitted or exempt waste, emphasising that material capable of practical recovery or recycling is banned from being processed by a waste-to-energy facility.³⁸

Municipal residual waste, commonly understood as the waste placed in household red-lidded bins, is only considered ‘permitted waste’ for waste-to-energy where councils provide separate kerbside collections for food organics and garden organics and mixed recycling.³⁹ From 1 July 2027, when the new *Household Waste and Recycling Service Standard* takes effect, councils will also be required to provide a separate glass collection for municipal residual waste to remain eligible for processing at a waste-to-energy facility.⁴⁰

The Committee heard that red-lidded municipal bins can contain significant amounts of recyclable and organic material. Accordingly, some stakeholders questioned whether the contents of the red-lidded bin should be considered genuine residual waste. Jane Bremmer, Toxics Free Australia, told the Committee that residual waste is intended to consist only of material that cannot be composted, reused or recycled.⁴¹ However, she argued that collection systems do not always remove all recyclable and compostable material before it enters the residual waste stream.⁴²

The City of Whittlesea provided a practical example. In a kerbside audit, Whittlesea found that, despite its four-bin system, only 41.5% of material in the bin was residual waste.⁴³ The remainder included 10% recyclable material and 48% food and garden organics. Whittlesea argued that thermal waste-to-energy should only proceed with mandatory pre-sorting and removal of recyclables and organics, even where that material had been placed in the red-lidded bin.⁴⁴ That audit did not establish the composition of garbage bins across Victoria. However, it suggests that the contents of a red-lidded bin cannot always be assumed to consist entirely of residual waste.

The Committee heard that waste-to-energy facilities do not seek organics waste, as it is not desirable feedstock because its low calorific value affects facility operation.⁴⁵ At the same time, the Committee heard that waste-to-energy facilities do not generally propose to sort mixed waste once it arrives at the facility. Instead, they rely on waste

³⁸ Recycling Victoria, response to questions on notice, p. 4.

³⁹ Recycling Victoria, *Waste to Energy Scheme: Guidance on the Scope of the Scheme*, 2024, p. 16.

⁴⁰ Ibid.

⁴¹ Jane Bremmer, Chair, Toxics Free Australia, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, pp. 17–18.

⁴² Ibid.

⁴³ City of Whittlesea, *Submission 424*, p. 3.

⁴⁴ Ibid.

⁴⁵ Gayle Sloan, *Transcript of evidence*, pp. 6–7.

being separated at the source to achieve the highest resource recovery outcomes.⁴⁶ In other words, the system relies on people putting the right items in the right bins.

Commercial and industrial waste may also be permitted to be processed by waste-to-energy facilities after source separation, or where reuse, recycling or material extraction is not technically, environmentally or economically practicable (**TEEP**).⁴⁷

The Committee heard that the TEEP test is a well-intentioned safeguard designed to ensure that only residual waste is processed by waste-to-energy facilities. However, the Waste Management and Resource Recovery Association of Australia submitted that the current framework places responsibility for meeting that requirement on waste-to-energy operators, even though they have little control over how waste is generated, separated or collected before it reaches their facility.⁴⁸ It argued that this disconnect could result in residual waste being sent to landfill rather than recovered through waste-to-energy.⁴⁹

It is not clear to the Committee what threshold proponents must meet to demonstrate that further reuse, recycling or material extraction is not practicable, what evidence they will be expected to provide, how that evidence will be assessed or how those assessments will be reviewed as recovery markets evolve. Understanding how the TEEP test will operate in practice is important because it determines which waste streams are classified as residual and can therefore be processed by a waste-to-energy facility.

It is also not clear to the Committee what the statewide method for sampling facility loads will be, how their composition will be verified, how rejected material will be recorded or how repeated contamination will be dealt with.

FINDING 19: Victoria's *Waste-to-Energy Framework* sets rules about what waste can be used as feedstock in thermal waste-to-energy facilities. However, it is not clear how those rules will operate in practice or be updated as recovery options improve.

FINDING 20: Household waste collected in red-lidded bins, known as municipal residual waste, may still contain recyclable and compostable materials. This raises questions about whether all material in the municipal residual waste stream should be considered suitable for waste-to-energy.

RECOMMENDATION 10: That the Victorian Government invest in research and trials to identify practical and cost-effective ways of recovering non-residual materials from municipal, red-lidded residual waste streams after collection.

⁴⁶ South East Metropolitan Advanced Waste Processing, response to questions on notice received 18 June 2026, p. 4.

⁴⁷ Victorian Government, *Victorian Waste to Energy Framework*, p. 17.

⁴⁸ Waste Management and Resource Recovery Association of Australia, *Submission 581*, p. 6.

⁴⁹ Ibid.

RECOMMENDATION 11: That the Victorian Government develop a consistent, public standard for checking that only eligible waste is sent to waste-to-energy facilities. The standard should clearly set out who is responsible, what evidence is required, how compliance is monitored and audited, and how decisions are reviewed as recycling and recovery options improve.

4.3.1 How waste-to-energy facilities secure their waste supply

The Committee heard that waste-to-energy facilities require a reliable and ongoing supply of waste to operate. Many stakeholders expressed concern about the implications of councils entering into long-term waste supply contracts and what this could mean for Victoria's efforts to reduce waste and increase recycling over time. They argued that the long-term feedstock needs of these facilities could reduce flexibility, making it more difficult for Victoria to adapt as waste volumes decline and recycling and other circular economy initiatives expand.

Alison Medforth, No Sunbury Waste Incinerator, warned that the need to continually feed waste-to-energy facilities could leave Victoria 'stuck on their hook for decades to come'.⁵⁰ Similarly, Dr Peter Tait, the Public Health Association Australia, expressed concern that reliance on waste-to-energy incinerators would create 'a perverse incentive' to supply the waste needed over a facility life of 20 or 30 years.⁵¹

The clearest example before the Committee of how municipal waste would be supplied to a waste-to-energy facility came from councils in Melbourne's south-east. South-East Metropolitan Advanced Waste Processing (**SEMAWP**) was formed by nine councils seeking an alternative to landfill for residual red-bin waste. Mick Cummins, Chair of the SEMAWP Board, told the Committee that the participating councils represent around 2 million people and generate approximately 400,000 tonnes of residual waste each year, which is currently sent to landfill.⁵² He also noted that both the population and the amount of waste generated by these councils are expected to grow significantly over time.⁵³ The councils began a joint procurement in 2018. Mick Cummins described this process as 'technology agnostic' and said it received 32 expressions of interest, with the most viable option emerging as waste-to-energy technology.⁵⁴ By the end of 2024 the councils had entered a waste supply agreement with a consortium comprising Veolia, Masdar Tribe and Opal Energy to supply their municipal residual waste to the proposed Maryvale facility.⁵⁵

⁵⁰ Alison Medforth, No Sunbury Waste Incinerator, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 3.

⁵¹ Dr Peter Tait, Public Health Association of Australia, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 57.

⁵² Mick Cummins, Chair, South East Metropolitan Advanced Waste Processing, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 13.

⁵³ Ibid, p. 14.

⁵⁴ Ibid, p. 13.

⁵⁵ Ibid.

Mick Cummins also told the Committee that a waste-arising model, where councils supply only the waste they generate, would not provide enough ‘financial surety’ for a project to proceed.⁵⁶ As a result, participating SEMAWP councils committed to supplying the Maryvale waste-to-energy facility a minimum amount of waste under a binding 25-year agreement. The exact tonnage committed under the agreement is not publicly available. In response to concerns about what this could mean for councils over the long term, Mick Cummins emphasised that the guaranteed minimum amount was ‘significantly lower than what is likely to be generated over the period of time’ by the participating councils.⁵⁷ He argued that this reduced the risk of councils being unable to meet their contractual commitments even if recycling rates increased significantly.⁵⁸

David Jettner, General Manager of Opal, told the Committee that the Maryvale facility’s contracts with councils are predominately waste-arising; they did not set a floor, so that councils are free to ‘drive initiatives around other recycling and waste reduction opportunities’ without penalty.⁵⁹ It is unclear whether this refers to the SEMAWP councils and, if it does, what type of contractual arrangements these councils have entered into in light of this conflicting evidence.

The limited public information available about these agreements makes it difficult for the Committee to assess the extent to which they may create long-term risks for councils or reduce incentives to increase recycling and other higher-order waste management practices. In the SEMAWP example, the Committee heard evidence that the guaranteed minimum tonnage was set well below the amount of waste expected to be generated, which Mick Cummins argued reduced this risk. However, as the contracted tonnage and the modelling underpinning it are not publicly available, the Committee is unable to independently assess this claim. Greater transparency about contracted waste volumes, and the assumptions used to determine them, would help governments, councils and the community better assess these risks, especially if more waste-to-energy projects progress to contract negotiations.

FINDING 21: Long-term, minimum guaranteed waste supply commitments were presented as necessary for financing proposed waste-to-energy facilities. International experience shows that the use of minimum guaranteed waste supply commitments has the potential to produce perverse consequences and efforts to reduce the quality of waste going to waste-to-energy facilities.

⁵⁶ Ibid, p. 14.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ David Jettner, General Manager, Environment and Sustainability, Opal, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 23.

RECOMMENDATION 12: That the Victorian Government develop guidance to assist councils when considering or entering into long-term waste supply agreements with thermal waste-to-energy facilities. The guidance should address how agreements can remain flexible as residual waste volumes change over time, respond to changes in waste policy and resource recovery, and provide appropriate public transparency while protecting confidential and commercially sensitive information.

4.4 What do these policies mean for higher-order waste management strategies?

The Committee heard concerns that the long operational life of waste-to-energy facilities could affect future waste management decisions and reduce flexibility to pursue higher-order waste management and circular economy objectives (see Section 4.3.1). Stakeholders pointed to examples from Europe where significant waste-to-energy capacity was said to have reduced government and industry incentives to pursue waste avoidance, reuse and recycling.⁶⁰ Others expressed the view that waste-to-energy incineration is fundamentally inconsistent with a circular economy. Pauline Galvin, Climate Action Merri-bek, quoted UN special rapporteur Dr Marcos Orellana, arguing that waste-to-energy is ‘the end of the line for fossil fuels’ and ‘a linear process that is incompatible with a circular economy’.⁶¹

Other evidence argued that the Victorian Government’s waste policy settings, in particular the waste hierarchy, should be reconsidered, arguing that thermal waste-to-energy is at least as undesirable, if not more, than landfill.⁶²

Toxics Free Australia argued that landfill with full pretreatment (that is, investment in higher order waste reduction and recycling) was the best option, with waste incineration being the worst outcome in terms of costs for climate, air quality and health.⁶³

The Circular Economy (Waste Reduction and Recycling) Act 2021 sets out the objectives for waste and recycling in Victoria and recognises the waste hierarchy as the guiding framework for waste management decisions (See Section 2.3). It states that waste should be managed in the following order of preference, beginning with the most preferable:

- waste should be avoided
- waste should be minimised

⁶⁰ Mariel Vilella, Director, Global Climate Program, Global Alliance for Incinerator Alternatives, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, pp. 50–52; Dr Atiq Zaman, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, pp. 54, 59.

⁶¹ Pauline Galvin, Treasurer, Climate Action Merri-bek, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 13.

⁶² No Waste Incinerators in Lara and Greater Geelong, *Submission 423*, p. 19; Marion Cincotta, Victorian Anti-Incinerator Alliance, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 30.

⁶³ Toxics Free Australia, *Submission 397*, p. 6.

- waste should be reused
- waste should be recycled
- energy and other resources should be recovered from waste
- waste should be treated so as to reduce the potential impacts of degradation
- waste should be disposed of.⁶⁴

In this sense, the policy framework envisages a role for waste-to-energy, but only for managing residual waste that cannot be managed through higher-order options. Government and industry stakeholders emphasised that this was both the intended role of waste-to-energy and the role it would perform in practice.⁶⁵

The Committee heard from stakeholders who were not persuaded by these assurances.⁶⁶ Stakeholders pointed to Recycling Victoria's decision to allocate substantial waste-to-energy capacity without having to demonstrate that the relevant waste could not reasonably be managed higher in the waste hierarchy. Sunbury Clean Future argued that this was inconsistent with the waste hierarchy and broader objectives set out in the Act.⁶⁷

In their view, a lack of any statutory requirements or duties creates a disconnect between the objectives set out in the Act and the decision to allocate waste-to-energy caps. They contend that this is because there is no requirement to publicly demonstrate why waste is being directed to a lower-order option instead of being managed higher in the waste hierarchy.⁶⁸ Some stakeholders called for legislative reform to make the waste-management hierarchy an enforceable decision-making requirement, rather than a guiding principle.

The Committee does not consider that this disconnect arises from the waste-to-energy cap itself. In principle, the cap is intended to limit the amount of genuine residual waste that can be processed by waste-to-energy facilities.⁶⁹ As discussed earlier in this report, some residual waste will remain even after waste avoidance, reuse, recycling and other higher-order recovery options have been exhausted. If the projected volume of genuine residual waste is sufficient to justify a statewide cap of 2.5 million tonnes per year, then the allocation of capacity under that cap is consistent with the waste hierarchy. This reinforces the importance of transparent decision-making. Determining whether the 2.5 million tonne cap is appropriate depends on understanding how that figure was reached.

⁶⁴ *Circular Economy (Waste Reduction and Recycling) Act 2021*, pt 1, div 2, s 8(3).

⁶⁵ Carolyn Jackson, *Transcript of evidence*, pp. 34–35; Gayle Sloan, *Transcript of evidence*, pp. 5–7.

⁶⁶ Alison Medforth, *Transcript of evidence*, p. 3; Jane Bremmer, *Transcript of evidence*, pp.17–19; DiaperRecycle, *Submission 580*, p. 3.

⁶⁷ Sunbury Clean Future, *Legislative Reform Package*, 2026, pp. 10–11.

⁶⁸ *Ibid.*, pp. 17–18.

⁶⁹ Victorian Government, *Victorian waste to energy framework*, pp. 2, 6; Carolyn Jackson, *Transcript of evidence*, p. 34.

The Committee considers that the issue is less about the cap itself and more about the feedstock rules that determine what waste can count towards it. As currently drafted, the feedstock rules allow for some waste that could otherwise be recovered through higher-order waste management options to be treated as residual waste that can be incinerated under the cap. For example, allowing all waste collected in municipal red-lidded bins to count towards the cap, regardless of whether some of it could still be recycled, risks directing recyclable materials to a lower-order waste management option. Similarly, the TEEP test may permit additional material to be incinerated where further recovery is not considered technically, environmentally or economically practicable.⁷⁰ The Committee considers that the feedstock rules, rather than the cap, are the key policy mechanism for encouraging higher-order waste management and giving effect to the waste hierarchy. This calls into question what the waste-to-energy cap is trying to achieve.

4.4.1 What is the waste-to-energy cap trying to achieve?

The Committee considers that the purpose of the waste-to-energy cap can be viewed in two ways. On one view, the cap provides a clear policy signal that waste-to-energy is intended to play only a limited role in Victoria's waste management system by restricting the amount of waste that can be processed each year. This reinforces the Government's intention that waste-to-energy will complement, rather than replace, higher-order waste management options.

On another view, the existence of the cap could be interpreted as an implicit recognition that the feedstock rules alone may not be sufficient to ensure that only genuine residual waste is processed. If the feedstock rules were considered capable of consistently achieving that outcome, then some may question whether a separate cap on capacity would be necessary. On this view, the cap serves as an additional safeguard by limiting the amount of waste that can be processed through waste-to-energy facilities, thereby reducing the risk that waste-to-energy could displace higher-order waste management options.

The Committee acknowledges the practical challenges associated with managing municipal waste. Household waste is not always correctly separated before collection, and recovering recyclable materials after collection can be complex and costly. However, limiting the overall capacity of waste-to-energy facilities does not change the composition of this municipal waste. If red-lidded bins contain recyclable or compostable materials, those materials remain in the waste stream regardless of the size of the cap.

The Committee considers a cap on processing capacity does little, on its own, to address these underlying issues. It does not prevent non-residual waste from being incinerated, nor does it address the underlying challenge of incentivising higher-order waste management options. In addition, if the volume of genuine residual waste were to exceed the capped capacity, some of that waste may instead be directed

⁷⁰ Victorian Government, *Victorian waste to energy framework*, pp. 11–12.

to landfill, despite landfill sitting lower in the waste hierarchy than waste-to-energy. The Committee therefore considers that strengthening the feedstock rules may be a more direct way of supporting the objectives of the waste hierarchy than relying primarily on a capacity cap (see Section 4.3).

FINDING 22: A cap on waste-to-energy capacity, on its own, does little to uphold the waste hierarchy and may, where genuine residual waste exceeds the capped capacity, increase reliance on landfill.

4.4.2 Are economic signals required?

The Committee also heard concerns that allocating waste-to-energy cap licences directs a publicly generated waste stream, and the financial value associated with it, to private waste-to-energy operators without a publicly available assessment of whether this represents value for money. Sunbury Clean Future argued that, instead of using public funding mechanisms such as the landfill levy to support higher-order circular economy infrastructure, the current approach allocates that waste stream to private waste-to-energy operators, who can then charge gate fees. Sunbury Clean Future estimated that the value could be as high as \$7.7 billion over the lifetime of the projects and argued that this decision warrants further scrutiny.⁷¹ It said:

At the 2024–25 verified rate of \$129.27 per tonne, the foregone public levy revenue is \$303.78 million per annum – approximately \$7.7 billion over the project horizon. Allocating 94% of the cap through a non-competitive process transfers an estimated \$1.3–\$2.5 billion over the project horizon. Both figures call for independent cost benefit analysis. No disclosed assessment has compared either against the value of the recycling infrastructure the levy was designed to fund.⁷²

The Committee notes that a purpose of the landfill levy is to discourage the disposal of waste to landfill by making higher-order waste management activities such as reuse and recycling more financially attractive. Accordingly, the transfer of public waste streams to higher-order waste management activities is not, of itself, a concern. Rather, it reflects the intended operation of the landfill levy, which seeks to encourage alternatives to landfill. The relevant policy question is which alternatives should be incentivised, and to what extent.

The introduction of waste-to-energy raises the question of whether a similar pricing signal should apply to thermal treatment of waste. If waste-to-energy is intended to complement, rather than compete with, higher-order waste management options, policymakers may wish to consider whether sufficient incentives remain to prioritise waste avoidance, reuse and recycling. In this context, the Committee considers there is merit in further exploring whether an economic mechanism, similar in principle to the landfill levy but tailored to the distinct role of waste-to-energy, could help maintain

⁷¹ Sunbury Clean Future, *Submission 362*, p. 3.

⁷² Ibid.

incentives for waste avoidance, reuse and recycling. The Committee recognises, however, that waste-to-energy performs a different function to landfill and is intended to manage genuine residual waste. Any consideration of a similar mechanism would therefore need to carefully reflect these differences and avoid discouraging the appropriate treatment of residual waste.

Victorian Government policy envisages a role for waste-to-energy in managing residual waste within the circular economy. It also recognises that Victoria's current policy position seeks to reduce reliance on landfill and avoid the development of new landfill capacity. In that context, some form of infrastructure-scale response will be required to manage the volume of residual waste that cannot reasonably be avoided, reused or recycled.

FINDING 23: The introduction of waste-to-energy raises a broader policy question about whether Victoria's economic incentives continue to appropriately support waste avoidance, reuse and recycling ahead of thermal treatment and landfill.

FINDING 24: The Committee heard evidence questioning the current Victorian waste policy settings, including the incorporation of thermal waste-to-energy in the circular economy, and its placement in the waste hierarchy.

RECOMMENDATION 13: That the Victorian Government consider whether Victoria's economic incentives continue to appropriately support waste avoidance, reuse and recycling ahead of thermal treatment and landfill.

Chapter 5

Regulating what a waste-to-energy facility can emit

5.1 Introduction

Knowing what it could mean to live, work or study near a waste-to-energy facility starts with understanding what the facility will emit, how much it will emit and what the potential health impacts of those emissions may be. The Committee found that answering these questions requires careful consideration of complex evidence, some of which is highly contested.

Stakeholders interpreted the available evidence in very different ways, leading to conflicting conclusions about what waste-to-energy facilities emit and how effectively those emissions can be controlled. Without specialist expertise, it is difficult to assess this evidence and determine which conclusions are best supported. The Committee recognises the challenges many members of the community have faced in trying to make sense of these competing claims while seeking to understand what a proposed waste-to-energy facility could mean for them.

Stakeholders also differed as to whether Victoria's regulatory framework would effectively manage those emissions. Some stakeholders considered that the standards to be applied would provide adequate protection, while others did not.

While waste-to-energy technology is well established in other jurisdictions, with over 2,000 facilities operating around the world, it is new to Victoria.¹ In these circumstances, the Committee considers that the Victorian Government has a particular responsibility to help communities understand the evidence underpinning the technology, rather than simply assuring them that it is safe. To date, the Committee considers that the Victorian Government has not done enough to explain the evidence behind waste-to-energy facilities or help communities understand these proposals.

5.2 What is emitted from a waste-to-energy facility?

When mixed waste is burned in a waste-to-energy facility, chemical reactions in the furnace can produce a range of emissions. These include:

- **particulate Matter** (PM), such as PM^{2.5} and PM¹⁰, which are tiny airborne particles

¹ Gayle Sloan, Chief Executive Officer, Waste Management and Resource Recovery Association Australia, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 2

- **gases**, such as Nitrogen Oxides (NO^x), Sulphur Dioxide (SO²) and Hydrogen Chloride (HCl)
- **heavy metals**, such as Mercury and Lead
- **dioxins and furans**, which describe a family of compounds with varying degrees of toxicity
- **greenhouse gases**, such as Carbon Dioxide (CO²) and Nitrous Oxide (N²O), and
- **PFAS**.

Many of the substances that may be emitted from a waste-to-energy facility are already present in the environment from both natural and human sources, such as soil dust, pollen, bushfires, vehicle emissions and industrial processes.² However, this does not mean that additional emissions are inconsequential. Any emissions from a waste-to-energy facility would add to overall environmental concentrations and cumulative exposure, alongside existing background levels and other sources of emissions.³

Human exposure to emissions from waste-to-energy facilities may occur through:

- inhalation
- deposits on the skin, or
- eating food containing deposited pollutants.⁴

Dr Peter Tait, Public Health Association of Australia, told the Committee that where exposure occurs, it is most likely to be through eating food exposed to pollutants, rather than through inhalation or skin contact. However, Dr Tait noted that determining the specific exposure pathway can be difficult.⁵

The Committee heard that the design of a waste-to-energy facility can help minimise emissions. For example, by:

- Operating the furnace at the appropriate temperature, for a certain time and under controlled oxygen conditions to maximise combustion and minimise the generation of pollutants, including dioxins.⁶
- Requiring emissions from the furnace to pass through pollution control equipment before being discharged into the atmosphere via a tall stack or chimney.⁷

2 Waste Management and Resource Recovery Association Australia, *Submission 581*, pp. 15–16; Australian Government Department of Climate Change, Energy, the Environment and Water, *Particulate Matter (PM10 and PM2.5)*, 3 June 2026, <<https://www.dcceew.gov.au/environment/protection/npi/substances/particulate-matter-pm10-and-pm25>> accessed 21 July 2026.

3 Janek Vähk, Policy Manager, Zero Waste Europe, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 56.

4 Dr Peter Tait, Public Health Association of Australia, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 58.

5 Ibid.

6 Waste Management and Resource Recovery Association Australia, *Submission 581*, pp. 16–17.

7 Ibid.

In Victoria, a waste-to-energy facility cannot operate unless it incorporates these kinds of ‘multistage’,⁸ ‘best practice emissions controls’.⁹ The Committee heard that, while some stakeholders considered these controls to be effective in minimising emissions,¹⁰ others questioned their effectiveness in practice.¹¹

This divergence in views is particularly important for communities because differing views on the effectiveness of emissions controls lead to different expectations about the level of emissions that may be produced by a waste-to-energy facility. One example of these differing views was the evidence the Committee heard on whether de novo synthesis can be mitigated through facility design and pollution control systems.

Jane Bremmer, Toxics Free Australia, described de novo synthesis as evidence ‘that you cannot make [waste-to-energy facilities] safe’.¹² She told the Committee that the ‘most dangerous pollutants are formed outside of the stack’¹³ as they cool, re-form and attach to soot and ash particles. According to this evidence, because de novo synthesis occurs after emissions have passed through pollution control systems, it cannot be addressed by such controls.¹⁴

The Committee put Jane Bremmer’s evidence to Dr Jen Martin, Chief Environmental Scientist at the Environment Protection Authority Victoria.¹⁵ Dr Martin said that modern waste-to-energy facilities are specifically designed to minimise de novo synthesis through the way they are operated and by using multiple pollution control systems.¹⁶ This includes by carefully controlling the combustion process, rapidly cooling emissions to reduce the opportunity for pollutants to reform and using multiple stages of pollution control.¹⁷ Dr Martin told the Committee that these measures have been successful in significantly reducing dioxin and furan emissions, with some facilities recording levels below the limit of detection.¹⁸

The Committee considers that, while these two pieces of evidence are not necessarily technically inconsistent, they are likely to convey very different impressions to the average reader about what will be emitted from a waste-to-energy facility and the extent to which those emissions can be controlled. Such divergent accounts do not

8 Dr Jen Martin, Chief Environmental Scientist, Environment Protection Authority Victoria, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 36.

9 Carolyn Jackson, Deputy Secretary, Regions, Environment, Climate Action and First Peoples, the Department of Energy, Environment and Climate Action, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 34; Dr Jen Martin, *Transcript of evidence*, p. 36.

10 Dr Jen Martin, *Transcript of evidence*, pp. 45–46.

11 Lee Bell, Senior Advisor to the International Pollution Elimination Network, Toxics Free Australia, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, pp. 19–20; Jane Bremmer, Chair, Toxics Free Australia, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 16.

12 Jane Bremmer, *Transcript of evidence*, p. 16.

13 Ibid.

14 Ibid.

15 Jen Martin, *Transcript of evidence*, pp. 45–46.

16 Ibid.

17 Ibid.

18 Ibid.

assist communities to understand the likely impacts of a proposal. Instead, they can create confusion and contribute to community fear, particularly where facilities are proposed close to homes, workplaces or schools.

The Committee heard from some witnesses that organised activist campaigns have amplified community fear by overstating the risks associated with emissions.¹⁹

Dr Jackie Wright, Director of Environmental Risk Sciences, a commercial consulting company, stated that ‘a very organised activist group’ distributes what she described as ‘the same package of misinformation’ to communities near proposed waste-to-energy facilities. She suggested these messages resonate because they draw on existing uncertainty about chemicals and emissions within the community.²⁰ Proponents may then need to spend significant time responding to those claims, although their ability to address community concerns may be limited because they are not always regarded as independent or trusted sources of information.

The Committee does not consider that community concerns are simply the result of inaccurate or contested information from some groups. While this kind of information is likely to add to community confusion, the Inquiry showed that the science underpinning this sector is complex and experts do not always agree, making it difficult for communities to understand the evidence and assess competing claims. Without clear, independent information from the Government, communities are more likely to rely on information from a range of sources, some of which may present only part of the picture or offer competing interpretations of the evidence.

The Committee considers that the Victorian Government has an important role to play in addressing this information gap. It should provide communities with clear, accessible and science-based information about the technology, the emissions expected from modern waste-to-energy facilities, the effectiveness of emissions controls, and the areas where uncertainty remains. The Committee does not consider that proponents alone can fulfil this role, particularly where sections of the community may perceive them as having a commercial interest in the proposal, potentially affecting the level of trust placed in the information they provide (see Section 4.6). The Committee considers that, to date, the Victorian Government has not played a sufficiently active role in supporting community understanding of what may be emitted from a waste-to-energy facility. This view was shared by a number of stakeholders who participated in this Inquiry.²¹

FINDING 25: Many of the pollutants that may be emitted by waste-to-energy facilities are already present in the environment from other sources. Emissions from a waste-to-energy facility should be considered in the context of a community’s overall cumulative exposure from all sources.

¹⁹ Dr Jackie Wright, Director, Environmental Risk Sciences, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 9.

²⁰ Ibid.

²¹ For example, see Carly Moore, Mayor, Hume City Council, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 55; Banyule City Council, *Submission 426*, pp. 5–6.

FINDING 26: The Victorian Government has not provided communities with sufficient independent guidance about the emissions expected from modern waste-to-energy facilities, the effectiveness of emissions controls, and what this means in practice for nearby communities.

RECOMMENDATION 14: That the Victorian Government provide communities with clear, accessible and evidence-based information about waste-to-energy facilities, including how they operate, the emissions they produce, how emissions are controlled, and where uncertainty remains.

5.3 What do emissions from a waste-to-energy facility mean for our health?

5

The Committee heard widespread concern from community members about the potential health impacts of emissions from waste-to-energy facilities, particularly where proposed facilities would be located close to homes and schools.²² This was one of the most common issues raised during the Inquiry, with approximately two-thirds of all submissions expressing concern about the potential health impacts of proposed facilities.²³

Dr Peter Tait, Public Health Association of Australia, stated that waste-to-energy incineration has been linked with a range of health effects, including cancers and reproductive dysfunction.²⁴ He told the Committee that these associations are strongest for older incinerators and facilities with infrequent maintenance, which he said have been ‘strongly linked with adverse health effects’.²⁵

Stakeholders disagreed about whether the available evidence proves that emissions from waste-to-energy facilities are linked to adverse health impacts. Varying stakeholders told the Committee that:

- Attributing adverse health outcomes to emissions from a particular waste-to-energy facility is difficult where communities are exposed to pollutants from multiple sources. As a result, studies may be unable to reliably distinguish the effects of facility emissions from other sources of exposure or contributing factors.²⁶

²² For example, see, Matthew Lingard, *Submission 1*, p. 1; Craig Buty, *Submission 68*, p. 1; Irene Campbell, *Submission 119*, p. 1; Emma West, *Submission 270*, p. 1; Mia Molloy, *Submission 354*, p. 1; Barbara Horwood, *Submission 403*, pp. 1–2; Kerry Heinrich, *Submission 452*, p. 1; Name withheld, *Submission 518*, p. 1; Name withheld, *Submission 591*, pp. 1–2; Allie Goodchild, *Submission 618*, p. 1; Jenny Saal, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 24.

²³ Ibid.

²⁴ Dr Peter Tait, *Transcript of evidence*, p. 56.

²⁵ Peter Tait et al. ‘The health impacts of waste incineration: a systematic review’, *Australian and New Zealand Journal of Public Health*, vol. 44, no. 1, February 2020.

²⁶ Dr Peter Tait, *Transcript of evidence*, p. 57.

- The extent to which findings from studies of older incinerators can be applied to modern waste-to-energy facilities is contested. Some stakeholders argued that modern emissions controls make those findings less applicable,²⁷ while others considered that because newer facilities continue to emit concerning levels of pollutants the health findings remain relevant.²⁸
- Some studies linking waste-to-energy emissions with adverse health effects have methodological limitations that weaken the conclusions that can be drawn and reduce the extent to which their findings can be applied to other waste-to-energy facilities.²⁹
- A lack of conclusive evidence should not be taken to mean that waste-to-energy facilities pose no risk to human health. In these circumstances, decision-makers should apply the precautionary principle by taking the possibility of harm into account, rather than waiting until harm has occurred before acting.³⁰

5.3.1 Attribution challenges

The Committee heard that researchers face challenges in attributing specific adverse health outcomes to emissions from waste-to-energy facilities, as distinct from other sources of exposure or other contributing factors.

Multiple stakeholders acknowledged that communities are ‘already exposed’³¹ to pollutants from a variety of natural and human-made sources:

Now, it depends where they are, what is upwind of where they are living. You know, there might be other industries, there might be a major highway which is contributing some pollution into the environment and there may be a waste-to-energy incinerator. All of those things have the potential to be putting toxins into the environment which we may be measuring and we may be picking up as ill effects.³²

In these circumstances, where communities may be exposed to pollutants from multiple sources, attributing any adverse health effects to one source of exposure can be challenging. In other words, some studies cannot reliably determine whether an adverse health outcome is caused by emissions from a waste-to-energy facility or alternatively is caused by other sources of exposure, other contributing factors, or a combination of all of these.

²⁷ Gayle Sloan, *Transcript of evidence*, p. 2; Dr Jackie Wright, *Transcript of evidence*, p. 3; Dr Jen Martin, *Transcript of evidence*, pp. 37–46.

²⁸ Jane Bremmer, *Transcript of evidence*, p. 16.

²⁹ Dr Jen Martin, *Transcript of evidence*, p. 42; UK Health Security Agency, *Epidemiological evidence review in the UK and EU, following implementation of the Waste Incineration Directive*, 9 June 2025, <<https://www.gov.uk/government/publications/municipal-waste-incinerators-emissions-impact-on-health/epidemiological-evidence-review-in-the-uk-and-eu-following-implementation-of-the-waste-incineration-directive>> accessed 21 July 2026; Peter Tait et al. ‘The health impacts of waste incineration: a systematic review’.

³⁰ Dr Peter Tait, *Transcript of evidence*, p. 57.

³¹ Dr Jackie Wright, *Transcript of evidence*, p. 2.

³² Dr Peter Tait, *Transcript of evidence*, p. 57.

As some stakeholders emphasised, the fact that adverse health outcomes cannot be conclusively attributed to emissions from a waste-to-energy facility does not necessarily mean the facility is causing no harm.³³ They argued that it demonstrates only that a study was unable to establish a causal relationship between emissions from a waste-to-energy facility and the observed health outcomes.³⁴

Further, some stakeholders argued that the key issue is not whether adverse health outcomes can be attributed to emissions from a single waste-to-energy facility, but how those emissions contribute to a community's overall cumulative exposure.³⁵ They emphasised that communities are already exposed to pollutants from many natural and human-made sources and that any assessment of potential health risks should take that broader context into account, particularly where background exposure is already elevated due to surrounding industries.³⁶

While this perspective provides important context for understanding cumulative exposure, it does not fully address a key question facing decision-makers: whether emissions from a particular waste-to-energy facility are likely to cause adverse health effects and, if so, whether that risk justifies refusing approval. In this context, the ability to determine whether any adverse health outcomes are attributable to emissions from a particular facility is central to assessing that risk.

The evidence suggesting that emissions from modern waste-to-energy facilities may be below detectable levels or may not produce a measurable increase above existing background concentrations further complicates this analysis.³⁷ If accepted, this evidence makes it more difficult to conclude that emissions from a facility would materially increase a community's cumulative exposure. On that view, it then also becomes difficult to conclude that emissions from such a facility would contribute to adverse health outcomes beyond those already associated with the community's existing background exposure and other sources of emissions.

The Committee considers that this is another area where greater government leadership would assist communities to understand what is known, what remains uncertain, and what that uncertainty means in practice. Without clear and trusted information, it is understandable that communities have become very concerned about the potential health implications of proposed facilities, particularly where those facilities are located close to homes, workplaces and schools.

Jane Vähk, Policy Manager at Zero Waste Europe, explained to the Committee that their research from recent years across six countries, including of state-of-the-art modern facilities, shows high levels of emissions and dioxins at levels that 'if you were growing some food, it would not be recommended for consumption'.³⁸

³³ Ibid.

³⁴ Ibid.

³⁵ Jane Vähk, *Transcript of evidence*, p. 56; James Stirton, Executive Director, City Infrastructure, City of Greater Geelong, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 12.

³⁶ Dr Atiq Zaman, Curtin University Sustainability Policy, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 62.

³⁷ Dr Jen Marin, *Transcript of evidence*, pp. 43–44; Dr Jackie Wright, *Transcript of evidence*, p. 2.

³⁸ Jänek Vahk, *Transcript of evidence*, p. 59.

FINDING 27: The Committee considers that the Victorian Government has an important role in explaining the scientific complexity and the competing interpretations of the evidence. The Committee does not consider that this has occurred to a sufficient extent to date.

RECOMMENDATION 15: That the Victorian Government provide clear, evidence-based information to the public regarding thermal waste-to-energy.

5.3.2 ‘Older’ versus ‘modern’ incinerator technology

The distinction between older and modern waste-to-energy facilities was a recurring theme in the evidence before the Committee. Several witnesses emphasised that modern facilities differ significantly from older incinerators because they incorporate strict emissions controls and reflect decades of technological development and international best practice.³⁹

Some stakeholders emphasised that modern waste-to-energy facilities incorporate design features and emissions controls that were not present in older incinerators and, as a result, are expected to produce substantially lower emissions,⁴⁰ with some pollutants reported at levels below the limit of detection.⁴¹ Dr Jen Martin, Chief Environmental Scientist, told the Committee that the reduction in emissions, such as dioxins and furans, from modern waste-to-energy facilities is well documented and is ‘down 99 per-cent plus compared to historical plants’:⁴²

There have been considerable changes in the technologies, really stemming from when the EU introduced the waste incineration directive. Prior to that point, it was very much a way of treating waste effectively. There were limited to no air pollution controls in place. The combustion efficiency that can actually control the generation of a lot of pollutants was not particularly good. So there has been a significant change in what you are seeing in terms of pollution and emissions. It is very well documented at this stage.⁴³

On this basis, these stakeholders argued that findings of adverse health impacts associated with older incinerators cannot necessarily be applied to modern waste-to-energy facilities, as lower emissions may reduce or eliminate the observed association with adverse health outcomes.⁴⁴

³⁹ Gayle Sloan, *Transcript of evidence*, p. 2; Dr Jackie Wright, *Transcript of evidence*, p. 3; Dr Jen Martin, *Transcript of evidence*, pp. 37–46; Powering Australia, *Submission 503*, p. 3.

⁴⁰ Gayle Sloan, *Transcript of evidence*, p. 2; Dr Jackie Wright, *Transcript of evidence*, p. 3; Dr Jen Martin, *Transcript of evidence*, pp. 37–46.

⁴¹ Jen Martin, *Transcript of evidence*, pp. 43–44; Dr Jackie Wright, *Transcript of evidence*, p. 2.

⁴² Jen Martin, *Transcript of evidence*, p. 42.

⁴³ Ibid.

⁴⁴ Gayle Sloan, *Transcript of evidence*, p. 2; Dr Jackie Wright, *Transcript of evidence*, p. 3; Dr Jen Martin, *Transcript of evidence*, pp. 37–46.

By contrast, other stakeholders challenged the distinction between older and modern waste-to-energy facilities. Jane Bremmer, Toxics Free Australia, questioned whether air pollution control systems introduced around 2000 could be characterised as modern, while acknowledging that those systems have continued to undergo incremental refinements over time as understanding of emissions has evolved.⁴⁵ Similarly, Dr Peter Tait cautioned against discounting evidence from older incinerators, arguing that it is premature to conclude that modern waste-to-energy facilities pose a lower health risk because insufficient time has elapsed to determine whether improved emissions controls have reduced long-term adverse health impacts.⁴⁶

Further, even if emissions are reduced, evidence cited by witnesses and in submissions notes that there are some substances for which there is no safe level, including persistent organic pollutants, PM^{2.5}, PM¹⁰, and heavy metals in air dust.⁴⁷

FINDING 28: Modern waste-to-energy facilities incorporate emissions controls that differ from those used in older facilities. Some stakeholders considered that these differences affect the extent to which findings from studies of older facilities can be applied to modern facilities, while others cautioned against discounting those findings.

5.3.3 Methodological limitations in the evidence

The Committee heard evidence that questioned the strength and reliability of the existing evidence linking waste-to-energy emissions with adverse health effects.⁴⁸ This matters because limitations in study design can weaken the evidence and reduce the extent to which it supports conclusions about the health impacts of emissions from waste-to-energy facilities. The Committee also heard the contrary view: that the design of a study can influence whether long-term harm is detected and, in some cases, may obscure evidence of such harm.

Dr Jen Martin, Chief Environmental Scientist, referred the Committee to a systematic review by the UK Health Security Agency, which found ‘no clear evidence of an association between exposure to emissions from modern, well-regulated waste-to-energy facilities and morbidity, cancer or adverse birth outcomes’.⁴⁹

This review examined epidemiological studies of modern municipal waste incinerators operating under post-2000 European emissions standards. Although some studies linked waste-to-energy emissions with adverse health outcomes, the review found that many of these studies had important design limitations, including inadequate adjustment for other sources of pollution and the long time it can take for some

⁴⁵ Jane Bremmer, *Transcript of evidence*, p. 16.

⁴⁶ Dr Peter Tait, *Transcript of evidence*, p. 56.

⁴⁷ Toxics Free Australia, *Submission 397*, p. 7; No Waste Incinerators in Lara and Greater Geelong, *Submission 423*, p. 22.

⁴⁸ Jen Martin, *Transcript of evidence*, p. 45.

⁴⁹ UK Health Security Agency, *Epidemiological evidence review in the UK and EU, following implementation of the Waste Incineration Directive*.

diseases, such as cancer, to develop.⁵⁰ Overall, the review concluded that modern, well-run and well-regulated municipal waste-to-energy incinerators are ‘not a significant risk to public health’.⁵¹

Dr Peter Tait authored a similar systematic review on the health impacts of waste incineration, published in the *Australian and New Zealand Journal of Public Health* in 2020.⁵² The review examined English-language studies on waste incineration and health using the PRISMA systematic review methodology. The review concluded that the available evidence is limited by study design, multiple sources of pollution and the difficulty of establishing causation.⁵³ Referring to this review, Dr Martin told the Committee that many of the studies it considered were of ‘a very low level of reliability’,⁵⁴ making it ‘very hard to base significant decisions on’⁵⁵ their findings.

Dr Tait also referred to a more recent review of studies published between 2018 and 2024, which was not accepted for publication. He explained that, since the 2020 systematic review, only a small number of additional studies had been published. Most were of generally low quality and produced mixed findings, leaving insufficient evidence to conclude whether adverse health effects had increased, decreased or remained unchanged.⁵⁶

Despite these findings, Dr Peter Tait cautioned the Committee against interpreting a lack of evidence of harm as evidence of no harm:

I think my reading of that review is that a lot of it relies on the fact that there is lack of evidence of harm at a high level, but equally with that lack of evidence of harm, there is also a lack of evidence of no harm. So they are sort of saying, ‘Nothing to see here, because we haven’t found it.’ That is why I am thinking we need to be cautious about these sorts of claims. I think that there is correlation, and attribution is difficult, but the fact that there is some correlation means there is still potential to do harm.⁵⁷

Dr Tait argued that, even in the absence of robust evidence linking emissions from waste-to-energy facilities to adverse health impacts, decision-makers should adopt a precautionary approach to managing potential risks (discussed further in Section 4.3.4).⁵⁸ This view was shared by other stakeholders, who argued that studies with relatively short observation periods may be limited in their capacity to identify the effects of long-term exposure. In their view, an absence of detected harm in such studies should not be interpreted as evidence that no long-term harm occurs.⁵⁹

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Peter Tait et al. ‘The health impacts of waste incineration: a systematic review’.

⁵³ Ibid.

⁵⁴ Dr Jen Martin, *Transcript of evidence*, p. 45.

⁵⁵ Ibid.

⁵⁶ Dr Peter Tait, Public Health Association of Australia, response to questions on notice received 1 July 2026, p. 4.

⁵⁷ Dr Peter Tait, *Transcript of evidence*, p. 57.

⁵⁸ Ibid.

⁵⁹ Chris Wilson, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 26.

By contrast, other stakeholders interpreted the same body of evidence differently, arguing that the absence of robust evidence of harm provides reassurance about the safety of modern waste-to-energy facilities and supports their use as part of broader waste management strategies.⁶⁰

Where the available evidence is technically complex and capable of supporting different interpretations, it is difficult for communities to evaluate competing claims and reach their own informed conclusions about the potential health impacts of emissions from modern waste-to-energy facilities. Consistent with its earlier findings, the Committee considers that the Victorian Government should play a more active role in helping communities understand the available evidence. This has not occurred to a sufficient extent to date.

FINDING 29: Various studies linking waste-to-energy emissions with adverse health impacts have methodological limitations that affect the strength of their conclusions and the extent to which their findings can be applied more broadly.

FINDING 30: Stakeholders drew different conclusions from the same body of evidence. Some considered that scientific uncertainty warranted a precautionary approach, while others provided reassurance that modern waste-to-energy facilities are safe.

FINDING 31: Differing evidence can make it difficult for the community to understand what may be emitted by a waste-to-energy facility and the extent to which those emissions can be controlled, as the underlying claims are difficult to interrogate without specialist expertise.

RECOMMENDATION 16: That the Victorian Government should require operators of waste-to-energy facilities to fund an independently administered community health surveillance program as a condition of planning approval.

5.3.4 Interpreting and balancing risk

The evidence discussed above demonstrates that the current evidence base can support very different interpretations. Stakeholders relied on the same body of evidence to advance markedly different conclusions about the level of emissions from modern waste-to-energy facilities and the potential health impacts of those emissions.

⁶⁰ Dr Jen Martin, *Transcript of evidence*, p. 45; Dr Jackie Wright, *Transcript of evidence*, p. 2; Gayle Sloan, *Transcript of evidence*, p. 8.

Some provided reassurance that modern facilities present a low level of risk and that emissions are unlikely to increase pollutant concentrations above existing background levels.⁶¹ Such stakeholders emphasised that waste-to-energy facilities are not ‘experimental’,⁶² but rather, ‘they are sophisticated, proven infrastructure delivering essential waste services at scale’⁶³ with ‘more than 2,000 facilities operating safely around the world’.⁶⁴

Others considered that the same uncertainty warranted a precautionary approach, arguing that the absence of conclusive evidence of harm does not exclude the possibility that health impacts exist but have not yet been detected or may take many years to emerge.⁶⁵ The Committee notes that a precautionary approach does not necessarily require all risk to be eliminated. Rather, it recognises that, where scientific uncertainty exists, greater weight should be given to preventing or minimising potential harm.

These differing interpretations reflect broader differences in how risk should be managed. One approach places greater emphasis on the precautionary principle, favouring caution where scientific uncertainty remains. Another accepts that public policy decisions often involve some degree of uncertainty and risk, and that the appropriate question is not whether risk can be eliminated entirely, but whether it can be reduced to a level that is acceptable in light of the expected benefits.

Ultimately, determining the level of risk that is acceptable, and whether the potential benefits of waste-to-energy facilities justify that level of risk, is not a matter for the Committee, but a matter for the Victorian Government.

5.4 What do emissions from a waste-to-energy facility mean for our environment?

Many community members expressed concern about the potential environmental impacts of emissions from waste-to-energy facilities.⁶⁶ The Committee’s analysis of submissions found that environmental contamination was a concern raised by over

⁶¹ Dr Jen Martin, *Transcript of evidence*, p. 45; Dr Jackie Wright, *Transcript of evidence*, p. 2; Gayle Sloan, *Transcript of evidence*, p. 8.

⁶² David Jettner, General Manager, Environment and Sustainability, Opal, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 15.

⁶³ David Jettner, *Transcript of evidence*, p. 15.

⁶⁴ Gayle Sloan, *Transcript of evidence*, p. 12.

⁶⁵ Dr Peter Tait, *Transcript of evidence*, p. 57.

⁶⁶ For example, see: Chis Wilson, *Submission 4*, pp. 9–127; Dustin Russell, *Submission 66*, pp. 1–2; Ross Martin, *Submission 149*, p. 1; Name withheld, *Submission 217*, p. 1; Mary Mackinnon, *Submission 280*, p. 1; Nabin Sapkota, *Submission 342*, p. 1; Name withheld, *Submission 407*, p. 1; Name withheld, *Submission 471*, pp. 1–2; Jennifer Caddaye, *Submission 586*, pp. 1–2; Michaelia Cooke, *Submission 611*, p. 1.

half of all submitters. Several submitters also raised concerns about climate change,⁶⁷ while a smaller number expressed concerns about food contamination.⁶⁸

5.4.1 Food contamination

The Committee heard concerns that emissions from waste-to-energy facilities could contaminate nearby vegetation and produce, with pollutants accumulating over time to levels that may be unsafe for consumption.⁶⁹

Janek Vähk, Zero Waste Europe, referred the Committee to research conducted by ToxicoWatch in several European countries, which he said had found elevated levels of dioxins, PFAS and heavy metals in soil, vegetation, water and food collected near incinerators operating under European Union emissions standards.⁷⁰

ToxicoWatch's research was referred to by numerous stakeholders throughout the Inquiry, particularly its monitoring of the Paris waste-to-energy facility, which reported elevated levels of pollutants in backyard chicken eggs and prompted public health advice that locally produced backyard eggs should not be consumed.⁷¹

The Committee observed that stakeholders relied on the ToxicoWatch research to support two distinct propositions:

- The first was that elevated levels of pollutants had been identified in the environment surrounding some waste-to-energy facilities.
- The second was that this research proves that modern emissions controls are not working as intended and that these facilities are releasing more pollutants than is currently understood. This is reflected in statements such as 'near incinerators operating under the so-called EU standards'⁷² or 'around a best practice EU incinerator',⁷³ which may reasonably lead readers to infer that facilities meeting modern emissions standards are still releasing concerning levels of pollutants despite the emissions controls in place.

The Committee considers that these propositions are analytically distinct. While the research provides evidence of elevated concentrations of dioxins in the surrounding environment, it does not necessarily follow that those findings establish the effectiveness of current emissions controls or the level of emissions from modern

⁶⁷ For example, see: Kerry Mulroyan, *Submission 233*, p. 1; Whittlesea Climate Action Network, *Submission 310*, pp. 1–4; Friends of Merri Creek, *Submission 381*, p. 3; Global Alliance for Incinerator Alternatives, *Submission 391*, pp. 1–7.

⁶⁸ For example, see: Rod Cummings, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 46; Pat Carmody, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 47; Chris Wilson, *Submission 4*, p. 55; Name withheld, *Submission 220*, p. 1; Name withheld, *Submission 241*, p. 1; Vicki Maltman, *Submission 286*, p. 1; Gabriella Hont, *Submission 360*, p. 1; No Waste Incinerator Lara and Greater Geelong, *Submission 423*, pp. 7–25; Julie Copal, *Submission 550*, p. 1.

⁶⁹ For example, see: Rod Cummings, *Transcript of evidence*, p. 46; Pat Carmody, *Transcript of evidence*, p. 47.

⁷⁰ Janek Vähk, *Transcript of evidence*, p. 56.

⁷¹ Jenny Saal, *Transcript of evidence*, p. 24; Nisa Y, Al Siraat College, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 2; No Waste Incinerator Lara and Greater Geelong, *Submission 423*, p. 26; Julie Copal, *Submission 550*, p. 1.

⁷² Janek Vähk, *Transcript of evidence*, p. 56.

⁷³ Jane Bremmer, *Transcript of evidence*, p. 16.

facilities operating under contemporary standards. The extent to which such conclusions can be drawn remains uncertain. The Committee considers that further research may be needed before robust conclusions can be drawn in support of this second proposition.

The Committee understands that generally, it is accepted that older incinerators operating before the introduction of modern emissions control requirements emitted pollutants, such as dioxins and furans, at higher levels than facilities operating today. Some European incinerators, including the Paris facility most frequently referenced by submitters, have operated for many decades, including during periods before these requirements were introduced. As a result, studies such as those examining the Paris incinerator, warrant careful consideration, as they do not, in themselves, establish the extent to which those findings reflect historical emissions, current emissions, or a combination of both.

Research examining newer facilities is perhaps more informative in this regard. ToxicoWatch published a report on the Dutch Reststoffen Energie Centrale incinerator, which commenced operation in 2011.⁷⁴ The report identified dioxin concentrations in backyard chicken eggs, grass and soil near the facility that exceeded relevant limits.⁷⁵ It has been suggested that emissions controls may not fully capture releases, particularly during start-up, shut-down or where pollution control equipment is bypassed.⁷⁶ These findings are significant because they relate to a relatively new facility and are therefore not subject to the same uncertainties associated with disentangling historical and current emissions. In the Committee's view, they warrant further independent investigation.

The Committee considers that further research, including replication and peer review of the methodology and findings, would strengthen the evidence base and help ensure that study design does not limit the confidence that can be placed in the conclusions (see Section 4.3.3). Furthermore, research that controls for other potential sources of contamination and incorporates comparison sites at varying distances from facilities could help address attribution challenges by better distinguishing emissions attributable to a facility from background environmental contamination (see Section 4.3.1).

What is perhaps clearer to the Committee is why ToxicoWatch's evidence seems to resonate with many community members. It is reasonable that evidence of environmental contamination around some waste-to-energy facilities may contribute to community scepticism about claims that modern facilities are safe and that emissions controls are effective. The Committee considers that this scepticism should be acknowledged and constructively addressed, rather than dismissed.

⁷⁴ ToxicoWatch, *Biomonitoring persistent organic pollutants, POPs, in the environment of the WtE waste incinerator REC, Harlingen, the Netherlands 2025, Interim Report*, April 2025; Arkenbout A, Petrlik J, Hid, 'Hidden emissions of UOPs: Case study of a waste incinerator in the Netherlands', *Organohalogen Compounds*, vol. 81, 2019, pp. 247–250.

⁷⁵ Ibid.

⁷⁶ Ibid.

The Committee also heard evidence that exercising caution in the face of scientific uncertainty is both appropriate and important. As Dr Peter Tait observed, it is likely that the impacts of modern waste-to-energy facilities may take many years to emerge, so it may not yet be possible to fully assess the effectiveness of contemporary emissions controls.⁷⁷

The Committee also acknowledges that scientific understanding of emissions has evolved over time and is likely to continue to evolve as monitoring techniques improve and further research is undertaken. It is therefore possible that future research may identify emissions, or the impact of those emissions, that are not currently recognised or fully understood now. The Committee considers that this perspective may reasonably influence how some members of the community view the long-term safety of waste-to-energy facilities. Decision-makers should acknowledge this perspective and respond through transparent engagement and clear, evidence-based information. In this context, assurances that are not accompanied by a clear explanation of the evidence may be insufficient to build public confidence and, in some cases, may further entrench community scepticism.

FINDING 32: Further independent research would strengthen the evidence base by improving the ability to distinguish emissions attributable to waste-to-energy facilities from background environmental contamination. It would also help verify whether emissions from modern facilities are consistent with those identified through current monitoring and reporting practices.

FINDING 33: Scientific understanding of emissions continues to evolve. The possibility that future research may identify emissions or impacts that are not yet fully understood may reasonably contribute to community concerns about the safety of waste-to-energy facilities. Maintaining public confidence requires transparent, evidence-based communication that acknowledges both the current evidence and its limitations.

RECOMMENDATION 17: That the Victorian Government commission an independent longitudinal study to distinguish emissions attributable to waste-to-energy facilities from background environmental contamination.

5.4.2 Greenhouse gas emissions

The Committee heard concerns about the level of greenhouse gas emissions generated by waste-to-energy facilities and whether these emissions are compatible with broader efforts to reduce emissions and mitigate climate change.⁷⁸

⁷⁷ Dr Peter Tait, *Transcript of evidence*, p. 57.

⁷⁸ For example, see: Kerry Mulroyan, *Submission 233*, p. 1; Whittlesea Climate Action Network, *Submission 310*, pp. 1–4; Friends of Merri Creek, *Submission 381*, p. 3; Global Alliance for Incinerator Alternatives, *Submission 391*, pp. 1–7.

Jane Bremmer, Toxics Free Australia, stated that ‘per unit of energy produced, waste-to-energy incineration emits twice the climate pollution of gas, and is equally and often more polluting than coal and oil’.⁷⁹ Jane Bremmer described the waste-to-energy industry ‘as a fossil fuel industry in disguise’.⁸⁰ Similar concerns were raised by other stakeholders, who argued that claims that waste-to-energy incinerators produce renewable energy ‘should be challenged at the highest level as greenwashing’.⁸¹

As part of broader efforts to reduce greenhouse gas emissions, several European countries, including the Netherlands, Norway, Denmark, Sweden and Germany, have introduced some form of carbon pricing or emissions trading for waste-to-energy facilities.⁸² The United Kingdom has also recently announced that municipal waste incineration will be included in its Emissions Trading Scheme from 2028.⁸³ As of July this year, the European Union announced plans to add the waste-to-energy industry to its emissions trading scheme.⁸⁴ The Committee considers that this reflects a growing trend towards applying carbon pricing to greenhouse gas emissions from waste-to-energy facilities as part of broader efforts to achieve net-zero emissions.

Given Victoria’s own commitments to reducing greenhouse gas emissions and achieving net zero by 2045, it is understandable that some stakeholders have questioned why Victoria is also proposing to develop multiple long-term waste-to-energy facilities that will continue to emit greenhouse gases throughout their operating lives, including beyond 2045.⁸⁵

The Committee understands that waste-to-energy is often presented as having lower greenhouse gas impacts than landfill and as a preferable option for managing residual waste.⁸⁶ These claims are largely based on the fact that organic waste in landfill generates methane, a potent greenhouse gas. However, the Committee considers that the comparison between waste-to-energy and landfill is more nuanced than a simple

⁷⁹ Jane Bremmer, *Transcript of evidence*, p. 19.

⁸⁰ Ibid.

⁸¹ Zerogen, *Submission 369*, p. 2.

⁸² EU Perspectives, *Waste incinerators fight looming entry into EU carbon market*, 2 July 2026, <<https://euperspectives.eu/2026/07/waste-incinerators-fight-looming-entry-into-eu-carbon-market>> accessed 21 July 2026; Climate Home News, *Will the EU finally make waste pay for its growing carbon footprint?*, 19 March 2026, <<https://www.climatechangenews.com/2026/03/19/will-the-eu-finally-make-waste-pay-for-its-growing-carbon-footprint>> accessed 21 July 2026.

⁸³ UK Department for Energy Security & Net Zero, *UK emissions trading scheme (UK ETS): A policy overview*, 8 April 2026, <<https://www.gov.uk/government/publications/uk-emissions-trading-scheme-uk-ets-policy-overview/uk-emissions-trading-scheme-uk-ets-a-policy-overview>> accessed 21 July 2026.

⁸⁴ European Commission, *Questions and answers on the EU Emissions Trading Scheme (EU ETS) review*, 17 July 2026, <https://ec.europa.eu/commission/presscorner/detail/en/qanda_26_1598> accessed 21 July 2026.

⁸⁵ For example, see: Pauline Galvin, Treasurer, Climate Action Merri-bek, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 13; Kerry Mulroyan, *Submission 233*, p. 1; Whittlesea Climate Action Network, *Submission 310*, pp. 1–4; Friends of Merri Creek, *Submission 381*, p. 3; Global Alliance for Incinerator Alternatives, *Submission 391*, pp. 1–7.

⁸⁶ Gayle Sloan, *Transcript of evidence*, p. 8; Andy Smith, Gippsland Trade and Labour Council, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 36; Carolyn Jackson, *Transcript of evidence*, p. 42; Waste Management and Resource Recovery Association Australia, *Submission 581*, p. 3; Scottish Government, *Decarbonisation of residual waste infrastructure: report*, 3 February 2023, <<https://www.gov.scot/publications/stop-sort-burn-bury-independent-review-role-incineration-waste-hierarchy-scotland-second-report-decarbonisation-residual-waste-infrastructure-scotland/pages/7>> accessed 21 July 2026.

binary comparison and overlooks the broader range of waste management options available.

While waste-to-energy may produce lower greenhouse gas emissions than current landfill practices, this does not, of itself, address concerns about the volume of greenhouse gases emitted by waste-to-energy facilities. Alternative approaches, such as diverting organic waste from landfill for processing through anaerobic digestion while continuing to landfill other residual waste, could reduce methane emissions from landfill.⁸⁷ If implemented at scale, such approaches may alter the comparative greenhouse gas performance of landfill and waste-to-energy.

The Committee therefore considers that care should be taken when comparing waste-to-energy solely against landfill. The fact that one option may have lower emissions than another does not, in itself, establish that it is a low-emissions or environmentally preferable outcome. Comparisons should take account of the range of available waste management options and their respective environmental impacts.

Dr Jen Martin, Chief Environmental Scientist, told the Committee that climate change is considered through EPA Victoria's regulatory framework, including the general environmental duty.⁸⁸ She said proponents are expected to adopt best available techniques to reduce greenhouse gas emissions so far as reasonably practicable.⁸⁹ David Jettner, General Manager, Environment and Sustainability, Opal, also confirmed that proponents are required to report carbon dioxide (CO₂) emissions under the National Greenhouse and Energy Reporting (NGER) Scheme, which is administered by the Australian Government.⁹⁰

FINDING 34: Waste-to-energy facilities emit greenhouse gases. Some stakeholders questioned whether these emissions are compatible with Victoria's climate change and net-zero objectives.

FINDING 35: Comparisons between waste-to-energy and landfill should consider the full range of waste management options. A lower greenhouse gas footprint than landfill as it is currently practiced (which includes large volumes of organic waste) does not, by itself, establish that waste-to-energy is a low-emissions or environmentally preferable option.

⁸⁷ Janek Vähk, Policy Manager, Zero Waste Europe, questions on notice, p. 6; Zero Waste Europe, 'Reducing waste management's contribution to climate change', June 2024; Mariel Vilella, Director, Global Climate Program, Global Alliance for Incinerator Alternatives, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 54.

⁸⁸ Dr Jen Martin, *Transcript of evidence*, p. 49.

⁸⁹ Ibid.

⁹⁰ David Jettner, *Transcript of evidence*, p. 27.

5.5 How does Victoria regulate emissions for waste-to-energy?

Several government authorities have responsibilities for regulating different aspects of the waste-to-energy sector, including:

- **Recycling Victoria** – who administers and monitors the cap licensing scheme
- **The Environment Protection Authority (EPA) Victoria** – who regulates pollution and waste harms to environment and people, including permissioning (see Chapter 5)
- **Planning authorities** – who regulate land use and amenity (see Chapter 6)
- **The Australian Energy Market Operator (AEMO), The Australian Energy Regulator (AER) The Australian Energy Market Commission (AEMC) and Energy Safe Victoria** – who regulate energy participation, economic, technical and safety; and
- **WorkSafe Victoria** – who regulate workplace safety.⁹¹

This Section focuses only on the aspects of the regulatory framework administered by the EPA Victoria.

The EPA Victoria is Victoria's environmental regulator under the *Environment Protection Act 2017* (Vic) (**The EP Act**). It is tasked with preventing harm to health and the environment through a 'risk-based, science-led approach'.⁹² The EPA Victoria plays a role at each stage of the development of a waste-to-energy facility, including:

- **Design and planning** – assessing applications for development licences.
- **Construction** – monitoring compliance to ensure development licence conditions are met.
- **Commissioning** – assessing applications for operating licences before the facility commences operation.
- **Operation** – undertaking ongoing compliance and monitoring to ensure operating licence conditions continue to be met.⁹³

In addition to the requirements that apply specifically to the development of a waste-to-energy facility, proponents are also subject to the general environmental duty. This duty imposes a positive obligation to eliminate or minimise risks of harm to human health and the environment so far as reasonably practicable.⁹⁴

⁹¹ The Department of Energy, Environment and Climate Action, *Carolyn Jackson Panel Presentation*, [PowerPoint presentation], Melbourne, 26 May 2026, p. 7.

⁹² The Environment Protection Authority Victoria, *EPA slide pack WtE Parliamentary Inquiry Public Hearing May 2026*, [PowerPoint presentation], Melbourne, 26 May 2026, p. 1.

⁹³ Ibid.

⁹⁴ The *Environment Protection Act 2017* (Vic), s. 25.

The Committee heard that this combination of rigorous licence assessment processes, legally enforceable licence conditions, and ongoing monitoring and compliance activities should give the community confidence that waste-to-energy facilities operating in Victoria meet high environmental standards throughout their operating lives.

While these processes may provide assurance to some, the Committee also heard significant community scepticism about how effective they are in practice and whether the standards applied to waste-to-energy facilities are sufficient to protect human health and the environment.⁹⁵

5.5.1 Licensing requirements

The Committee heard that EPA Victoria permissions ‘are one of several key approval types required’⁹⁶ before a waste-to-energy facility can become operational. Through its licensing regime, the EPA Victoria seeks to ‘ensure [the] risk-based regulation of industries that contribute to pollution and waste’.⁹⁷

The EPA Victoria licensing regime for waste-to-energy facilities has two key stages:

- the development licence, and
- the operating licence.

Development licence

A development licence is required before construction of a waste-to-energy facility can commence. It assesses whether the proposed ‘technology, design and planning around processes and systems will be fit for purpose’.⁹⁸ The EP Act sets out the matters the EPA Victoria must consider when assessing applications for development licences, including:

- the steps the applicant has taken, or proposes to take, to meet the general environmental duty when operating a waste-to-energy facility
- the likely impacts of the facility on human health and the environment.
- the principles of environmental protection, as set out in Part 2.3 of the EP Act, including:
 - integration of environmental, social and economic considerations
 - proportionality

⁹⁵ Janek Vähk, *Transcript of evidence*, pp. 55–59; Dr Peter Tait, *Transcript of evidence*, p. 60; Mariel Vilella, *Transcript of evidence*, p. 53; Pauline Galvin, *Transcript of evidence*, p. 13; Arabella Daniel, Clean Air Communities, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 14; Jane Bremmer, *Transcript of evidence*, pp. 16–20, Lee Bell, *Transcript of evidence*, pp. 19–20; Alison Medforth, No Sunbury Waste Incinerator, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, pp. 5–6.

⁹⁶ Dr Jen Martin, *Transcript of evidence*, p. 36.

⁹⁷ Ibid.

⁹⁸ Ibid.

- primacy of prevention
- shared responsibility
- polluter pays
- waste-management hierarchy
- evidence-based decision making
- precautionary principle
- equity
- accountability
- conservation.
- whether the proposed waste-to-energy facility uses the best available techniques and technologies
- whether the proposed waste-to-energy facility is otherwise consistent with the EP Act and the regulations
- any feedback received from prescribed agencies, the community and other stakeholders during the application process, and
- any other prescribed matters.⁹⁹

The EP Act identifies the matters the decision-maker must consider, but it does not direct how those matters are to be weighed against one another. A decision is not invalid merely because the decision-maker ultimately gives greater weight to some mandatory considerations than others.

The EP Act also sets out that the EPA Victoria must refuse an application for a development licence for a waste-to-energy facility if:

- It considers that the proposed facility poses an unacceptable risk to human health or the environment.
- It determines that the applicant is not a fit and proper person to hold a development licence. In making this decision, the Environment Protection Authority must consider:
 - the applicant's history of complying with this act and/or similar laws in other Australian jurisdictions
 - whether the applicant has the financial capacity to meet the obligations of a development licence, and
 - any other prescribed criteria.¹⁰⁰

⁹⁹ The *Environment Protection Act* 2017 (Vic), s. 69.

¹⁰⁰ The *Environment Protection Act* 2017 (Vic), s. 66.

Dr Jen Martin, Chief Environmental Scientist, told the Committee that, when assessing an applicant's compliance history, the EPA Victoria considers the nature, context and circumstances of any past breaches in the context of the proposed project.¹⁰¹ Dr Martin also noted that a history of non-compliance is not in itself determinative of whether an applicant is a fit and proper person. Depending on the circumstances, the EPA Victoria may instead take that history into account by imposing additional licence conditions.¹⁰²

As part of the development licence application process, proponents must provide the EPA Victoria with detailed information about their proposed waste-to-energy facility, including:

- details of the proposed facility's design, layout, capacity, waste management systems and environmental controls
- the types, sources, composition and quantity of waste the facility will receive, including how these may change over time
- the proposed waste-to-energy technology, why it was chosen, how it works, and evidence that it can safely and effectively treat the intended waste
- how energy will be recovered, how efficiently the facility will generate it, and how it will be used or supplied
- the environmental controls that will be used to manage waste, emissions, wastewater, noise, odour and other environmental risks
- the types and amounts of residual waste the facility will produce, how they will be managed, and any contaminants they may contain
- how risks to human health and the environment will be managed, including the proposed monitoring of emissions and other environmental impacts, and
- evidence that the facility will not pose an unacceptable risk to human health or the environment, supported by assessments of emissions, air quality, odour, noise, fire safety and greenhouse gas emissions.¹⁰³

The Committee heard that proponents will be required to 'demonstrate that the technology can meet stringent emissions criteria and regulatory requirements in Victoria'.¹⁰⁴ As part of this, proponents will be required to undertake a 'very comprehensive multiple pathways assessment of potential risks to human health for a wide-ranging number of contaminants'.¹⁰⁵ This includes a 'detailed air quality or impact assessments',¹⁰⁶ to show 'where and how those emissions could be',¹⁰⁷ as well

¹⁰¹ Dr Jen Martin, *Transcript of evidence*, pp. 48–49.

¹⁰² Ibid.

¹⁰³ Environment Protection Authority Victoria, *A08 Waste to Energy*, 30 June 2026, <<https://www.epa.vic.gov.au/a08-waste-energy>> accessed 21 July 2026.

¹⁰⁴ Dr Jen Martin, *Transcript of evidence*, p. 37.

¹⁰⁵ Ibid., pp. 43–44.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

as ‘assessments of what might deposit to the ground and how that could be in the soil that people might be exposed to’.¹⁰⁸

The Committee heard that proponents will be required to ‘demonstrate that the technology can meet stringent emissions criteria and regulatory requirements’.¹⁰⁹ As part of this process, proponents must undertake ‘very comprehensive multiple pathways assessments’¹¹⁰ of the potential risks to human health from a broad range of contaminants. This includes ‘detailed air quality impact assessments’¹¹¹ to predict how emissions may disperse, as well as assessments of how pollutants may deposit onto land and contribute to potential human exposure through soil. Dr Jen Martin, Chief Environmental Scientist, elaborated:

Human health risk assessments are required to consider air toxins such as heavy metals, dioxins and furans and criteria pollutants such as particulate matter. We expect these assessments to consider existing background environmental conditions and also to consider multiple exposure pathways – the size, density and vulnerability of the exposed population. The full range of potential environmental risks needs to be assessed, and that includes air, waste handling, noise and odour and contamination of land, groundwater and surface water throughout the proposed operations. We only grant approvals where it can be demonstrated that those risks can be effectively managed, and we set strict licence conditions on emissions.¹¹²

Based on the detailed information provided in the application, the EPA Victoria assesses the proposal against the required assessment criteria to decide whether the proposed facility can proceed. If a development licence is granted, it will include legally binding conditions designed to ensure that the facility is built as proposed and that its ‘design, performance and emissions standards are delivered in practice’.¹¹³

Operating licence

The Committee heard that a waste-to-energy facility must first satisfy all development licence conditions and demonstrate, through a robust commissioning process, that it can operate in accordance with the standards set out in its licence.¹¹⁴ Only then will EPA Victoria grant an operating licence, allowing the facility to commence operation.

Licence conditions

The Committee heard that the conditions attached to a development licence are a key mechanism for ensuring waste-to-energy facilities meet the required standards. Such licence conditions not only require a waste-to-energy facility to be constructed in

¹⁰⁸ Ibid.

¹⁰⁹ Ibid., p. 37.

¹¹⁰ Ibid., pp. 43–44.

¹¹¹ Ibid., p. 37.

¹¹² Ibid.

¹¹³ Ibid., p. 36.

¹¹⁴ Ibid.

accordance with the approved design and technology specifications, but also establish the operating and emissions standards that the facility must satisfy before it can commence operation.¹¹⁵

The Committee heard that proponents expect development licences to impose stringent conditions. HiQ stated that it was ‘prepared for [its] development licence to hold very stringent standards’¹¹⁶ and that it would need to demonstrate its ability to meet those standards before the project could proceed. Similarly, Opal told the Committee that its development licence issued by EPA Victoria ‘specifically called out’¹¹⁷ that it would also be required to apply updated the best practice European standards (often referred to as the BREF standards).

Understanding what these standards are, and where they come from, is central to assessing the level of environmental performance expected of waste-to-energy facilities and the emissions they may generate in practice. This is explored further in *Section 4.5.2* below.

5.5.2 What standards will be incorporated into licence conditions?

The Committee heard that the EPA Victoria would assess waste-to-energy facilities against a range of standards, including:

- The EPA Victoria’s guideline for assessing and minimising air pollution in Victoria
- The Environmental Health (**enHealth**) guidelines
- European Best Available Techniques Reference (**BREF**) documents for waste-to-energy.

Dr Jen Martin, Chief Environmental Scientist, told the Committee that ‘the very first place [she] would direct people to’¹¹⁸ is the EPA Victoria’s guideline for assessing and minimising air pollution in Victoria. Dr Martin described these guidelines as containing a ‘comprehensive list of standards that we apply’, as well as the ‘tiered risk assessment process that [they] would expect to see’.¹¹⁹

Other stakeholders, like Dr Jackie Wright, Director of Environmental Risk Sciences, referred the Committee to national guidelines, such as those drafted by enHealth. Dr Wright described the enHealth National guidelines as ‘really robust’¹²⁰ and aligned with international best practice, explaining that they allow the risks associated with emissions to be assessed using scientific methods.¹²¹

¹¹⁵ Dr Jen Martin, *Transcript of evidence*, p. 37.

¹¹⁶ Mark Rodgers, Chief Executive Officer, HiQ, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 20.

¹¹⁷ David Jettner, *Transcript of evidence*, p. 29.

¹¹⁸ Dr Jen Martin, *Transcript of evidence*, p. 51.

¹¹⁹ Ibid.

¹²⁰ Dr Jackie Wright, *Transcript of evidence*, p. 2.

¹²¹ Ibid.

The Committee also heard that standards are intended to evolve over time to reflect advances in science, technology and industry practice. Dr Martin emphasised that the EPA Victoria are ‘not just focusing on a current standard’, but ‘continuously aim[ing] for improvement’.¹²²

The standards most commonly discussed throughout the Inquiry were those developed in Europe, often referred to as the BREF standards. These standards were described as international best practice, reflecting decades of experience in the design, operation and regulation of waste-to-energy facilities.¹²³

However, the Committee also heard evidence questioning whether the BREF standards are achieving the environmental outcomes that would be expected of a framework described as international best practice.¹²⁴ Such stakeholders pointed to research from Europe that reports elevated levels of pollution in the areas surrounding certain facilities, arguing that these findings raise questions about whether the emissions controls required under those standards are operating as intended.¹²⁵

European BREF waste-to-energy standards

The European BREF standards are reference documents developed by the European Union that set out current best practice across a range of industries. They are periodically reviewed and updated to reflect advances in science, technology and industry practice. The current BREF standards for waste incineration were published in 2019.¹²⁶

The Committee heard that the BREF documents are ‘really important’¹²⁷ and have ‘been developed over decades in Europe.’¹²⁸ Victoria is therefore well placed to draw on the decades of international experience underpinning these standards and apply them to waste-to-energy facilities in the State.¹²⁹

The Committee heard that waste-to-energy facilities seeking to operate in Victoria will be expected to meet the BREF standards, or higher, and that compliance with those standards will be made legally enforceable through licence conditions.¹³⁰

¹²² Dr Jen Martin, *Transcript of evidence*, p. 42.

¹²³ Gayle Sloan, *Transcript of evidence*, p. 3; Dr Jackie Wright, *Transcript of evidence*, p. 3.

¹²⁴ Lee Bell, *Transcript of evidence*, pp. 19–20; Jane Bremmer, *Transcript of evidence*, p. 20; No Sunbury Waste Incinerator group, response to questions on notice received 4 June 2026, p. 1.

¹²⁵ Janek Vähk, *Transcript of evidence*, p. 59; Mariel Vilella, *Transcript of evidence*, p. 53; Pauline Galvin, *Transcript of evidence*, p. 13.

¹²⁶ European Commission, *Best Available Techniques (BAT) Reference Document for Waste Incineration*, 2019 <https://bureau-industrial-transformation.jrc.ec.europa.eu/sites/default/files/2020-01/JRC118637_WI_Bref_2019_published_0.pdf> accessed 21 July 2026.

¹²⁷ Dr Jackie Wright, *Transcript of evidence*, p. 3.

¹²⁸ Ibid.

¹²⁹ Gayle Sloan, *Transcript of evidence*, p. 3.

¹³⁰ Ibid., p. 4.

However, the Committee also heard concerns from some stakeholders that the BREF standards may not provide sufficient protection against the risks associated with waste-to-energy incineration. Such stakeholders considered that the BREF standards were now out of date,¹³¹ or not ‘ambitious’¹³² enough, or ‘created a misleading perception of safety’.¹³³

Lee Bell, Technical and Policy Advisor for the International Pollutants Elimination Network and Toxics Free Australia, told the Committee that, despite being characterised as international best practice, the BREF standards do not require the monitoring of all pollutants emitted from a facility’s stack.¹³⁴ He argued that the lack of routine monitoring for some known emissions raises questions about the scope of the BREF standards.¹³⁵ For example, the Committee heard concerns that, despite what is known about PFAS, it is not routinely monitored, particularly in Europe.¹³⁶ In relation to PFAS, Dr Martin told the Committee that ‘PFAS is a very well-known issue to manage’¹³⁷ and is considered by the EPA Victoria as part of its regulatory assessments.

Some stakeholders also referred to investigations that have revealed elevated levels of pollution around waste-to-energy incinerators in Europe operating under best practice standards.¹³⁸ They argued that these findings were difficult to reconcile with the expectation that facilities operating in accordance with the BREF standards should achieve a high level of emissions control.¹³⁹ In other words, they argued that if the standards were effective, the surrounding environment would not exhibit the levels of contamination being reported. (See Section 4.3.1 and 4.3.3 for further discussion of this evidence).

Other stakeholders suggested that these elevated pollution levels could also be explained by periods of abnormal operation that are not fully captured by the BREF standards.¹⁴⁰ The Committee heard concerns that higher levels of pollutants may be released when waste-to-energy facilities start up, shut down or undergo maintenance.¹⁴¹ These stakeholders argued that emissions during these periods can be substantial, in some cases describing them as the equivalent of ‘a year’s worth of pollution’.¹⁴² They expressed concern that emissions released during these periods may be treated differently under the regulatory framework because they occur outside

¹³¹ Mariel Vilella, *Transcript of evidence*, p. 53.

¹³² Ibid.

¹³³ Arabella Daniel, *Transcript of evidence*, p. 14.

¹³⁴ Lee Bell, *Transcript of evidence*, p. 20.

¹³⁵ Ibid.

¹³⁶ Ibid.

¹³⁷ Dr Jen Marin, *Transcript of evidence*, pp. 43–44.

¹³⁸ Janek Vähk, *Transcript of evidence*, p. 55; Jenny Saal, *Transcript of evidence*, p. 24; Nisa Y, Al Siraat College, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 2; No Waste Incinerator Lara and Greater Geelong, *Submission 423*, p. 26; Julie Copal, *Submission 550*, p. 1.

¹³⁹ Janek Vähk, *Transcript of evidence*, p. 59; Pauline Galvin, *Transcript of evidence*, p. 13; Arabella Daniel, *Transcript of evidence*, p. 14; Jane Bremmer, *Transcript of evidence*, p. 16.

¹⁴⁰ Dr Peter Tait, *Transcript of evidence*, p. 60.

¹⁴¹ Jane Bremmer, *Transcript of evidence*, p. 16.

¹⁴² Ibid.

normal operating conditions and argued that this may result in an incomplete picture of a facility's overall emissions performance. In contrast, Dr Martin explained that emissions limits are set so that the risk of harm to people is very low, meaning that a small or temporary exceedance is unlikely to cause serious or irreversible harm.¹⁴³

Janek Vähk, Zero Waste Europe, argued that compliance with the BREF standards should not be taken to mean that waste-to-energy incinerators are risk free.¹⁴⁴ He submitted that, while the standards may reduce risks, they do not eliminate them or mean that facilities have no impact on surrounding communities or the environment.¹⁴⁵

Opal's submission to the Inquiry states:

Victoria's EPA framework provides strong oversight of emissions to air, land and water. However, it does not clearly differentiate between facilities that meet international best practice standards, like operating up time, and those that do not.¹⁴⁶

FINDING 36: Stakeholders had differing views about the effectiveness of the European Union BREF standards. Concerns focused on the scope of pollutant monitoring, emissions during abnormal operating conditions, and whether the standards achieve the environmental outcomes expected of international best practice.

RECOMMENDATION 18: That the Victorian Government ensure that development and operating licence conditions for waste-to-energy facilities require the monitoring and public reporting of emissions at all times including during periods outside normal operating conditions, including start-up, shutdown and maintenance. This monitoring should capture any spikes in emissions released during these periods to ensure they are reflected in the facility's overall emissions profile and are publicly available.

RECOMMENDATION 19: That the Victorian Government embed international best practice standards for waste-to-energy facilities within Victoria's regulatory framework to provide certainty for proponents and confidence for communities.

5.5.3 How will compliance with licences be ensured?

Because emissions limits are incorporated into legally binding licence conditions, there must also be mechanisms to verify compliance and, where necessary, respond to non-compliance. The Committee heard that the EPA Victoria requires proponents to undertake ongoing monitoring, report on their performance and, where appropriate,

¹⁴³ The Environment Protection Authority Victoria, response to question on notice received 30 June 2026, p. 13.

¹⁴⁴ Janek Vähk, *Transcript of evidence*, p. 55.

¹⁴⁵ Ibid.

¹⁴⁶ Opal, *Submission 504*, p. 2.

submit to independent audits.¹⁴⁷ Where licence conditions are breached, the EPA Victoria may take a range of enforcement actions.¹⁴⁸

Monitoring and reporting obligations

The Committee heard that proponents will ‘absolutely have to be able to back’¹⁴⁹ up their claims of compliance with evidence and validate the emissions generated by their facilities. This requirement is enforced through licence conditions requiring emissions monitoring.

Operating waste-to-energy facilities are also required to ‘implement comprehensive risk management and monitoring programs’¹⁵⁰ and regularly report on their performance to demonstrate ongoing compliance with their regulatory requirements.

These licensing requirements operate alongside the general environmental duty, which applies to all proponents. The Committee heard that this duty ‘puts the onus on the proponent’¹⁵¹ to ‘actively’¹⁵² and ‘continuously’¹⁵³ manage risks so far as reasonably practicable, and that they cannot wait for the EPA Victoria to intervene before taking action. It applies regardless of the specific licence conditions and does not depend on EPA Victoria taking regulatory action. However, some stakeholders were critical of the emphasis placed on this duty, characterising it as requiring proponents to effectively regulate themselves, which was ‘antithetical to any profit-driven company’.¹⁵⁴

Frequency of emissions monitoring

Emissions monitoring was described to the Committee as ‘real-time’¹⁵⁵ and ‘continuous’.¹⁵⁶ Dr Jen Martin, Chief Environmental Scientist, clarified, however, that continuous emissions monitoring is only required where it is technically feasible.¹⁵⁷ For contaminants that cannot be monitored continuously, proponents may instead be required to undertake supplementary periodic sampling.¹⁵⁸

Dr Martin further clarified that proponents will be required to develop an air emissions monitoring plan as part of their licence conditions.¹⁵⁹ She noted that the monitoring requirements, including which contaminants will be monitored continuously and which

¹⁴⁷ Dr Jen Martin, *Transcript of evidence*, p. 36.

¹⁴⁸ *Ibid.*

¹⁴⁹ *Ibid.*, pp. 43–44.

¹⁵⁰ *Ibid.*, p. 36.

¹⁵¹ *Ibid.*, p. 41.

¹⁵² *Ibid.*

¹⁵³ *Ibid.*

¹⁵⁴ No Sunbury Waste Incinerator, response to questions on notice received 4 June 2026, p. 3.

¹⁵⁵ Gayle Sloan, *Transcript of evidence*, p. 3; The Environment Protection Authority Victoria, response to question on notice received 30 June 2026, p. 10.

¹⁵⁶ Dr Jen Martin, *Transcript of evidence*, p. 37.

¹⁵⁷ *Ibid.*, p. 43.

¹⁵⁸ *Ibid.*

¹⁵⁹ *Ibid.*, p. 47.

will instead be subject to periodic sampling, will also be developed as proponents progress towards obtaining an operating licence.¹⁶⁰

The Committee also heard that the frequency of monitoring is determined according to the level of risk and should be proportionate to that risk.¹⁶¹ In other words, if the amount of a pollutant expected to be emitted from a stack is very small, it may not require the same level of comprehensive monitoring as pollutants present at higher concentrations. Dr Martin explained:

some of the studies from plants in Italy at the moment – for example, dioxins and furans have gotten so low that the contribution from a waste-to-energy facility is in the order of 10,000 times lower than just normal vehicular emissions. When you are starting to get that low, you actually will not be able to measure any additional difference. It is too small a contribution to be able to actually even see. At that point it becomes too challenging.¹⁶²

The Committee recognises that there are likely to be sound scientific and technical reasons why continuous monitoring is feasible for some contaminants but not others. However, when these distinctions are discussed at a high level, they may contribute to community concern that some emissions will not be monitored as closely as others, or that aspects of a facility's emissions profile may not be fully captured.

In these circumstances, the Committee considers it important that the Victorian Government clearly explain the basis for these monitoring requirements, including why continuous monitoring is appropriate for some contaminants but not technically feasible for others. Given the importance of these issues to public confidence and community safety, those explanations should be transparent, evidence-based and readily accessible to the public. Where continuous monitoring is technically feasible, the Committee considers that it should be required.

FINDING 37: There are likely to be sound scientific and technical reasons why continuous emissions monitoring is feasible for some contaminants but not others. However, without clear and accessible explanations of these limitations, differences in monitoring requirements may contribute to community concern about whether a facility's emissions are being adequately monitored.

RECOMMENDATION 20: That the Victorian Government publicly report the basis for emissions monitoring requirements for waste-to-energy facilities, including why continuous monitoring is required for some contaminants but not technically feasible for others. The Government should ensure these reports are transparent, evidence-based and readily accessible to the public.

¹⁶⁰ Ibid.

¹⁶¹ Ibid., pp. 43–44.

¹⁶² Ibid.

RECOMMENDATION 21: That the Victorian Government independently audit emissions from thermal waste-to-energy facilities rather than rely on self-assessment and reporting.

RECOMMENDATION 22: That the Victorian Government require continuous emissions monitoring and real time public reporting of contaminants from waste-to-energy facilities wherever it is technically feasible to do so.

Emissions reporting practices

The Committee heard that the way emissions monitoring data is reported is important to community confidence.¹⁶³

Some stakeholders criticised the reporting practices of overseas waste-to-energy facilities, arguing that reporting average pollutant concentrations can mask short-term exceedances of emissions limits. They also expressed concern that some pollutants of interest, including heavy metals, mercury and dioxins, were not routinely reported.¹⁶⁴

In addition, stakeholders were critical of reporting practices where continuous emissions data was displayed in real time but replaced each day, limiting the ability to review historical data or compare emissions over time. They argued that these practices did not represent best practice in emissions reporting.¹⁶⁵

FINDING 38: The way emissions monitoring data is reported is an important factor in community confidence. Reporting practices that do not enable the public to identify short-term exceedances, access historical monitoring data, or understand emissions of pollutants of community interest may reduce transparency and undermine confidence in a facility's emissions reporting.

Monitoring beyond the stack

The Committee heard concerns that monitoring emissions only from a facility's stack may not provide a complete picture of the extent to which those emissions are affecting the surrounding environment and community.¹⁶⁶ In response, some stakeholders called for proponents of waste-to-energy facilities to undertake biomonitoring of the surrounding environment.¹⁶⁷

Biomonitoring would involve taking regular measurements in the surrounding environment to monitor pollutant concentrations over time. These stakeholders

¹⁶³ Pauline Galvin, *Transcript of evidence*, p. 13.

¹⁶⁴ Ibid.

¹⁶⁵ Ibid.

¹⁶⁶ Janek Vähk, *Transcript of evidence*, p. 58.

¹⁶⁷ Ibid., p. 59.

submitted that biomonitoring could help identify changes in environmental concentrations, provide a better understanding of community exposure, and allow comparisons between emissions measured at the stack and pollutant levels detected in the surrounding environment.¹⁶⁸

As discussed in Section 5.3.1, attributing contaminant levels in the environment to emissions from a waste-to-energy facility can be challenging. Pollutants may originate from a range of sources, and background concentrations may already exist in the environment because of historical industrial activity or natural sources.

The Committee found that some investigations from Europe would benefit from further background information, such as pre-existing pollution levels and other local sources of emissions. Without this information, it is difficult to determine how much pollution is attributable to the facility or draw conclusions about how effectively its current emissions controls are performing.

However, the Committee considers that Victoria is well placed to address many of these challenges and build a stronger evidence base about the environmental impacts of waste-to-energy facilities. In particular, the Committee considers that, before any facility is constructed, a comprehensive biomonitoring program should be undertaken to establish baseline contaminant levels in the surrounding environment. This baseline would provide an important reference point against which future monitoring could be assessed.¹⁶⁹ Without this information, Victoria may face similar challenges in conclusively determining the extent to which any detected contamination is attributable to a waste-to-energy facility.

The Committee also considers that such a reference point would also reduce the risk of incorrect conclusions being drawn about the source of any contamination. A baseline established before construction would protect proponents from being unfairly attributed responsibility for pre-existing contamination, while also ensuring communities have a clear benchmark against which any changes following the commencement of operations can be assessed. This would provide greater confidence in the interpretation of future monitoring results.

The Committee notes that at present, proponents must collect some site-specific baseline data as part of its development licence application.¹⁷⁰ This includes detailed air quality impact assessment and human health risk assessments which ‘characterise background environmental conditions and cumulative impacts’.¹⁷¹ While this information is valuable for EPA Victoria’s assessment of development applications, the Committee’s proposal has a broader purpose. It seeks to strengthen the evidence base by using any Victorian waste-to-energy facilities as case studies to robustly examine, through a reliable study design, the impacts of facilities operating under contemporary

¹⁶⁸ Ibid.

¹⁶⁹ Pauline Galvin, *Transcript of evidence*, p. 14.

¹⁷⁰ The Environment Protection Authority Victoria, response to question on notice received 30 June 2026, p. 15.

¹⁷¹ Ibid.

emissions controls. The Committee considers that Victorian universities would have a strong interest in such research and could assist the Victorian Government in undertaking it.

The Committee further considers that, once a facility begins operating, biomonitoring should continue at regular intervals alongside the emissions monitoring and reporting already required from the facility's stack. Together, these measures would provide a more complete understanding of pollutant levels in the surrounding environment over time and allow comparisons between emissions measured at the stack and contaminant concentrations detected in the surrounding area.

FINDING 39: Monitoring emissions from a facility's stack alone may not provide a complete picture of the extent to which emissions are affecting the surrounding environment and community. Biomonitoring of the surrounding environment can complement stack emissions monitoring by providing additional information about environmental contaminant levels over time.

RECOMMENDATION 23: That the Victorian Government, in collaboration with proponents and academic experts:

- a. undertake a comprehensive biomonitoring program before construction of any waste-to-energy facility to establish baseline contaminant levels in the surrounding environment; and
- b. continue biomonitoring at regular intervals throughout the operation of a facility, alongside existing stack emissions monitoring and reporting requirements.

The Committee considers that establishing a thorough baseline and undertaking ongoing biomonitoring would strengthen the evidence base on the environmental impacts of waste-to-energy facilities, improve the interpretation of future monitoring results, and help distinguish pre-existing contamination from any changes associated with the operation of a facility.

Audits and enforcement

The Committee heard that the EPA Victoria would conduct 'regular inspections'¹⁷² of waste-to-energy facilities to make sure that proponents 'are genuinely doing as they have agreed and committed to'¹⁷³ do. Proponents may also be subject to an 'independent audit'¹⁷⁴ to validate that they are meeting the requirements.

The Committee heard that, where a waste-to-energy facility is found not to be complying with these strict requirements, the EPA Victoria has a range of enforcement

¹⁷² Dr Jen Marin, *Transcript of evidence*, p. 43.

¹⁷³ *Ibid.*, p. 50.

¹⁷⁴ *Ibid.*, p. 36.

powers available under the EP Act.¹⁷⁵ These include imposing stricter controls, issuing fines, commencing prosecutions, or, in serious cases, suspending or revoking an environmental permission. The Committee heard that these are ‘very powerful tools’.¹⁷⁶

The Committee also heard that proponents have a strong commercial incentive to comply with these requirements.¹⁷⁷ As Tony Circelli, Head of Recycling Victoria, noted, proponents are investing more than \$1 billion to construct these facilities and therefore have a significant financial incentive to ensure they remain compliant and operate successfully over the long term in order to realise a return on that investment.¹⁷⁸

However, the Committee heard that conditions imposed in a licence are ‘only as good as the enforcement action that is carried out’¹⁷⁹. Some stakeholders pointed to examples in Europe where they considered inadequate enforcement had allowed waste-to-energy facilities to continue operating despite alleged exceedances of emissions limits, contributing to increasing environmental contamination.¹⁸⁰

The Committee heard that practices of this kind can undermine community confidence in the regulatory systems intended to protect human health and the environment. Should a waste-to-energy facility breach its licence conditions, the Committee considers it essential that EPA Victoria respond promptly and take strong enforcement action, consistent with the approach it described throughout this Inquiry.

FINDING 40: Effective and timely enforcement is essential to maintaining community confidence in the regulatory framework. A strong regulatory regime depends not only on robust licence conditions and enforcement powers, but also on timely and appropriate action where non-compliance occurs.

5.6 Trust, transparency and community concerns

This Chapter has explored how complex scientific evidence, characterised by nuance, evidentiary limitations and value-laden risk assessments, makes seemingly simple questions — such as what will be emitted by a facility and what the impacts of those emissions are — difficult to answer with certainty.

In the face of this uncertainty, the Committee heard that communities are often being asked to place significant trust in assurances about the safety and performance of waste-to-energy facilities.

¹⁷⁵ Ibid.

¹⁷⁶ Tony Circelli, Head, Recycling Victoria, public hearing, Melbourne, 26 May 2026, *Transcript of evidence*, p. 51.

¹⁷⁷ Ibid.

¹⁷⁸ Ibid.

¹⁷⁹ Lee Bell, *Transcript of evidence*, p. 20.

¹⁸⁰ Ibid.

The Committee considers that assurances are most effective when they are supported by clear, accessible and robust evidence, rather than relying on trust alone. Trust in proponents, governments or regulators will inevitably vary between individuals and communities for a range of reasons. Where trust is limited, people are more likely to seek information that they can examine for themselves and use to form their own views.

When that information is not readily available, meaningful engagement becomes more difficult. Discussions can become focused on competing assertions rather than a shared understanding of the evidence, making it harder for communities, proponents and decision-makers to engage constructively and build greater understanding of the issues.

5.6.1 Proponents

The Committee heard that some members of the community are wary about information provided by proponents, particularly where proponents have a direct commercial interest in the approval and operation of a facility.¹⁸¹ The Committee observed that confidence in assurances about the safety and performance of a facility may be further diminished where a proponent has a history of regulatory non-compliance or breaches of licence conditions.

This issue was particularly evident in relation to the proposed facility in Sunbury to be run by HiQ. Throughout the Inquiry, the Committee heard community members question whether assurances provided by HiQ could be relied upon considering its history of non-compliance and multiple successful prosecutions by the EPA Victoria.¹⁸² Similarly, some stakeholders expressed low levels of trust in Cleanaway, the proponent of the proposed Wollert facility, citing the company's poor workplace safety record,¹⁸³ including a number of workplace deaths in recent years.¹⁸⁴ The Committee considers that, in these circumstances, relying primarily on proponents to explain their proposals and build community confidence is unlikely to be effective.

Where independent information is not readily available, there is a greater risk that the information gap will be filled by competing narratives from stakeholders with differing perspectives or agendas. This can make it more difficult for communities to navigate the available information, evaluate competing claims, and form informed views.

¹⁸¹ For example, see: Clare Campbell, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 40; Kate Johnston, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 40; Sheena Frost, Chief Executive Officer, Hume City Council, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 58; Max Sargent, Anti-Incinerator Alliance, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 25.

¹⁸² For example, see: Alison Medforth, *Transcript of evidence*, p. 6.

¹⁸³ Name withheld, *Submission 322*, p. 1.

¹⁸⁴ Cath Rouse, No Northern Incinerator Wollert, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 24.

5.6.2 The Victorian Government

The Committee also heard that some members of the community are cautious about some of the information, or lack thereof, provided by the Victorian Government.¹⁸⁵ The reasons for this are likely to vary between individuals and communities. However, the Committee considers that public confidence can be undermined where Government messaging about waste-to-energy facilities appears inconsistent.

During the Inquiry, the Committee noted that a number of government Members publicly opposed proposed waste-to-energy facilities in their own electorates. This included the Hon. Lily D'Ambrosio, who opposed a proposed facility whilst serving as the Minister for Energy and Resources, a portfolio responsible for energy policy, including matters relevant to waste-to-energy.¹⁸⁶ While Members of Parliament are entitled to represent the views of their communities, the Committee considers that public opposition by government Ministers to particular facilities may make it more difficult for the Victorian Government to communicate a consistent, evidence-based position on the role of waste-to-energy technology. The Committee asked Gayle Sloan, Chief Executive Officer of the Waste Management & Resource Recovery Association Australia about former Minister D'Ambrosio's opposition to a local waste-to-energy project, who remarked that she 'wouldn't pretend it's helpful'.¹⁸⁷

The Committee considers that, where Government messaging is perceived to be inconsistent, communities may reasonably question the basis on which decisions are made and why a facility may be considered appropriate in one location but not another. This has the potential to undermine public confidence and make it more difficult for the Government to explain the evidence supporting its policy position and its assessment that the risks associated with modern waste-to-energy facilities can be appropriately managed.

5.6.3 Regulators

The Committee heard from some community members who expressed little confidence in EPA Victoria's ability to effectively regulate a facility of this complexity.¹⁸⁸ They argued that the safety of a waste-to-energy facility depends not only on its design, but also on how well it is operated, whether it remains compliant with regulatory

¹⁸⁵ Hume City Council, *Submission 496*, p. 4; Cath Rouse, *Transcript of evidence*, p. 24; No Northern Incinerator Wollert, *Submission 596*, p. 20; Sunbury Clean Future, *Submission 362A*, p. 4; Name withheld, *Submission 390*, p. 3; Glen Eira City Council, *Submission 551*, p. 5; Fabiana Johnston, *Submission 43*, p. 4; Michelle Parsons, *Submission 52*, p. 2; Christopher Wilson, *Submission 4*, p. 112.

¹⁸⁶ Norman Hermant, 'Modern waste-to-energy plants claim to be safe but these Melbourne residents aren't convinced' *The ABC*, 8 June 2026, <<https://www.abc.net.au/news/2026-06-08waste-to-energy-community-protests-sunbury-health-concerns/106756460>> accessed 21 June 2026.

¹⁸⁷ Gayle Sloan, *Transcript of evidence*, p. 8.

¹⁸⁸ For example, see: Pat Carmody, *Transcript of evidence*, pp. 47–48; Alan MacKenzie, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 48; Name withheld, *Submission 223*, p. 2; Jatin Wig, *Submission 127*, p. 1; Name withheld, *Submission 223*, pp. 2–3; Lynbrook Residents Association, *Submission 251*, p. 4; Carol Grose, *Submission 279*, p. 1; Name withheld, *Submission 294*, p. 1; Friends of Merri Creek, *Submission 381*, p. 2; No Northern Incinerator Wollert, *Submission 596*, p. 14; Clare Campbell, *Transcript of evidence*, p. 40; Hobsons Bay City Council, *Submission 553*, p. 3;

requirements, and how effectively that compliance is monitored and enforced.¹⁸⁹ As a result, these stakeholders expressed concern that, if regulatory oversight was inadequate, their health or environment could be placed at risk.¹⁹⁰

The Committee also heard that, where scientific uncertainty forms part of a risk assessment, communities expect regulators to apply the precautionary principle and place a high priority on protecting human health and the environment. As discussed in Section 5.3.2, scientific understanding is not static but continues to evolve over time. In light of this, communities may draw on historical examples where the risks associated with some pollutants were only fully understood over time,¹⁹¹ and where monitoring methods and regulatory controls evolved as scientific knowledge advanced.

In this context, the Committee considers it understandable that some members of the community remain cautious about whether current regulatory frameworks will identify and manage all potential risks associated with emissions from waste-to-energy facilities. The Committee also recognises that recent European research reporting elevated contaminant levels near some facilities operating under contemporary regulatory frameworks may reinforce those concerns, regardless of the conclusions that can ultimately be drawn from that research.

The Committee therefore considers that regulators should be mindful of this context when engaging with communities. They should clearly explain what is known, what remains uncertain, and how regulatory requirements, monitoring and emissions controls are designed to identify, manage and mitigate risks, including those associated with scientific uncertainty.

5.6.4 Transparency is key

The Committee considers that trust is strengthened not by assurances alone, but by transparency. Communities should be provided with the information they need to understand the evidence, evaluate competing claims and form their own views.

As waste-to-energy facilities progress through the approvals process, supporting documentation, such as environmental impact statements, should be released to the public as early as practicable. Mark Rodgers, Chief Executive Officer of HiQ, stated that the industry ‘needs to be in violent agreement that this [process] needs to be open and transparent’ and expressed support for the documentation accompanying HiQ’s EPA Victoria application being made publicly available.

Similarly, Gayle Sloan, Waste Management and Resource Recovery Association Australia, acknowledged that ‘it is counterproductive to our industry that information

¹⁸⁹ Pat Carmody, *Transcript of evidence*, pp. 47–48; Alan MacKenzie, *Transcript of evidence*, p. 48; Sue Lanigan, Resident, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 44.

¹⁹⁰ Ibid.

¹⁹¹ For example, see: Jenny Saal, *Transcript of evidence*, pp. 24–29; Kate Johnston, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 36; Les Dew, No Waste Incinerators in Lara and Greater Geelong, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 28; Name withheld, *Submission 58*, p. 1; Chris West, *Submission 284*, p. 2.

is not being publicly made available'.¹⁹² She explained that the respective roles of government agencies and proponents in deciding when information is released are often misunderstood, with delays or limitations on disclosure sometimes incorrectly attributed to proponents, even where they support public release:

It does add to the concern that we are hiding something, and we are definitely not. We believe totally in this facility, in this technology, in the safety. We are very happy to have it reported appropriately, and there is work underway to see what we could do as an industry to put that information out there. We are not hiding information.¹⁹³

Where waste-to-energy facilities are developed in Victoria, the Committee considers it essential that this commitment to transparency continue through their operation. Emissions monitoring and reporting should be publicly accessible to enable ongoing scrutiny and maintain community confidence.

The Committee considers that, to date, there has been insufficient transparency and effort to explain the complex scientific evidence underpinning an industry that, while well-established elsewhere, is new to Victoria. As a result, communities have attempted to engage in highly technical conversations about proposed waste-to-energy facilities that may be located near their homes, schools and workplaces without access to the clear, accessible information needed to meaningfully participate and form informed views. This needs to be immediately rectified.

FINDING 41: Where communities have limited confidence in proponents, relying on proponents alone to explain waste-to-energy facilities is unlikely to build community confidence.

FINDING 42: Inconsistent public messaging from the Victorian Government, particularly from its Ministers, has the potential to undermine public confidence in the safety of waste-to-energy technology.

¹⁹² Gayle Sloan, *Transcript of evidence*, p. 13.

¹⁹³ Ibid.

Chapter 6

Regulating where a waste-to-energy facility can be built

Deciding where a waste-to-energy facility should be built is one of the most important planning decisions. For many community members, the proposed location of a facility was the central issue, with concerns that it would be located too close to homes and have an impact on their day-to-day lives. The Committee found that many of the other concerns raised in submissions fell within the scope of the planning approvals process, including:

- Land use compatibility
- Impacts of increased traffic
- Loss of local character, and
- Equitable distribution of waste infrastructure.

Throughout the Inquiry, the Committee heard concerns about how the Victorian planning process operates. A key concern related to the Minister for Planning's discretion in determining the assessment pathway for some proposals, as this can affect opportunities for community participation, including access to Victorian Civil and Administrative Tribunal (**VCAT**) review. The Minister also has discretion to determine whether an application is subject to additional assessment through an Environment Effects Statement (**EES**) process. This discretion creates uncertainty about how the planning process will operate in practice and whether it will be applied consistently.

Community consultation also emerged as a significant issue throughout the Inquiry. Many community members said they had not been adequately consulted or provided with enough information about proposed waste-to-energy projects. Even though most of these proposals are at an early stage of the approvals process, and more comprehensive statutory consultation is yet to occur, the Committee considers that the current sequencing of approvals can create the perception that key decisions have already been made. This risks undermining community confidence before formal consultation has meaningfully commenced.

6.1 How does Victoria assess whether a site is suitable?

As discussed in Section 5.5 approving a waste-to-energy facility involves several government bodies, each responsible for a different part of the approval process. Recycling Victoria administers the waste-to-energy cap (see Chapter 4), the

EPA Victoria issues development and operating licences and oversees regulatory compliance once a facility is operational (see Chapter 5), and the Department of Transport and Planning (**DTP**) responsible for land use planning and planning approvals.

This Section focuses only on the aspects of the regulatory framework administered by the DTP.

DTP is responsible for evaluating and determining ‘whether waste-to-energy is an appropriate land use in a particular location’.¹ In doing so, the Department assesses each application ‘on their merits against planning policies and objectives’,² rather than against ‘a set of prescriptive tests’.³ The Committee heard that ‘there are a vast range of policies, strategies, regulations and policy clauses’⁴ that waste-to-energy applications must be assessed against, including:

- **Key Planning Policy Framework Clauses:**
 - clause 11 – Settlement
 - clause 13 – Environmental risks and amenity
 - clause 18 – Transport
 - clause 19 – Infrastructure.
- **Related Legislation and Regulations:**
 - *Transport Integration Act 2010*
 - *Road Management Act 2004*
 - *Environment Protection Act 2017*
 - *Environment Effects Act 1978*
- **Strategic Policy Documents, Regulations and Guidelines:**
 - *Plan for Victoria* (DTP 2025)
 - *Movement and Place in Victoria* (DoT 2019)
 - *Victorian Freight Plan* (DTP 2025)
 - *Victorian Road Safety Strategy 2021–2030* (DoT 2021)
 - *Victorian Recycling Infrastructure Plan* (DEECA 2024)
 - *PPN92: Managing buffers for land use compatibility* (DTP 2025)
 - *EPA Separation Distance Guideline* (EPA 2024)

¹ Coleen Peterson, *Transcript of evidence*, p. 37.

² *Ibid.*, pp. 37–38.

³ *Ibid.*

⁴ *Ibid.*, p. 38.

- *Environment Protection Regulations under the EP Act 2017*
- *Noise Limit and Assessment Protocol for the Control of Noise from Commercial, Industrial and Trade Premises and Entertainment Venues* (Publication 1826, EPA 2021).⁵

The Committee heard that, taken together, these instruments provide a ‘comprehensive’⁶ framework for assessing waste-to-energy proposals. This framework is intended to balance economic, environmental and social objectives when determining whether a ‘proposal delivers net community benefit’.⁷ Colleen Peterson, Deputy Secretary, Planning and Land Services, DTP, elaborated:

In terms of what do we consider, as a responsible authority, when considering waste-to-energy proposals, there are a broad range of considerations. We have human health and safety; environmental risks, which could include flood or fire or contamination; amenity impacts, which would include noise, odour and the visual impacts of these large incinerator units; and land use compatibility. We will look at matters such as separation distances and buffers – that is where advice from the EPA is very important; the economic and social impacts of a proposal; transport and infrastructure; built form and design; sustainability; and the landscape. These matters are addressed through planning permit applications and would be supported by plans and technical reports alongside policy submissions and referral advice.⁸

The Committee understands that at present the consideration of land use compatibility does not include the quality of agricultural land that a development will occupy.

Planning permit applications for waste-to-energy facilities can be assessed through one of two pathways: the standard assessment pathway or the planning scheme amendment pathway.⁹

The standard assessment pathway considers a waste-to-energy proposal against the existing planning scheme using the processes set out in the *Planning and Environment Act 1987*.¹⁰

5 The Department of Transport and Planning, *DTP Presentation – Inquiry into WtE infrastructure in Victoria*, [PowerPoint Presentation], Melbourne, 26 May 2026, p. 6.

6 Colleen Peterson, *Transcript of evidence*, p. 38.

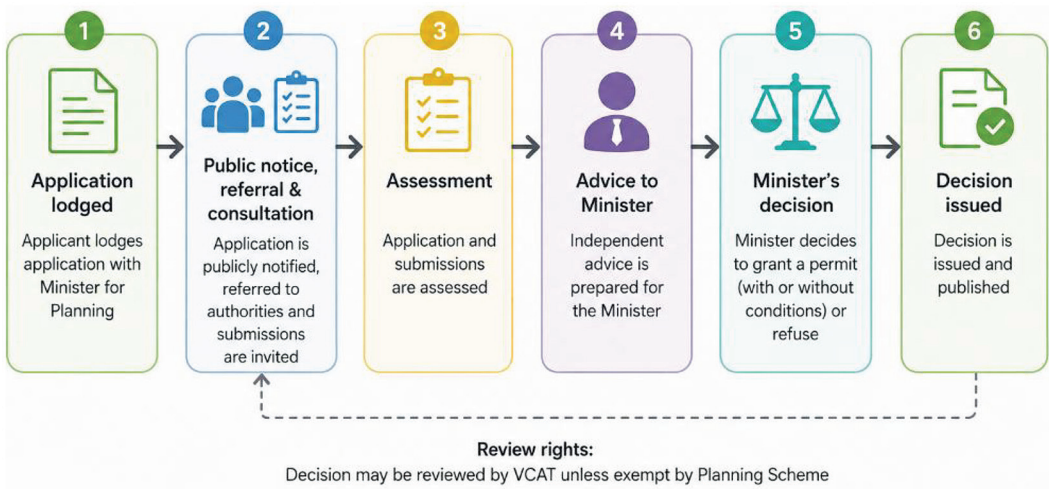
7 Ibid., p. 39.

8 Ibid., pp. 38–39.

9 Department of Transport and Planning, *DTP Presentation – Inquiry into WtE infrastructure in Victoria*, [PowerPoint Presentation], Melbourne, 26 May 2026, p. 7.

10 Ibid.

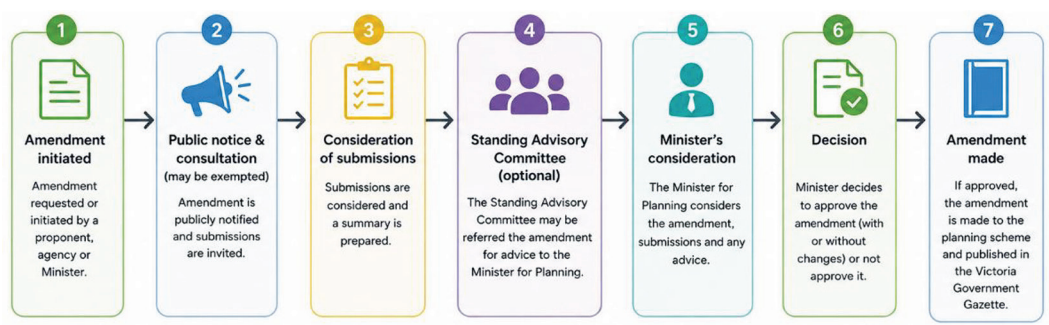
Figure 6.1 Standard Assessment Pathway for Planning Permit Application



Source: The Department of Transport and Planning, *DTP Presentation – Inquiry into WtE infrastructure in Victoria*, [PowerPoint Presentation], Melbourne, 26 May 2026, p. 7.

By contrast, the planning scheme amendment pathway is an exceptional process that can be used where changes to the planning scheme are considered necessary to enable a project. It is only available at the Minister’s discretion and requires a strategic justification.¹¹

Figure 6.2 Planning Scheme Amendment Pathway for Planning Permit Application



Source: The Department of Transport and Planning, *DTP Presentation – Inquiry into WtE infrastructure in Victoria*, [PowerPoint Presentation], Melbourne, 26 May 2026, p. 7.

A key difference between the two pathways is the opportunity to appeal a decision. Decisions made under the standard planning permit pathway can generally be appealed to VCAT. However, if a proposal is assessed under clause 53.22, which applies to projects considered to deliver significant economic development, the Minister is the final decision-maker and there are no third-party appeal rights to VCAT. Similarly, proposals assessed through the planning scheme amendment pathway also do not

11 Ibid.

have VCAT appeal rights. The Committee heard that, to date, no waste-to-energy proposal has been assessed under either clause 53.22 or the planning scheme amendment pathway.¹²

The Committee understands that the Minister for Planning is currently assessing two planning permit applications for waste-to-energy facilities:

- Cleanaway's proposed Melbourne Energy and Resource Centre (MERC) in Wollert, and
- Prospect Hill International Pty Ltd proposed waste-to-energy facility in Lara.¹³

Both applications have been under consideration by the Minister for Planning for several years. Cleanaway's planning permit application was received on 23 May 2023, while Prospect Hill's application was received on 2 December 2020.

The Committee understands that the assessment of Cleanaway's planning permit application may have been affected by changes to its waste-to-energy cap allocation. After receiving an increased cap allocation, Cleanaway withdrew its EPA Victoria development licence application so it can submit a new application reflecting the larger project capacity. Prospect Hill was not allocated a waste-to-energy cap. As a cap is required before a facility can operate, significant uncertainty remains as to whether the project will progress.

The Committee also understands that several waste-to-energy facilities have been successful in obtaining a planning permit to date, including:

- Opal's proposed waste-to-energy facility in Maryvale, co-located with Opal's Paper Mill.¹⁴
- Great Southern Waste Technologies gasification waste-to-energy facility in Dandenong South.¹⁵
- Recovered Energy Laverton's gasification waste-to-energy facility in Laverton North¹⁶

The Committee notes that the planning framework requires the Department to weigh a broad range of planning considerations, many of which are expressed in general terms, while also allowing the planning scheme to be amended at the Minister's discretion to facilitate a project. This makes it difficult for the Committee to understand how the planning framework will operate in practice, how consistently it will be applied and whether it will achieve its intended outcomes. The Committee notes that some

¹² The Department of Transport and Planning, *DTP Presentation – Inquiry into WtE infrastructure in Victoria*, [PowerPoint Presentation], Melbourne, 26 May 2026, p. 7.

¹³ The Department of Transport and Planning, response to questions on notice received 22 June 2026, p. 1.

¹⁴ Maryvale Waste from Energy, *Maryvale Energy from Waste Project Update*, December 2024 <https://opalanz.com/app/uploads/2025/02/241217-Maryvale-EfW-stakeholder-update-Dec_final3.pdf> accessed 21 July 2026.

¹⁵ Cam Lucadou-Wells, 'Waste plant clears first VCAT hurdle' *Star Journal*, 16 September 2020, <<https://dandenong.starcommunity.com.au/news/2020-09-16/waste-plant-clears-first-vcat-hurdle>> accessed 21 July 2026.

¹⁶ Recovered Energy Laverton, *Laverton North*, <<https://www.recoveredenergy.com.au/project-details>> accessed 21 July 2026.

stakeholders expressed similar concerns, describing the planning framework as ‘inconsistent’¹⁷ and creating ‘regulatory uncertainty’,¹⁸ which they argued can delay critical investment and create confusion for industry.¹⁹

The Committee also heard evidence that the current planning framework for waste-to-energy infrastructure is no longer fit for purpose because it lacks an overarching strategic vision to guide investment in waste and resource recovery infrastructure. Stakeholders noted that, unlike the former *Statewide Waste and Resource Recovery Infrastructure Plan*, the current *Victorian Recycling Infrastructure Plan* does not identify strategic sites or set out a coordinated statewide infrastructure network. In their view, this results in waste infrastructure being considered through individual development proposals rather than as part of an integrated statewide system, making planning more fragmented, reducing certainty about where infrastructure should be located, and limiting coordinated long-term planning.

FINDING 43: The planning framework provides significant flexibility in how waste-to-energy proposals are assessed. While this enables decisions to reflect the circumstances of individual projects, it can make it difficult to understand how planning considerations will be applied in practice and may contribute to perceptions of inconsistency and regulatory uncertainty.

FINDING 44: The current planning framework does not provide a coordinated statewide strategy for the long-term development of waste-to-energy infrastructure. Instead, it relies on project-by-project decision making, including the ability to amend planning schemes to facilitate individual proposals. This makes the framework less predictable and provides limited strategic direction for planning waste infrastructure across Victoria.

RECOMMENDATION 24: That the Victorian Auditor-General’s Office review whether the regulatory framework applying to waste-to-energy facilities is adequate to address the concerns expressed by the community and the findings and recommendations identified in this Report.

RECOMMENDATION 25: That the Victorian Government recognise the critical importance of agriculture and ensure stronger protections for productive agricultural land when assessing development proposals.

¹⁷ Gayle Sloan, *Transcript of evidence*, p. 7.

¹⁸ Ibid.

¹⁹ Ibid.

6.1.1 Environment Effects Statement in Victoria

If a project 'is capable of having a significant effect on the environment',²⁰ the application may be referred to the Minister for Planning, who will decide whether an Environment Effects Statement (**EES**) is required.²¹

If the Minister decides that an EES is required, the Minister sets the scope of the matters to be investigated. The proponent must then prepare an EES, supported by the required study program and consultation plan that addresses those requirements.²²

Once the Minister is satisfied that the EES is suitable, it is released for public consultation. After considering the EES, public submissions, the proponent's response and the Inquiry report, the Minister prepares an assessment of the project's environmental effects. The assessment may conclude that the project's environmental effects are acceptable, unacceptable, or that further investigations or significant modifications are needed.²³

Decision-makers must consider the Minister's assessment when deciding whether to approve the project, although the assessment is generally not binding.²⁴

In the case of waste-to-energy proposals, the Committee heard that a project 'would warrant a referral' to the Minister if it has the potential to generate greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per year.²⁵ The Committee notes that referring a project to the Minister does not mean an EES will be required. Rather, the purpose of the referral is to enable the Minister to determine, at their discretion, whether an EES is warranted.

In deciding whether an EES is required, the Minister should take the following factors into account:

- the potential for significant effects on the environment, either from the nature of the change (expected magnitude, extent, and duration) or the environment's capacity to withstand that change (location, rarity, physical/ecological/ social/cultural connections/ etc)
- the range and complexity of potential effects and associated uncertainty of available predictions
- the adequacy of existing standards and/or statutory assessment processes to address potentially significant effects

²⁰ *Environmental Effects Act 1978* (Vic). s. 3(2).

²¹ Department of Transport and Planning, *Environmental effects statements in Victoria*, 26 June 2024 <<https://www.planning.vic.gov.au/environmental-assessments/environmental-assessment-guides/environment-effects-statements-in-victoria>> accessed 21 July 2026.

²² Victorian Department of Transport and Planning, *Environmental effects statements in Victoria*.

²³ *Ibid.*

²⁴ *Ibid.*

²⁵ Coleen Peterson, *Transcript of evidence*, p. 38.

- the potential efficacy of avoidance and mitigation measures that may be implemented
- the availability of project alternatives that may warrant investigation to assess opportunities to avoid or minimise adverse environmental effects
- the benefits of an integrated assessment that would not otherwise be achieved under existing statutory assessment processes, and
- the level of public interest in a proposed project.²⁶

The *Ministerial Guidelines for Assessment of Environmental Effects under the Environment Effects Act 1978* state that the Minister will typically require a proponent to prepare an EES where:

- there is a likelihood of significant adverse effects on the environment
- there is a need for integrated or systems approach to assessment of potential environmental effects of a project (and alternatives), and/or
- existing statutory processes would not provide a sufficiently comprehensive, integrated and transparent assessment of those potential effects.²⁷

The Committee heard that the Minister has, to date, received two referrals seeking a decision on whether an EES is required for waste-to-energy projects, being:

- Cleanaway's proposed Melbourne Energy and Resource Centre (MERC) in Wollert, and
- Opal's proposed waste-to-energy facility in Maryvale, co-located with Opal's Paper Mill.²⁸

In both cases, the Minister 'determined that than an EES was not required'.²⁹ The reasons for these decisions are published on the Department's website.

²⁶ Department of Transport and Planning, *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978*, 2023, p. 19.

²⁷ Ibid.

²⁸ Department of Transport and Planning, response to questions on notice received 22 June 2026, pp. 1–2.

²⁹ Ibid.

Table 6.1 Minister for Planning's reasons for not requiring an ESS for waste-to-energy projects

Proposal	Reasons for Decision
Cleanaway's proposed Melbourne Energy and Resource Centre (MERC) in Wollert.	• The project has potential for effects particularly in relation to air and greenhouse gas emissions and waste, which are unlikely to be significant and/or can be readily managed through existing statutory processes. The development licence and operational licence approval processes under the Environment Protection Act 2017 will readily enable the appropriate and transparent examination of these potential effects. • Residual effects on amenity (such as noise and odour) and Aboriginal cultural heritage are unlikely to be significant and can be readily addressed via existing statutory requirements. • The effects on native vegetation and other biodiversity values are not significant due to the siting of the project on cleared agricultural land. Offsets for limited impacts to native vegetation and biodiversity values can be readily addressed in accordance with policy.
Opals proposed waste-to-energy facility in Maryvale, co-located with Opals Paper Mill.	• The project has potential for effects particularly in relation to air emissions, greenhouse gas emissions and waste, although these are unlikely to be significant. Existing statutory processes, in particular the Works Approval process under the <i>Environment Protection Act 1970</i>, will readily enable appropriate examination of both these effects and necessary mitigation measures. • The proponent will be required to demonstrate that they have identified best practice in relation to energy use and greenhouse gas (GHG) emissions associated with the proposal as part of the EPA Works Approval process. A GHG Action Plan will need to be implemented in accordance with EPA's 'Protocol for Environmental Management: GHG and Energy Efficiency in Industry'. • Residual effects on amenity (such as noise and odour) and cultural heritage are also unlikely to be significant and can be readily addressed via existing statutory requirements. • The effects on native vegetation and other biodiversity values are minor due to the siting of the project on developed land with very limited ecological values.

Source: Minister for Planning, *Reasons for decision under Environmental Effects Act 1978: Referral Number 2023-R02*, 5 October 2023; Minister for Planning, *Reasons for decision under Environmental Effects Act 1978: Referral Number 2018-R01*, 2 May 2018.

Cleanaway's proposed facility in Wollert has been allocated the largest waste-to-energy cap to date, allowing it to process up to 760,000 tonnes of waste per year. Despite its scale, when the project was referred to the Minister for consideration of whether an EES was required, the Minister concluded that its potential environmental effects were unlikely to be significant and could be appropriately managed through existing statutory processes, including EPA Victoria development and operating licence requirements. In light of this decision, the Committee considers it difficult to identify what factors would lead the Minister to require a future waste-to-energy proposal to prepare an EES, given that the Wollert proposal was not required to do so.

The Minister's decision not to require an EES for the Wollert and Maryvale proposals has attracted criticism from some in the community. The Committee heard that deciding not to conduct an EES 'set up distrust in all of the processes'³⁰ and contributed

³⁰ Cath Rouse, *Transcript of evidence*, p. 23.

to concerns that the project's environmental effects had not been comprehensively considered.³¹

The Committee notes that stakeholders differ on the likely environmental effects of modern waste-to-energy facilities. While some consider those effects can be appropriately managed, many members of the community remain concerned about the level of emissions and their potential environmental impacts. For those who consider that waste-to-energy facilities pose significant environmental risks, the description of the EES process as applying to 'particularly significant or complex proposals that will have adverse impacts on the environment'³² is likely to create an expectation that these projects will undergo an EES. As a result, a decision not to require an EES may create a perception among some members of the community that the project's environmental effects have not been fully examined or that the assessment process lacks transparency.

The Committee considers that this reinforces the importance of clear and transparent communication from the Victorian Government. As discussed in Section 5.6, simply assuring the community that waste-to-energy technology is safe is unlikely to address community concerns and, in some cases, may instead contribute to scepticism. Until the Victorian Government clearly explains what emissions modern waste-to-energy facilities are expected to produce, how reliably those emissions can be controlled and what their likely health and environmental effects are, many members of the community will continue to expect processes such as an EES to fill these knowledge gaps.

FINDING 45: For community members who are concerned about the environmental risks of waste-to-energy facilities, the Minister of Planning's decision not to require an Environment Effects Statement (EES) may be difficult to reconcile with their expectations of how those risks should be assessed.

6.2 What the Committee heard about key planning considerations

DTP told the Committee that, when assessing waste-to-energy proposals, key planning considerations include land use compatibility and separation distances, amenity, and transport impacts.³³

In submissions to the Committee, these three issues emerged as fundamental community concerns. Many submitters argued that the proposals were too close

³¹ Cath Rouse, *Transcript of evidence*, p. 23; Vernadette Bilbao-Dickson, *Transcript of evidence*, p. 43; Sue Lanigan, *Transcript of evidence*, p. 44; Name withheld, *Submission 23*, p. 2.

³² Colleen Peterson, *Transcript of evidence*, p. 38.

³³ Department of Transport and Planning, *DTP Presentation – Inquiry into WtE infrastructure in Victoria*, [PowerPoint Presentation], Melbourne, 26 May 2026, p. 10.

to residential areas³⁴ (raised in around two-thirds of submissions), would result in unacceptable increases in traffic³⁵ (raised in two-fifths of submissions), or would adversely affect the local community, neighbourhood character, and, potentially, property values.³⁶

Each of these key planning considerations is discussed further below.

6.2.1 Land use compatibility and separation distances

The question before us is not whether emissions can be regulated but whether it is appropriate to concentrate that risk so close to where people live.

Paul Ross, Sunbury Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 25.

The Committee heard differing views about where waste-to-energy facilities should be located. Some community members argued that they should be sited in isolated areas, well away from residential communities and agricultural land, to minimise potential impacts on people's health, quality of life and the surrounding environment.³⁷ Others emphasised that waste-to-energy facilities form part of Victoria's essential waste infrastructure and therefore need to be located close enough to where waste is generated to support efficient collection and transport.³⁸ They argued that locating facilities too far from metropolitan areas would increase truck movements, travel times and costs, while making the waste management system less efficient.³⁹

The Committee considers that the proposed Maryvale facility illustrates the practical challenges of balancing these competing objectives. The project represents an attempt to locate a waste-to-energy facility away from the communities that generate the waste. However, it also relies on supporting infrastructure closer to the source of that waste, with a waste transfer station proposed for the existing Hampton Park landfill site. The EPA Victoria refused a development licence for the Hampton Park transfer station, a decision that was upheld by VCAT, creating uncertainty about the future of the Maryvale project.

34 For example: see Matthew Lingard, *Submission 1*, p. 1; Name withheld, *Submission 9*, p. 1; Name withheld, *Submission 13A*, p. 1; Michelle Rankin, *Submission 15*, p. 1; Name withheld, *Submission 19*, pp. 1–2; Name withheld, *Submission 23*, p. 1; Judith Tanner, *Submission 26*, p. 1; Name withheld, *Submission 31*, p. 1; Name withheld, *Submission 59*, p. 1; Loryn Webber, *Submission 84*, p. 1; Ash Verma, *Submission 105*, p. 1; Peter De Vos, *Submission 112*, p. 1; Carolyn Colson, *Submission 148*, p. 1; Name withheld, *Submission 191*, pp. 1–2; Name withheld, *Submission 207*, p. 1; Lynbrook Residents Association, *Submission 251*, pp. 5–6; Gareth Taylor, *Submission 312*, p. 1; Clare Campbell, *Submission 379*, p. 1; Name withheld, *Submission 475*, p. 1; Mia Molloy, *Submission 354*, p. 1; Name withheld, *Submission 506*, p. 2; Al Siraat College, *Submission 540*, p. 2; Residents of Epping North and Wollert, *Submission 621*, p. 2; Donna James, *Submission 595*, p. 1; Name withheld, *Submission 514*, p. 1; Deepak Rattu, *Submission 352*, p. 1; Julie Manson, *Submission 387*, p. 1; Kerrie Smith, *Submission 355*, p. 21.

35 For example, see: Sarah Notaro, *Transcript of evidence*, p. 7; Deborah Taylor, *Submission 47A*, p. 1; Dan Chitty, *Submission 117*, p. 1; Darren Chris, *Submission 138*, p. 1; Name withheld, *Submission 188*, p. 1; Chris West, *Submission 284*, p. 1; Vicki Maltman, *Submission 286*, p. 1; Peter Cooke, *Submission 600*, p. 1; Glen Owens, *Submission 386*, p. 2; Paul Gratton, *Submission 613*, p. 1; Julie Ahmad, *Submission 392*, p. 3; Richard Wallner, *Submission 482*, p. 1; Robyn Thompson, *Submission 418*, p. 2; Amelia Casey, *Submission 361*, p. 1.

36 For example, see: Name withheld, *Submission 462*, p. 1; Chloe Hewat, *Submission 364*, p. 1; Name withheld, *Submission 519*, p. 3; Name withheld, *Submission 471*, p. 2.

37 Alison Medforth, *Transcript of evidence*, p. 4; Samuel Anderson, *Submission 32*, p. 1; Gulhan Yoldas, *Submission 34*, p. 1; Loryn Webber, *Submission 84*, p. 1; Anthony Ryan, *Submission 93*, p. 1; Name withheld, *Submission 217*, p. 1.

38 Gayle Sloan, *Transcript of evidence*, p. 7.

39 Ibid.

In the Committee's view, this demonstrates that locating waste-to-energy facilities further from residential areas does not, by itself, resolve the planning challenges associated with waste management. An efficient waste management system may still require supporting infrastructure to be located closer to where waste is generated, bringing its own planning, environmental and amenity considerations. Accordingly, the planning process requires decision-makers to balance these competing land uses when determining whether a particular location is suitable for a waste-to-energy facility.

Buffers between land uses

A key part of that assessment is determining how much separation there should be between a waste-to-energy facility and nearby homes. This separation is commonly referred to as the 'buffer' between the two land uses.

The EPA Victoria's *Separation Distance Guidelines* do not specify a recommended minimum buffer for waste-to-energy facilities.⁴⁰ Instead, they require separation distances to be assessed on a case-by-case basis,⁴¹ making it difficult to identify what level of separation is generally considered appropriate or to compare the proposed facilities against a consistent benchmark.

Of the proposed waste-to-energy facilities that have been awarded a cap licence, Sunbury is proposed to be the closest to residential land, with its nearest point approximately 800 metres from a future residential development. This proposal also attracted the greatest level of community opposition during the Inquiry. By comparison, the proposed Maryvale facility is the furthest from residential areas, with the nearest existing residential land located approximately three kilometres away.

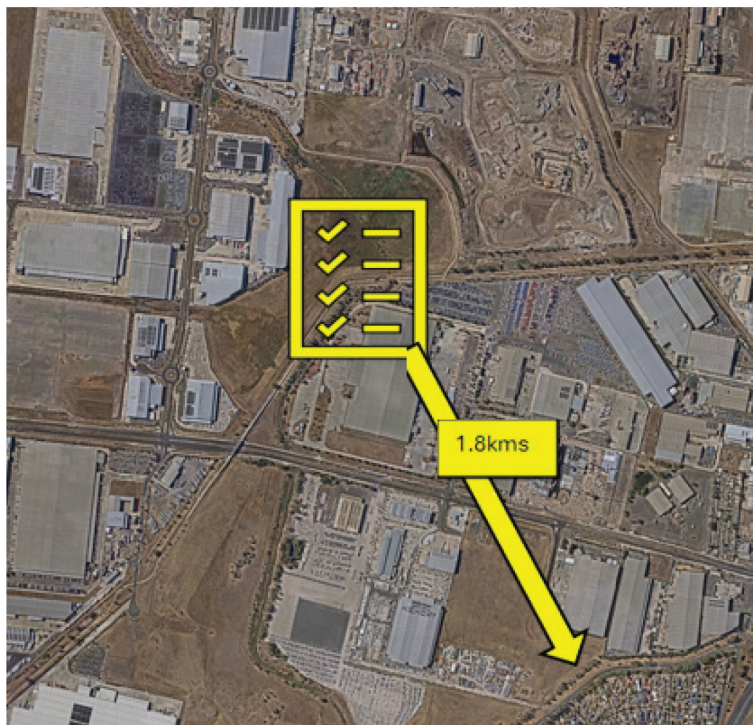
⁴⁰ Environment Protection Authority Victoria, *Separation Distance Guidelines: Publication 1949*, August 2024, p. 29.

⁴¹ Ibid.

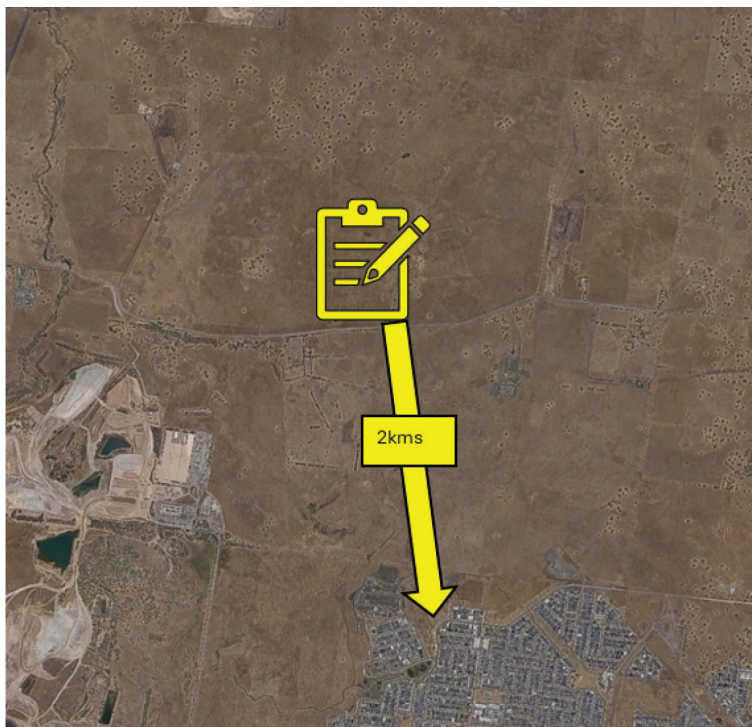
Figure 6.3 Distance between proposed waste-to-energy facilities awarded a cap licence from residential areas



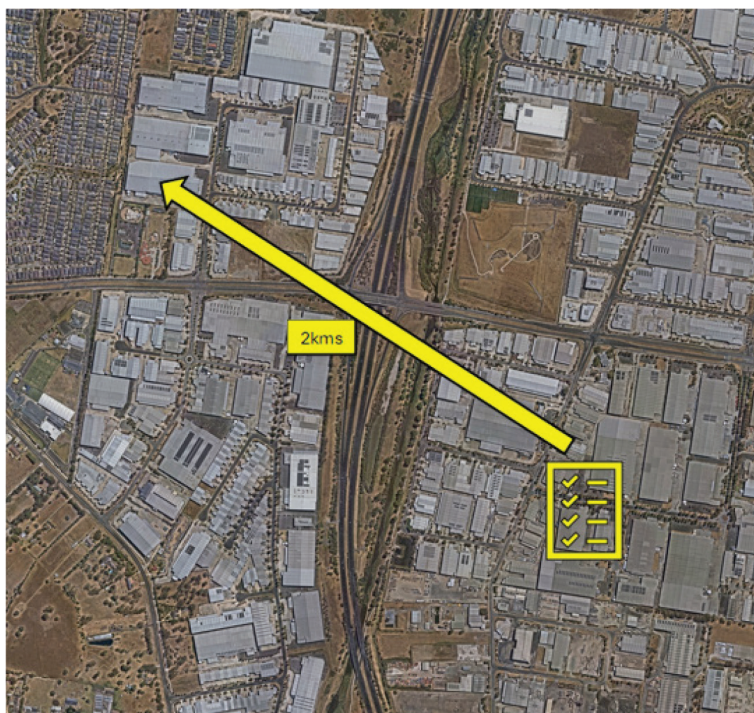
Proposed HiQ facility in Sunbury.



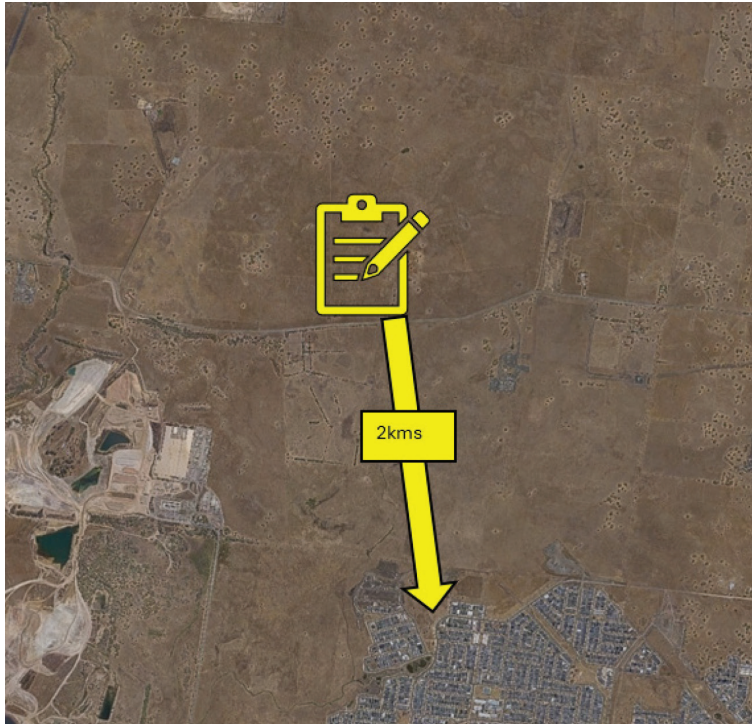
Proposed Recovered Energy facility in Laverton North.



Proposed Cleanaway facility in Wollert.



Proposed Great Southern Waste facility in Dandenong South.



Proposed Opal facility in Maryvale.

Source: Hume City Council, *Submission 496*, pp. 14–16.

The Committee considers that not having clear guidance on the minimum buffer between a waste-to-energy facility and nearby homes, community facilities and businesses creates uncertainty for communities. Without a clear benchmark, many people are left wondering whether a proposed facility is too close to where they live and what that could mean for their quality of life and enjoyment of their home. The Committee considers that communities should be given clearer information about how buffer distances are decided and why they are considered appropriate. This would help people better understand planning decisions and give them greater confidence that a facility can operate safely near their homes.

FINDING 46: Determining an appropriate buffer between a waste-to-energy facility and nearby residential areas is one of the most significant planning judgements, yet there is no prescribed minimum separation distance to guide communities or proponents.

RECOMMENDATION 26: That the Victorian Government provide communities with clear, accessible information explaining how buffer distances for waste-to-energy facilities are determined, the factors considered in setting them, and why those distances are considered appropriate.

Urban Sprawl

The Committee heard that land use planning for waste-to-energy facilities has become more complex as residential development has expanded into areas that were historically separated from industrial and waste management activities. Gayle Sloan, Chief Executive Officer, Waste Management and Resource Recovery Association Australia, observed that some sites were acquired many years ago in what were then considered appropriate buffers, but have since experienced residential encroachment. This can place these two potentially incompatible land uses in conflict, requiring planning authorities to determine whether they can coexist and, where they cannot, how competing planning objectives should be balanced.

The Committee considers this issue to be particularly evident in Sunbury. The site proposed for the waste-to-energy facility has operated as a waste management precinct for around 25 years. At the same time, future residential development is planned as close as 800 metres from the site, bringing planned housing into much closer proximity with existing and proposed waste infrastructure.

The Committee notes that the waste-to-energy facilities awarded a cap licence have all been proposed on sites alongside existing waste management or industrial infrastructure. For example, the proposed Sunbury facility is adjacent to an existing landfill and contaminated soil treatment facility, while the proposed Wollert facility is located near the Wollert Resource Recovery Precinct, which includes an existing landfill. The proposed Maryvale facility is co-located with the existing paper mill, and the proposed Dandenong South and Laverton North facilities are situated within established industrial areas. Despite this pattern of co-location, the evidence received suggests that siting the proposed facilities within existing industrial or waste management areas did not, on its own, alleviate concerns among nearby community members.

DTP told the Committee that its role is to balance competing land uses to achieve the greatest overall benefit for the community. The Committee considers that this means planning for both new housing and the essential infrastructure needed to support a growing population, including waste management facilities. Planning decisions that progressively bring residential development closer to existing waste infrastructure can increase the potential for future land use conflicts, particularly if those facilities need to expand or change over time. The Committee considers that improved coordination between long-term planning for housing and essential infrastructure could help reduce the likelihood of future land use conflicts.

Figure 6.4 What the Committee heard

“ I’m not suggesting waste to energy is not the answer at all, I am suggesting it absolutely should not be in a residential area.

Lachlan Davis, *Submission 353*, p. 1.

“ Sunbury is a major growth corridor. Building a heavy industrial waste plant in an area earmarked for thousands of new family homes is a failure of long-term urban planning.

Name withheld, *Submission 23*, p. 2.

“ The location really matters. The areas we are talking about are not just empty spaces, they are places where people live, where kids go to school and where families build their lives.

Aicha H, Al Siraat College, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 4.

“ Sunbury is not an industrial zone; it is a residential town surrounded by farming land, schools, childcare centres, sporting facilities, and recreational open space.

Name withheld, *Submission 506*, p. 2.

“ I am 12 years old and I live on Summerhill Road in Wollert where they are trying to build an incinerator. I am here today because I am very upset and worried about the plan to build an incinerator so close to my home and my school.

Nisa Y, Al Siraat College, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 2.

“ This is not a small facility. It is proposed to process up to 750,000 tonnes of waste each year and to be located within approximately 1 kilometre of existing and planned residential areas. That combination of scale and proximity is in itself a planning concern

Paul Ross, Sunbury Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 25.

“ I do not want this on my back door, it will force us to leave our home because of too many unknowns.

Name withheld, *Submission 31*, p. 1.

FINDING 47: As residential development expands closer to established waste management and industrial areas, the potential for land use conflicts increases.

FINDING 48: The co-location of proposed waste-to-energy facilities with existing waste management or industrial infrastructure did not, in itself, determine community acceptance of those proposals.

6.2.2 Impact of increased traffic

Sunbury is a beautiful community. We do not want hundreds of trucks roaring through our town, fill to the brim with red-bin waste.

Emma Osborne, *Submission 40*, p. 1.

The Committee heard that, for many community members, a key concern was the impacts associated with the truck movements required to transport waste to and from the site. They argued that these additional truck movements would place further pressure on road networks that are already experiencing congestion and capacity constraints.⁴²

Stakeholders also raised concerns about the effects of increased truck movements on local amenity and public safety.⁴³ Evidence referred to increased noise, vibration, diesel emissions, dust and odour, as well as the potential for more accidents involving pedestrians, cyclists and other road users.⁴⁴ Particular concern was expressed about heavy vehicles travelling past homes, schools, childcare centres and community facilities,⁴⁵ and across constrained infrastructure, such as older bridges.⁴⁶ These concerns were particularly evident in the submissions received from Sunbury residents.

Carly Moore, Mayor of Hume City Council, told the Committee that the community was concerned the proposed HiQ facility would significantly increase truck traffic on an already congested road network, particularly along Sunbury Road and the Hume Freeway.⁴⁷ She said existing bottlenecks, limited road capacity and population growth had already placed the network under pressure and called for major road upgrades if the project were to proceed.⁴⁸

⁴² For example, see: Dave Hill, *Submission 7*, p. 1; Brittany Devlin, *Submission 14*, p. 4; Name withheld, *Submission 23*, p. 1; Laraine Harrison, *Submission 424*, p. 1; Name withheld, *Submission 60*, p. 1; Anita Scurrah, *Submission 62*, p. 3; Donna Robertson, *Submission 71*, p. 1; Dan Chitty, *Submission 117*, p. 1; Name withheld, *Submission 188*, p. 1; Jatin Wig, *Submission 127*, p. 1; Darren Cain, *Submission 138*, p. 1; John Lego, *Submission 141*, p. 1; Name withheld, *Submission 150*, p. 1; Amanda Newman, *Submission 172*, pp. 1–2; Sue Hatton, *Submission 186*, p. 1; Sebastian Ortega Galli, *Submission 228*, p. 1; Peter Cooke, *Submission 600*, p. 1; Julie Ahmad, *Submission 392*, p. 3; Richard Wallner, *Submission 482*, p. 1; Maryam K, *Submission 515*, p. 1; Robyn Thompson, *Submission 418*, p. 2.

⁴³ For example, see: Name withheld, *Submission 23*, p. 1; Name withheld, *Submission 25*, p. 2; Jane Lees, *Submission 33*, p. 1; Emma Osbourne, *Submission 40*, p. 1; Laraine Harrison, *Submission 424*, p. 1; David Allen, *Submission 54*, p. 1; Donna Robertson, *Submission 71*, p. 1; Name withheld, *Submission 102*, pp. 1–2; Jatin Wig, *Submission 127*, p. 1; Amanda Newman, *Submission 172*, p. 2; Sue Hatton, *Submission 186*, p. 1; Chris West, *Submission 284*, p. 1; Richard Wallner, *Submission 482*, p. 1; Jarrod Bell, *Submission 5071*, p. 7; Amelia Casey, *Submission 361*, p. 1; City of Whittlesea, *Submission 424*, p. 2.

⁴⁴ Ibid.

⁴⁵ For example, see: Sarah Notaro, *Transcript of evidence*, p. 7; Deborah Taylor, *Submission 47A*, p. 1; Dan Chitty, *Submission 117*, p. 1; Darren Chris, *Submission 138*, p. 1; Name withheld, *Submission 188*, p. 1; Chris West, *Submission 284*, p. 1; Vicki Maltman, *Submission 286*, p. 1.

⁴⁶ For example, see: Jenny Saal, *Transcript of evidence*, p. 24; Rodney Cummings, *Transcript of evidence*, p. 52; Sheena Frost, *Transcript of evidence*, p. 60; Dave Hill, *Submission 7*, p. 1; Deborah Taylor, *Submission 47A*, p. 1; David Allen, *Submission 54.1*, p. 1; Darren Cain, *Submission 138*, p. 1; John Lego, *Submission 141*, p. 1; Amanda Newman, *Submission 172*, p. 1; Peter Cooke, *Submission 600*, p. 1; City of Whittlesea, *Submission 424.1*, p. 2; Donna James, *Submission 595*, p. 1; Carmel Lakey, *Submission 614*, p. 1.

⁴⁷ Carly Moore, *Transcript of evidence*, p. 55.

⁴⁸ Ibid.

Hume City Council also noted that, while it had not modelled the proposal's traffic impacts, it could draw on its experience during the West Gate Tunnel Project when more than 130,000 truck movements occurred annually to the HiQ site.⁴⁹ Other stakeholders similarly spoke about how this additional truck traffic placed further pressure on a road network already operating at capacity and created road safety risks, including through mud and debris left on road surfaces by heavy vehicles.⁵⁰

The Committee also heard concerns that a key access route to the facility included using an ageing bridge that was not designed for the anticipated volume of heavy vehicle movements, raising questions about its suitability and safety.⁵¹

Such concerns were not limited to the Sunbury proposal. Community members raised similar concerns about other proposed waste-to-energy facilities, including those at Wollert and Lara. They argued that similar factors, including the need to route trucks through residential areas and over infrastructure such as ageing bridges, meant that additional truck traffic would be disruptive and pose safety risks to the community.⁵²

Figure 6.5 What the Committee heard

“As an SES rescue volunteer of more than 15 years, I have seen directly how road design, heavy vehicle volumes and congestion affect emergency response and community safety.

Jarrold Bell, *Submission 507.1*, p. 6.

“HiQ's own proposal says that the truck route will be divided 50–50 between Sunbury Road and through the township of Sunbury. How is this even being considered – going past our schools, our childcare centres and our homes?

Jenny Saal, Sunbury Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 24.

“As a person with a disability, my transit options are often limited. Increased congestion and the presence of heavy industrial traffic make navigating local roads more dangerous and stressful, potentially isolating me from essential medical services and community support.

Graeme Johnston, *Submission 178*, p. 1.

“At this scale, local roads would function as an industrial freight corridor rather than a suburban transport network, which is inconsistent with their intended role in residential growth areas.

Julie Ahmad, *Submission 392*, p. 3.

⁴⁹ Hume City Council, response to questions on notice received 2 June 2026, p. 3.

⁵⁰ Hume City Council, response to questions on notice received 2 June 2026, p. 3; David Allen, *Submission 54.1*, p. 1.

⁵¹ For example, see: Jenny Saal, *Transcript of evidence*, p. 24; Rodney Cummings, *Transcript of evidence*, p. 52; Sheena Frost, *Transcript of evidence*, p. 60; Dave Hill, *Submission 7*, p. 1; Deborah Taylor, *Submission 47A*, p. 1; David Allen, *Submission 54.1*, p. 1; Darren Cain, *Submission 138*, p. 1; John Lego, *Submission 141*, p. 1; Amanda Newman, *Submission 172*, p. 1; Peter Cooke, *Submission 600*, p. 1; City of Whittlesea, *Submission 424.1*, p. 2; Donna James, *Submission 595*, p. 1; Carmel Lakey, *Submission 614*, p. 1.

⁵² For example, see: James Stirton, *Transcript of evidence*, p. 12; Les Dew, *Transcript of evidence*, p. 26.

“ Who will maintain these roads. Hopefully it is not the current ratepayers.

Amanda Newman, *Submission 172*, p. 1.

“ So anyone who is, obviously, familiar with that bridge and that area – near misses and the risks around that bridge with that truck volume – we consider it quite risky.

Sheena Frost, Chief Executive Officer, Hume City Council, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 60.

“ More trucks means more traffic and noise! imagine your in a VCE room doing your test and all of the sudden you start hearing loud trucks going back and forth that will be so distracting.

Zulaikha R, *Submission 529*, p. 1.

FINDING 49: For many community members, the transport of waste to and from a waste-to-energy facility was a concern in its own right. Concerns focused on congestion, road safety, local amenity and the suitability of existing road infrastructure.

RECOMMENDATION 27: That the Victorian Government give careful attention to truck routes, road capacity, air quality and surrounding land uses to minimise impacts of waste-to-energy facilities on residential communities.

RECOMMENDATION 28: That the Victorian Government require proponents of waste-to-energy facilities to contribute an appropriate share of the costs of any road or transport infrastructure upgrades required to support their proposal.

RECOMMENDATION 29: That the Victorian Government consider exhaust emissions from trucks transporting waste to and from waste-to-energy facilities as part of the health and environmental risk assessment.

6.2.3 Loss of local character

Adding an incinerator will tarnish the community many of us are working hard to build

Name withheld, *Submission 246*, p. 1.

The Committee heard concerns that locating waste-to-energy facilities close to residential areas, particularly those experiencing significant population growth, could fundamentally change the character of local communities and discourage people from moving there in the future.⁵³

These concerns were particularly evident in relation to the proposed facilities at Sunbury, Wollert and Lara. Stakeholders described these areas as growing, family-oriented communities valued for their open space, natural environment and semi-rural character.⁵⁴ They argued that introducing large-scale industrial waste infrastructure would be inconsistent with this identity and make these communities less attractive places to live.⁵⁵

Some community members also expressed concern that these changes could reduce property values, noting that many families had chosen to move to these areas because they offered a more affordable alternative to other parts of Melbourne.⁵⁶ They argued that families should not have to choose between affordable housing and concerns about the potential impacts of a nearby waste-to-energy facility.

Figure 6.6 What the Committee heard

“Even if every regulatory standard is met, the presence of this facility fundamentally alters the character and long-term trajectory of this community.

Gulhan Yoldas, *Submission 34*, p. 3.

“We chose to live in Sunbury for its sense of space, community, wellbeing and liveability — not to become neighbours to a large-scale waste processing facility.

Janet Moffat, *Submission 453*, p. 1.

⁵³ For example, see: Adam Bremner, No Sunbury Waste Incinerator, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 8; Mary Mackinnon, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 35; Gulhan Yoldas, *Submission 34*, p. 3; Priya Dhingra, *Submission 75*, p. 1; Name withheld, *Submission 239*, p. 1; Name withheld, *Submission 246*, p. 1; Chloe Hewat, *Submission 364*, p. 1; Residents of Epping North and Wollert, *Submission 621*, p. 2; Jane Moffat, *Submission 453*, p. 1; Amelia Casey, *Submission 361*, p. 1; Kathryn Monk, *Submission 472*, p. 2; Name withheld, *Submission 402*, p. 1; Seema Rani, *Submission 356*, p. 2.

⁵⁴ For example, see: Adam Bremner, *Transcript of evidence*, p. 8; Jenny Saal, *Transcript of evidence*, p. 24; Mary Mackinnon, *Transcript of evidence*, p. 35; Fabiana Johnston, *Submission 43*, p. 3; Dinah Scicluna, *Submission 48*, p. 1; Priya Dhingra, *Submission 75*, p. 1; Stacey Toll, *Submission 94*, p. 1; Name withheld, *Submission 125*, p. 1; Tom Johnston, *Submission 179*, pp. 1–2; Name withheld, *Submission 246*, p. 1; Jane Moffat, *Submission 453*, p. 1; Amelia Casey, *Submission 361*, p. 1; Name withheld, *Submission 488*, p. 1; Ashleigh Guldson, *Submission 497*, p. 1; Ryan O’Callaghan, *Submission 458*, p. 1.

⁵⁵ For example, see: Ruth Tott, *Submission 83*, p. 1; Peter De Vos, *Submission 112*, p. 1; Name withheld, *Submission 125*, p. 1; Tom Johnston, *Submission 179*, pp. 1–2; Chloe Hewat, *Submission 354*, p. 1; Name withheld, *Submission 506*, p. 3.

⁵⁶ Adam Bremner, *Transcript of evidence*, p. 8; Jenny Saal, *Transcript of evidence*, p. 24; Mariel Vilella, *Transcript of evidence*, pp. 56–57; Name withheld, *Submission 8*, p. 1; Kristina Larson, *Submission 16*, p. 1; Name withheld, *Submission 41*, p. 1; Name withheld, *Submission 81*, p. 1; Name withheld, *Submission 102*, p. 2; Carolyn Colson, *Submission 148*, p. 1; Tom Johnston, *Submission 179*, p. 2; Name withheld, *Submission 281*, p. 1; Name withheld, *Submission 462*, p. 1; Chloe Hewat, *Submission 364*, p. 1; Name withheld, *Submission 518*, p. 6.

“ As a retired taxpayer, business owner and homeowner, I find it totally unacceptable that my primary financial asset should be compromised to solve a state-wide waste management issue.

Tom Johnston, *Submission 179*, p. 2.

“ The presence of large waste infrastructure can affect how residents perceive their neighbourhoods, influence property values, and shape the long-term identity of communities.

Sue Lanigan, *Submission 425*, p. 19.

“ I’m a single mum and have just purchased land and employed a builder to build for us in redstone estate. I almost did not buy in Sunbury because of the proposed incinerator. I looked elsewhere and practically every single growth corridor that working and middle class people can try to get their foot in the door in the housing market around Melbourne has a proposed incinerator.

Kristina Larson, *Submission 16*, p. 1.

“ Hume Council has invested in making Sunbury a family friendly suburb with new links to the CBD. Projections for growth are huge. A 90m chimney churning out smoke 24/7 is hardly a landmark that will attract families to the area

Ruth Tott, *Submission 83*, p. 1.

“ This WtE plant will be both an eyesore and a hazard to the communities and take what is currently a booming part of Melbourne and ruin its potential.

Peter De Vos, *Submission 112*, p. 1.

FINDING 50: Locating major waste infrastructure near rapidly growing residential communities requires careful consideration of the long-term character and amenity of those communities.

FINDING 51: Access to affordable housing should not require communities to accept disproportionate impacts from major waste infrastructure.

6.2.4 Equitable distribution of waste infrastructure

So this is not just about waste; it is about risk. And another question becomes: who is being asked to carry that risk? Because it is not evenly shared; it is placed on specific communities, on growing suburbs, on families and on young people.

Tamara M, Al Siraat College, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 5.

The Committee heard concerns that major waste infrastructure is disproportionately located in outer suburban, regional and working-class communities, meaning these

areas bear the environmental, social and amenity impacts of infrastructure that serves the broader metropolitan population.⁵⁷

Similar patterns have also been reported internationally. It was submitted that low-income communities in the United Kingdom are around ten times more likely to host a waste incinerator, while around 80% of waste incinerators in the United States are located in lower-income communities.⁵⁸

Some described communities such as Sunbury, Bulla, Wollert and Dandenong South as already hosting significant waste and industrial infrastructure and argued it was unfair for them to shoulder an increasing share of Victoria's waste burden.⁵⁹ Stakeholders also questioned whether these communities were being asked to accept risks that would be unlikely to be tolerated in more affluent suburbs, and argued that environmental risks should be distributed more equitably across the state.⁶⁰

Figure 6.7 What the Committee heard

“ I feel this area is very much shouldering more than a fair disruptive share for Victoria.

Mary Mackinnon, Sunbury Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 36.

“ These are suburbs with existing high levels of disadvantage, and exposure to discharges from the plant will further disadvantage those living in these and nearby areas.

Darebin Climate Action Now, *Submission 622*, p. 4.

“ There are no incinerators in Toorak, Brighton or Sandringham because that is where the people from Cleanaway live. Obviously they do not want it in their backyard, and no-one else wants it in their backyard either.

Rod Cummings, Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 46.

“ Residents have lived with the impacts of odour, heavy-vehicle traffic, dust and ongoing environmental concerns for many, many years. As a result there is a growing perception that communities like ours are repeatedly expected to absorb infrastructure that may face far greater resistance elsewhere.

Vernadette Bilbao-Dickson, Lynbrook Residents Association, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 42.

⁵⁷ Alison Medforth, *Transcript of evidence*, p. 2; Arabella Daniel, *Transcript of evidence*, p. 15; Tamara M, *Transcript of evidence*, p. 5; Brittany Devlin, *Submission 14*, p. 5; Gulhan Yoldas, *Submission 34*, p. 2; Michael Richardson, *Submission 56*, p. 1; Anita Scurrah, *Submission 62*, pp. 1–2; Priya Dhingra, *Submission 75*, p. 1; Stacey Toll, *Submission 94*, p. 1; Tom Johnston, *Submission 179*, p. 2; Sue Lanigan, *Submission 425*, p. 16; Sarah Notaro, *Submission 527*, p. 1; Fazeel Arain, *Submission 502*, p. 2; Yarra Climate Action Now, *Submission 481*, p. 1; Natalie Pawlus, *Submission 435*, p. 1; Extinction Rebellion Victoria, *Submission 579*, p. 8.

⁵⁸ Alison Medforth, *Transcript of evidence*, p. 2.

⁵⁹ For example, see: Sarah Notaro, *Transcript of evidence*, p. 7; Mary Mackinnon, *Transcript of evidence*, p. 36; Vernadette Bilbao-Dickson, *Transcript of evidence*, p. 42; Fabiana Johnston, *Submission 43*, p. 2; Anita Scurrah, *Submission 62*, p. 1; Josh Hunt, *Submission 89*, p. 1; Tom Johnston, *Submission 179*, p. 2.

⁶⁰ Sarah Notaro, *Transcript of evidence*, p. 7; Rod Cummings, *Transcript of evidence*, p. 46; Sue Lanigan, *Submission 425*, p. 16; Natalie Pawlus, *Submission 435*, p. 1.

“ Proposed sites including Sunbury, Wollert, Lara, Dandenong Sth, are often targeted because a significant number of residents are first home buyers, young families and residents facing high mortgage stress, rental stress and cost of living stress. It may be more difficult for these communities to fight these proposals.

Barbara Horwood, *Submission 403*, p. 1.

“ People in the community have said that they will move out if this thing is built, but where are people going to go? We are in a working-class area.

Sarah Notaro, No Sunbury Waste Incinerator, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 7.

RECOMMENDATION 30: That the Victorian Government consider the equitable distribution of waste infrastructure and its cumulative impacts, as an important consideration when assessing suitable locations for waste-to-energy facilities

6.2.5 Employment

This project represents a unique opportunity to deliver jobs, at a time when new employment opportunities are urgently needed.

Gippsland Trade and Labour Council, *Submission 421*, p. 1.

The Committee heard that the jobs created by waste-to-energy facilities are an important consideration for some communities, particularly in regions affected by the closure of major industries or power stations.⁶¹

This consideration was raised primarily in relation to the proposed Maryvale waste-to-energy facility. Supporters saw the project as an important opportunity to support the future of the Maryvale paper mill, create construction and ongoing jobs, and assist the Latrobe Valley’s economic transition as coal-fired power generation is phased out.⁶²

However, others cautioned that potential economic benefits should not outweigh environmental and health considerations, arguing that decisions should strike an appropriate balance between job creation and protecting the community.⁶³

⁶¹ Andy Smith, *Transcript of evidence*, pp. 32–33.

⁶² Ibid.

⁶³ Tracey Anton, *Transcript of evidence*, p. 47.

Figure 6.8 What the Committee heard

“The Latrobe Valley in itself has some really terrible socioeconomic and social issues. It consistently ranks in the top two or three in the state in domestic violence, ambulance call-out and hospitalisation from domestic violence, and elevated homelessness, especially for women. Youth unemployment is way higher than the state average. Unemployment in general is higher than the state average, and poor mental health in the Latrobe Valley is 34 per cent higher than the state average. People may ask why I am raising these social issues in an inquiry into waste-to-energy. It is quite simple, and that is that with the impending closure of the power industry and Yallourn power station and mine, those types of statistics are only going to get worse – they are not going to get better.

Andy Smith, Gippsland Trade and Labour Council, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 32.

“Basically, with our local member it is all about the jobs. That is fair enough, as Andy said, for Latrobe Valley. But you cannot put a weight on jobs, which I think Recycling Victoria do, you know, forsaking environmental concerns and the health of the population.

Tracey Anton, Friends of Latrobe Water (FLOW), public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 47.

“WtE offers economic benefits such as local job creation and reliable industrial energy.

Latrobe City Council, *Submission 624*, p. 5.

“Composting and repair/reuse generate 3x more jobs per tonne than WtE, supporting local economies and community engagement.

Global Alliance for Incinerator Alternatives, *Submission 391*, p. 3.

FINDING 52: Employment and regional economic benefits are an important consideration in assessing some waste-to-energy proposals, particularly in regions undergoing industrial transition. Benefits should be balanced against alternative waste management options, and environmental, health and community considerations.

6.3 Community Consultation

Community consultation emerged as a significant issue during the Inquiry, with many community members expressing concern that they had not been adequately consulted or provided with sufficient information about the proposed projects.⁶⁴ While these concerns warrant careful consideration, the Committee also notes that many of the proposals are still at an early stage of the approvals process. Several projects

⁶⁴ For example, see: Alison Medforth, *Transcript of evidence*, pp. 2–5; Adam Bremner, *Transcript of evidence*, p. 5; Sarah Notaro, *Transcript of evidence*, p. 7; Paul Ross, *Transcript of evidence*, p. 25; Jenny Saal, *Transcript of evidence*, p. 27; Chris Wilson, *Transcript of evidence*, p. 32; Clare Campbell, *Transcript of evidence*, p. 39; Mary Mackinnon, *Transcript of evidence*, p. 43; Kate Johnston, *Transcript of evidence*, p. 43; Rodney Cummings, *Transcript of evidence*, p. 46; Julie A, *Transcript of evidence*, p. 2; Tamara M, *Transcript of evidence*, pp. 4–5; Cath Rouse, *Transcript of evidence*, p. 23; Carmen Lahiff-Jenkins, *Transcript of evidence*, p. 41; Phillip Sinclair, *Transcript of evidence*, p. 41; Vendatte Bilabo-Dickson, *Transcript of evidence*, p. 42; Sue Lanigan, *Transcript of evidence*, p. 48.

have not yet reached key milestones, such as applying for a development licence or planning permit, where more comprehensive community consultation would normally be expected. In that context, the Committee heard that some concerns about the consultation process may reflect the early stage of these projects.

At the same time, the Committee considers that the current approvals process creates a reasonable expectation that communities should have already been more meaningfully consulted. Under the current approvals framework, proponents may be allocated waste-to-energy cap capacity before they begin the planning and environmental approval processes. Although a cap allocation does not approve a project, it can create the impression that an important decision has already been made. In the Committee's view, this sequencing risks undermining community confidence before the formal consultation process has even begun and can leave communities with the perception that consultation occurs too late to meaningfully influence project outcomes.

Opal's submission to the Inquiry states:

Victoria's planning and EPA processes provide established consultation pathways. These enable stakeholders to raise concerns and ensure risks are assessed and managed. It should be acknowledged that major infrastructure projects are unlikely to achieve full, unanimous support. Rather the focus should be on meaningful community consultation and appropriate mitigation to those risks to allow the project to proceed with a low and acceptable risk profile in order to deliver an essential service for the greater good of communities.⁶⁵

6.3.1 Planning Permits

The Committee heard that community engagement is built into Victoria's planning system through public exhibition, submissions and, where appropriate, public hearings. However, the Committee notes that the Minister's power to exempt proposals from public notice and consultation in certain circumstances may reduce community confidence in the planning system and its ability to provide meaningful opportunities for consultation.

For applications assessed through the standard planning permit pathway, affected community members can object to a planning permit application during the public notice period. In most cases, permit decisions, permit conditions and delays can also be reviewed by VCAT. However, where an application is assessed under Clause 53.22 of the *Victorian Planning Provisions (Significant Economic Development)*, there are no VCAT appeal rights.

For applications assessed through the planning scheme amendment pathway, community members do not have VCAT appeal rights. However, they can make submissions during the public exhibition process and participate in panel hearings

⁶⁵ Opal, *Submission 504*, p. 3.

on the proposed planning scheme amendment. The Minister may also establish an independent advisory committee to provide advice on particularly large or complex proposals, with further opportunities for public hearings. Examples include the Hexham Wind Farm and the Kentbruck Green Power Hub projects. The Committee heard that, to date, no advisory committee has been established for a waste-to-energy proposal, which the Department attributed in part to the relatively small number of proposals received.

The Committee also notes that, for projects assessed through this planning scheme amendment pathway, the Minister has the power to exempt a proposal from any public notice and consultation where the minister considers ‘that compliance with any of those requirements is not warranted or that the interests of Victoria or any part of Victoria make such an exemption appropriate’.⁶⁶

The Committee notes that Victoria’s planning framework provides the Minister with discretion in relation to aspects of the approvals process. Depending on the circumstances, this may include the assessment pathway and the statutory consultation requirements that apply to a proposal. The Committee considers that such powers are likely to affect community confidence in the process. Where it is unclear how a proposal will ultimately be assessed, or whether the usual public notice and consultation requirements will apply, communities may be concerned that they will have limited opportunities to participate meaningfully in the decision-making process. Given this uncertainty, the Committee understands why many community members seek to engage early, rather than waiting for the formal planning approval processes to commence.

FINDING 53: The opportunities for communities to have a say on a waste-to-energy proposal depend on the planning pathway used. For some proposals, the Minister for Planning decides which planning pathway applies. This decision can affect whether the community is notified, consulted, or able to seek a review through VCAT.

FINDING 54: Uncertainty about the assessment pathway and consultation requirements that will apply to a waste-to-energy proposal risks undermining community confidence and encourages communities to seek engagement before formal planning processes begin.

6.3.2 Development Licence

The Committee heard that public participation is an important part of the EPA Victoria development licence process, with both the EPA Victoria and proponents responsible for engaging with the community (see Section 5.5.1 for further information about the development licence process).

⁶⁶ *Planning and Environment Act 1987* (Vic) s. 20(4).

EPA Victoria invites public feedback through its own consultation process, hosted on Engage Victoria, and expects proponents to engage with stakeholders ‘early and meaningfully’.⁶⁷ It also requires waste-to-energy operators to maintain a community and stakeholder engagement plan and provide regular public reporting on construction, operations and emissions to support transparency throughout the life of the facility.⁶⁸

The Committee heard that many of the opportunities that community members were seeking, including access to detailed project information, health risk assessments, public engagement sessions and the opportunity to provide formal feedback, are built into the EPA Victoria development licence process.⁶⁹ However, many of the proposed waste-to-energy projects have not yet reached that stage. Alison Medforth, No Sunbury Waste Incinerator, told the Committee that they found it difficult to raise concerns because no formal application had yet been submitted, leaving them with no clear opportunity to object or participate in the process:

And one of the things that has also been really concerning is, when we have brought it up with different groups or different government bodies, we have hit a roadblock because there actually has not been an application. So what we hear from HiQ or from different government agencies is they will say, ‘Well, what application? There isn’t an application.’ So we cannot actually oppose anything because there is nothing to oppose.⁷⁰

The Committee heard from the EPA Victoria that it is reasonable for communities to be engaged and interested in proposals before a development licence application is lodged.⁷¹

FINDING 55: Environment Protection Authority Victoria assured the Committee that many of the opportunities for community engagement sought during this Inquiry are built into the development licence process. However, it also acknowledged that many proposed waste-to-energy projects have not yet reached that stage, meaning those consultation processes have not yet commenced.

⁶⁷ Dr Jen Martin, *Transcript of evidence*, p. 37.

⁶⁸ Ibid.

⁶⁹ Dr Jen Martin, *Transcript of evidence*, p. 41.

⁷⁰ Alison Medforth, *Transcript of evidence*, p. 5.

⁷¹ Dr Jen Martin, *Transcript of evidence*, p. 41.

6.3.3 What the Committee heard about consultation

Many stakeholders who participated in the Inquiry spoke to the Committee about shortcomings in the consultation processes they had experienced to date.⁷² By contrast, some evidence indicated that consultation processes had been conducted well and had kept communities informed.⁷³ This section outlines the main concerns raised about community consultation, including that it:

- was a formality, because the decision has been made
- was informational, not participatory
- did not reach the right stakeholders, and
- lacked Victorian Government leadership.

Consultation was a formality, because the decision has been made

The Committee heard that some community members did not think the consultation had been genuine because they believed the key decisions had already been made.⁷⁴ However, government agencies and other stakeholders emphasised that most of the proposed waste-to-energy projects are still in the early stages of the approvals process and must go through several planning and environmental approvals before they can proceed.⁷⁵

This disconnect highlights the way the current approvals process can be perceived by many in the community. Although the allocation of waste-to-energy cap capacity does not authorise a project, the Committee considers that it may create the impression that an infrastructure pathway has been ‘effectively locked in’.⁷⁶ This may lead some community members to perceive subsequent consultation as a ‘tick-box’⁷⁷ exercise, undermining confidence that the process offers a genuine opportunity to participate in decision-making.

⁷² For example, see: Alison Medforth, *Transcript of evidence*, pp. 2–5; Adam Bremner, *Transcript of evidence*, p. 5; Sarah Notaro, *Transcript of evidence*, p. 7; Paul Ross, *Transcript of evidence*, p. 25; Jenny Saal, *Transcript of evidence*, p. 27; Chris Wilson, *Transcript of evidence*, p. 32; Clare Campbell, *Transcript of evidence*, p. 39; Mary Mackinnon, *Transcript of evidence*, p. 43; Kate Johnston, *Transcript of evidence*, p. 43; Rodney Cummings, *Transcript of evidence*, p. 46; Julie A, *Transcript of evidence*, p. 2; Tamara M, *Transcript of evidence*, pp. 4–5; Cath Rouse, *Transcript of evidence*, p. 23; Carmen Lahiff-Jenkins, *Transcript of evidence*, p. 41; Phillip Sinclair, *Transcript of evidence*, p. 41; Vendatte Bilbao-Dickson, *Transcript of evidence*, p. 42; Sue Lanigan, *Transcript of evidence*, p. 48.

⁷³ Andy Smith, *Transcript of evidence*, p. 36; Dr Jackie Wright, *Transcript of evidence*, p. 10; Gayle Sloan, *Transcript of evidence*, p. 9; David Jettner, *Transcript of evidence*, p. 15; Mark Rodgers, *Transcript of evidence*, p. 17.

⁷⁴ For example, see: Alison Medforth, *Transcript of evidence*, pp. 2–5; Adam Bremner, *Transcript of evidence*, pp. 5–10; Vernadette Bilbao-Dickson, *Transcript of evidence*, p. 42; Name withheld, *Submission 191*, pp. 2–3; Lynbrook Residents Association, *Submission 251*, p. 1; Jane Mitchell, *Submission 259.1*, p. 5; Name withheld, *Submission 396*, p. 4; Friends of Merri Creek, *Submission 381*, p. 2; Darebin Neighbourhood House Network, *Submission 381*, p. 2.

⁷⁵ Dr Jen Martin, *Transcript of evidence*, p. 41; Coleen Peterson, *Transcript of evidence*, p. 39.

⁷⁶ Jane Mitchell, *Submission 259.1*, p. 5.

⁷⁷ Alison Medforth, *Transcript of evidence*, p. 5; Vernadette Bilbao-Dickson, *Transcript of evidence*, p. 42; Tamara M, *Transcript of evidence*, p. 5.

Figure 6.9 What the Committee heard

“ Many residents only become aware of these proposals after key decisions are already underway, which undermines public confidence and creates a perception that consultation is procedural rather than meaningful.

Lynbrook Residents Association, *Submission 251*, p. 1.

“ What I observed was not genuine community engagement. It was, at best, the performance of consultation.

Darebin Neighbourhood House Network, *Submission 626*, p. 3.

“ Based on what we have heard from other communities involved with WtE incinerator proposals, “window dressing” would be a good description of their (and our) experience. The proponents and government agencies appear to be just going through the process, with a pre-determined outcome in mind.

Friends of Merri Creek, *Submission 381*, p. 2.

“ Community consultation loses its meaning when it is token. When facts and reports put forward by hard working communities are disregarded in government reports.

Liz Morigan, *Submission 398*, p. 5.

“ Once it gets to, for example, the EPA, there is a very common thought that the EPA is there to tick the boxes for the major corporations and for the government, and the little guys, the communities, are not really taken into account.

Alison Medforth, No Sunbury Waste Incinerator, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 5.

FINDING 56: Although most proposed waste-to-energy projects are still at an early stage and require several approvals before they can proceed, the current sequencing of the approvals process can create the perception that projects have already been approved, undermining confidence in subsequent consultation.

RECOMMENDATION 31: That the Victorian Government review how the waste-to-energy approvals process is communicated to communities to ensure the sequencing of approvals does not inadvertently undermine confidence in subsequent consultation and decision-making.

Consultation was informational, not participatory

The Committee heard that some community members viewed consultation as largely one-way communication that focused on explaining or justifying proposals, rather than listening to or responding to community concerns.⁷⁸ Some did not regard information sessions alone as genuine consultation, instead expecting a two-way dialogue in which their views could be heard and meaningfully considered.⁷⁹

Figure 6.10 What the Committee heard

“ Many residents feel that consultation has been limited and reactive rather than transparent and genuinely participatory.

Paul Ross, Sunbury Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 25.

“ Meaningful community engagement requires more than information sessions—it requires genuine consideration of whether the project should proceed at all in this location.

Name withheld, *Submission 506*, p. 3.

“ We have had no consultation at all. There have been two seminars that HiQ has started, but they were very barely what we would call consultation. They were more information or propaganda sessions where they were just really telling us what was going to happen. There was no back and forth between. There were opportunities to ask questions, but it was more them justifying their position as opposed to being receptive or taking on any feedback.

Alison Medforth, No Sunbury Waste Incinerator, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 5.

FINDING 57: Effective community consultation requires more than the provision of information. Communities expect genuine two-way engagement in which their concerns are heard and meaningfully considered.

⁷⁸ Alison Medforth, *Transcript of evidence*, p. 5; Paul Ross, *Transcript of evidence*, p. 25; Jenny Saal, *Transcript of evidence*, p. 32.

⁷⁹ Alison Medforth, *Transcript of evidence*, p. 5; Jenny Saal, *Transcript of evidence*, p. 32.

Consultation did not reach the right stakeholders

The Committee heard consistent concerns that many community members were not aware of consultation opportunities or even the proposals themselves until community groups brought them to their attention.⁸⁰ Many said they found out through social media, neighbours or local advocacy groups rather than through direct communication from proponents, government or regulators.⁸¹ Stakeholders argued that relying on websites such as Engage Victoria was not sufficient, as many people were unaware of these platforms or did not know they needed to look for information.⁸² They called for more proactive and accessible engagement, including direct notifications, community drop-in sessions, letterbox drops and communication in a range of formats to ensure affected communities were aware of proposals and had a genuine opportunity to participate.⁸³

The Committee also heard that consultation needs to be accessible to the communities it is intended to reach. This was raised as a particular issue for proposals affecting areas with large culturally and linguistically diverse populations, including Wollert, Sunbury and Dandenong South. Stakeholders argued that lengthy, highly technical documents, short consultation timeframes and reliance on English-language information can make it difficult for some community members to understand proposals and participate meaningfully. Tamara M, a student at Al Siraat College, asked the Committee:

If a decision is too complex for the average family to understand, can their agreement truly be called informed? If language, time and access determine whose voices are heard, can we call this process equal?⁸⁴

These stakeholders emphasised that simply making information available is not enough. Effective consultation should use clear language, appropriate communication channels and, where necessary, translated materials and culturally appropriate engagement to ensure all affected communities have a genuine opportunity to understand proposals and have their views heard.

⁸⁰ For example, see: Chris Wilson, *Transcript of evidence*, p. 33; Clare Campbell, *Transcript of evidence*, p. 39; Kate Johnston, *Transcript of evidence*, p. 43; Rodney Cummings, *Transcript of evidence*, p. 46; Matthew Lingard, *Submission 1*, p. 1; Darebin Neighbourhood House Network, *Submission 626*, p. 3; Heather Campbell, *Submission 565*, p. 1.

⁸¹ For example, see: Chris Wilson, *Transcript of evidence*, p. 33; Clare Campbell, *Transcript of evidence*, p. 39; Kate Johnston, *Transcript of evidence*, p. 43; Rodney Cummings, *Transcript of evidence*, p. 46; Matthew Lingard, *Submission 1*, p. 1.

⁸² Julie A, Al Siraat College, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 8; Carmen Lahin-Jenkins, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 41.

⁸³ No Sunbury Waste Incinerator, response to questions on notice received 4 June 2026, p. 1; Carmen Lahin-Jenkins, *Transcript of evidence*, p. 41.

⁸⁴ Tamara M, *Transcript of evidence*, p. 5.

Figure 6.11 What the Committee heard

“ This is not just unfortunate; this is fundamentally unfair. Because a fair decision is not just defined by whether information was released; it is defined by whether that information was understood by everyone, not just a few.

Tamara M, Al Siraat College, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 5.

“ The Epping, Wollert and surrounding areas are highly multicultural. Many households speak languages other than English at home. In a community like this, proper consultation requires more than publishing information and assuming it has been understood.

Fazeel Arain, *Submission 502*, p. 3.

“ The regulator responsible for community consultation told me it did not have the capacity to reach the community. That is not a resource problem. That is a policy failure.

Darebin Neighbourhood House Network, *Submission 626*, p. 3.

“ I found out because I was going for a run and I saw a sign in someone's front yard, and then I had to do my own research. So I feel like the communication has been non-existent.

Kate Johnston, Sunbury Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 43.

“ Reviewing thousands of pages of technical environmental and planning documentation within short consultation windows is challenging even for highly resourced communities. It is particularly difficult for households navigating language barriers, work pressures, and settlement challenges.

Gulhan Yoldas, *Submission 34*, p. 2.

FINDING 58: Consultation should be designed around the needs of the community it is intended to reach. In communities with large culturally and linguistically diverse populations, consultation should use accessible information and appropriate engagement methods so everyone has a genuine opportunity to participate.

RECOMMENDATION 32: That the Victorian Government require any organisation responsible for consulting on a proposed waste-to-energy facility to prepare a community engagement plan that explains how it will ensure affected communities are aware of the proposal and have a genuine opportunity to participate. This should include culturally appropriate engagement, translated materials where appropriate, and communication methods that reflect the characteristics of the local community.

Consultation lacked Victorian Government leadership

The Committee heard concerns that the consultation process was confusing and difficult to navigate.⁸⁷ Some community members said they received little or no information from government and instead relied on proponents, community groups or their own research to understand what was being proposed.⁸⁸ Some stakeholders also expressed frustration that attempts to seek information or engage directly with government representatives were unsuccessful, reinforcing the perception that the community had been left to navigate the process largely on its own.⁸⁹

The Committee recognises that agencies such as the EPA Victoria and DTP cannot assess or respond to the details of proposals that have not yet been formally submitted. However, the Committee considers that the Victorian Government has an important role in helping communities understand waste-to-energy technology, the approvals process, and the evidence underpinning government policy.

By allocating waste-to-energy cap capacity and identifying waste-to-energy as part of Victoria's approach to reducing landfill, the Victorian Government has signalled that it is actively considering this technology. It is therefore understandable that communities want information before individual projects enter the formal approvals process. The Committee considers that the Victorian Government must play a more active role in providing clear, balanced and accessible information, rather than relying primarily on proponents or community groups to explain complex and often contested issues.

Having better government communication before formal applications are lodged would also help communities understand the issues, build confidence in the approvals process, and place them in a stronger position to participate meaningfully once statutory consultation on individual proposals begin.

Figure 6.12 What the Committee heard

“ I must admit, as a resident, a lot of the processes that happen with this incinerator going ahead have actually been quite confusing to try and follow.

Jenny Saal, Sunbury Resident, public hearing, Sunbury, 7 May 2026, *Transcript of evidence*, p. 27.

“ A proper consultation process must be led by the state government, not by a private proponent with a vested interest in the project's approval.

Richard Wallner, *Submission 482*, p. 2.

⁸⁷ Jenny Saal, *Transcript of evidence*, p. 27; Lynbrook Residents Association, *Submission 251*, p. 6.

⁸⁸ Mary Mackinnon, *Transcript of evidence*, p. 43; Paul Ross, *Transcript of evidence*, p. 32.

⁸⁹ Venadette Bilbao-Dickson, *Transcript of evidence*, p. 47; Sue Lanigan, *Transcript of evidence*, p. 48.

“ Council does not believe the level of engagement on WtE by State Agencies has been sufficient.

Banyule City Council, *Submission 426*, p. 6.

“ We tried and we could not get much. I agree, there are a lot of reservations from state MPs.

Verndatte Bilbao-Dickson, Lynbrook Residents Association, public hearing, Melbourne, 8 May 2026, *Transcript of evidence*, p. 47.

“ Communication by the Victorian Government on WtE infrastructure and policy has been insufficient, particularly in regard to diminishing landfill capacity, the intended role of WtE within the system, environmental safeguards and monitoring, and long-term waste infrastructure plans for Victoria.

Glen Eira City Council, *Submission 551*, p. 5

FINDING 59: Community confidence is undermined when the Victorian Government does not take a clear leadership role in explaining proposed waste-to-energy projects and the approvals process, leaving communities to rely on proponents, community groups or their own research.

RECOMMENDATION 33: That the Victorian Government ensure planning decisions for waste-to-energy facilities are:

- informed by independent scientific evidence,
- rigorous environmental and public health assessments,
- strategic waste planning,
- meaningful community and stakeholder consultation,
- consideration of surrounding property uses, and
- consistent with best-practice regulatory standards

to provide clarity and consistency for proponents and confidence for communities.

**Adopted by the Legislative Council Economy and Infrastructure Committee
Parliament of Victoria, East Melbourne
5 August 2026**

Appendix A

About the Inquiry

A.1 Submissions

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627	Waste Circology Pty Ltd

A.2 Public hearings

26 May 2026

Committee Hearing Room 3, 55 St Andrews Place, East Melbourne, VIC

Witness	Position and Organisation
Gayle Sloan	Chief Executive Officer, Waste Management and Resource Recovery Association Australia
Jackie Wright	Principal/Director at Environmental Risk Sciences, Waste Management and Resource Recovery Association Australia
David Jettner	General Manager, Environment and Sustainability, Representative of the Maryvale Energy from Waste consortium, Opal
Andrew Short	Director of Project Development ANZ, O.C.O Technology Australia Pty Ltd
Mark Rodgers	Chief Executive Officer, HiQ
Lance Ingrams	Chief Strategy Officer, HiQ
Jen Martin	Chief Environmental Scientist, Environmental Protection Authority Victoria
Tony Circelli	Head, Recycling Victoria
Carolyn Jackson	Deputy Secretary, Regions, Environment, Climate Action and First Peoples, Department of Energy, Environment and Climate Action
Jill Riseley	Deputy Chief Executive Officer, Infrastructure Victoria
Colleen Peterson	Deputy Secretary Planning and Land Services, Department of Transport and Planning
Adam Henson	Director, Planning Facilitation, Department of Transport and Planning
Peter Tait	Public Health Association, ANU
Atiq Zaman	Curtin University, Sustainability Policy
Janek Vähk	Policy Manager, Zero Waste Europe

8 May 2026

Committee Hearing Room 3, 55 St Andrews Place, East Melbourne, VIC

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Nisa Y	Al Siraat College
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Jana G	Al Siraat College
Aicha H	Al Siraat College
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Allana Bedggood	Manager, City of Greater Geelong
Tim Frederico	Project Manager, South East Metropolitan Advanced Waste Processing
Mick Cummins	Chair of Board, South East Metropolitan Advanced Waste Processing
Cath Rouse	No Northern Incinerator Wollert Inc
Les Dew	President, No Waste Incinerators in Lara & Greater Geelong Incorporated
Chaz Street	Secretary, No Waste Incinerators in Lara & Greater Geelong Incorporated
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Max Sargent	Anti-Incinerator Alliance
Andy Smith	Gippsland Trades and Labour Council
Tracey Anton	Friends of Latrobe Water (FLOW)
Phillip Sinclair	Friends of Merri Creek
Carmen Lahiff-Jenkins	Climate Justice and Community Garden Coordinator
Sue Lanigan	
Vernadette Bilbao-Dickson	Lynbrook Residents Association Pty Ltd
Mariel Vilella	Director of Global Climate Program, Global Alliance for Incinerator Alternatives

7 May 2026

Hume Global Learning Centre, 44 Macedon Street, Sunbury, VIC

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Paul Ross	
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Clare Campbell	
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Pat Carmody	Craiglee Wines
Alan McKenzie	McKenzie Water Carriers
Rodney Cummings	
Carly Moore	Mayor, Hume City Council
Sheena Frost	Chief Executive Officer, Hume City Council
Nat Abboud	Mayor, Merri-bek City Council

Appendix B

Waste-to-energy cap licence holders in Victoria

Key information	Description
Cleanaway Operations Pty Ltd	
Cap amount	Up to 760,000 tonnes a year, issued through the 2025 allocation round.
Proposed site	Wollert
Process and feedstock	Proposed thermal waste-to-energy facility for residual waste.
Public status	The Department of Transport and Planning advised in June 2026 that Cleanaway's planning permit application was under assessment by the Minister for Planning. The Minister had previously determined that an Environment Effects Statement was not required. ¹
Evidence note	Cleanaway's public material said the Melbourne Energy and Resource Centre was first proposed at 380,000 tonnes a year. It said the later allocation of 760,000 tonnes would make the project more economically and operationally viable. ²
HiQ EFW Victoria Pty Ltd	
Cap amount	Up to 750,000 tonnes a year, issued through the 2025 allocation round.
Proposed site	Sunbury/Bulla
Process and feedstock	Proposed energy-from-waste facility within an integrated waste precinct.
Public status	Cap licence issued; environmental and planning approvals remained to be obtained before construction or operation.
Evidence note	HiQ linked the allocated capacity to economies of scale, project bankability and contracted waste. ³
Knox Transfer Station Pty Ltd	
Cap amount	Up to 15,000 tonnes a year, issued through the 2025 allocation round.
Proposed site	To be confirmed.
Process and feedstock	Not identified in the public register or evidence available to the Committee.
Public status	No named project or approval pathway was identified in the public material examined by the Committee.
Evidence note	This was the smallest allocation in the 2025 round. ⁴

¹ Department of Transport and Planning, response to questions on notice received 22 June 2026, pp. 1–2.

² Recycling Victoria, *Waste to Energy Scheme licences*; Cleanaway, *Melbourne Energy and Resource Centre*, 2026, <<https://www.cleanaway.com.au/melbourne-energy-and-resource-centre>> accessed 9 July 2026.

³ Mark Rodgers, *Transcript of evidence*, pp. 18–19.

⁴ Recycling Victoria, *Waste to Energy Scheme licences*.

Key information	Description
Liquid Power Co Pty Ltd	
Cap amount	Up to 50,000 tonnes a year, issued through the 2025 allocation round.
Proposed site	Not identified in the public register.
Process and feedstock	Not identified in the public register or evidence available to the Committee.
Public status	No named project or approval pathway was identified in the public material examined by the Committee.
Evidence note	The register identifies the licence holder and allocated capacity but gives no corresponding project location or description. ⁵
Melbourne Water Corporation	
Cap amount	Up to 450,000 tonnes a year, issued through the 2025 allocation round.
Proposed site	Melbourne Water identified the Eastern Treatment Plant and Western Treatment Plant as possible locations.
Process and feedstock	Melbourne Water said it was investigating a thermal facility processing residual solid waste. It identified possible synergies involving heat for sewage drying and biosolids as an energy feedstock.
Public status	Feasibility investigation during the 2026–31 regulatory period.
Evidence note	Melbourne Water said the project could involve private-sector participation. Its submission did not identify a final site, technology, feedstock mix or development pathway. ⁶
Recovered Energy Laverton Pty Ltd	
Cap amount	Existing-operator licence issued in April 2024 and cap licence for up to 280,000 tonnes a year issued through the 2025 allocation round.
Proposed site	Laverton North
Process and feedstock	Thermal waste-to-energy project; further detail was not identified in the register.
Public status	Both licences remain recorded in the public register.
Evidence note	The register does not show whether the later allocation supplements, replaces or otherwise relates to the capacity held under the existing-operator licence. ⁷
Zerogen Holdings Pty Ltd	
Cap amount	Cap licence for up to 45,000 tonnes a year, issued through the 2025 allocation round.
Proposed site	Not identified in the public register.
Process and feedstock	Not identified in the public register or evidence available to the Committee.
Public status	No named project or approval pathway was identified in the public material examined by the Committee.
Evidence note	The register identifies the licence holder and allocated capacity but gives no corresponding project location or description. ⁸

⁵ Recycling Victoria, *Waste to Energy Scheme licences*.

⁶ Melbourne Water, *2026 Price Submission*, p. 230; Recycling Victoria, *Waste to Energy Scheme licences*.

⁷ Recycling Victoria, *Waste to Energy Scheme licences*.

⁸ Recycling Victoria, *Waste to Energy Scheme licences*.

Key information	Description
Paper Australia Pty Ltd	
Cap Licence	Existing-operator licence issued in December 2023; not one of the seven allocations under the 2025 cap round. The licensed annual quantity is not published in the register.
Proposed site	Maryvale paper mill
Process and feedstock	Proposed moving-grate combustion facility processing residual waste.
Public status	Opal told the Committee that the project had approvals from EPA Victoria, Recycling Victoria and Latrobe City Council. The Minister for Planning had also determined that an Environment Effects Statement was not required. ⁹
Evidence note	Opal described a facility capable of processing up to 715,000 tonnes a year and confirmed energy offtake to the Maryvale paper mill. The register does not publish the quantity attached to the existing operator licence. ¹⁰
Visy Industries Australia Pty Ltd	
Cap amount	Existing-operator licence issued in January 2024. The licensed annual quantity is not published in the register.
Proposed site	Coolaroo
Process and feedstock	Not identified in the public register or evidence available to the Committee.
Public status	Existing-operator licence recorded; no further project status was identified in the material examined.
Evidence note	The entry identifies the operator, licence date and location, but not the licensed quantity or project behind the licence. ¹¹
Great Southern Waste Technologies Pty Ltd	
Cap amount	Existing-operator licence issued in March 2024. The licensed annual quantity is not published in the register.
Proposed site	Dandenong South
Process and feedstock	Not identified in the public register or evidence available to the Committee.
Public status	Existing-operator licence recorded; no further project status was identified in the material examined.
Evidence note	The entry identifies the operator, licence date and location, but not the licensed quantity or project behind the licence. ¹²

⁹ David Jettner, *Transcript of evidence*, pp. 15-16; Opal, response to questions on notice received 28 July 2026, p. 2.

¹⁰ David Jettner, *Transcript of evidence*, pp. 15-16; Recycling Victoria, *Waste to Energy Scheme licences*.

¹¹ Recycling Victoria, *Waste to Energy Scheme licences*.

¹² Recycling Victoria, *Waste to Energy Scheme licences*.

Extract of proceedings

Committee meeting – 5 August 2026

Chapter 2 – Victoria’s waste challenges

Ms Broad moved, at line 471 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government review the Sustainability Fund framework to enable funding for eligible waste-to-energy projects that divert residual waste from landfill.

Question – put.

The Committee divided.

Ayes – 3	Noes – 4
Ms Broad	Dr Mansfield
Mr Welch	Ms Purcell
Mr Mulholland	Mr McIntosh
	Mr Berger

Question Negatived.

Chapter 4 – Regulating what a waste-to-energy facility can incinerate

Dr Mansfield moved, at line 1404 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government amend The Circular Economy (Waste Reduction and Recycling) Act 2021 to make it explicit that thermal waste-to-energy sits at the bottom of the waste hierarchy.

Question – put.

The Committee divided.

Ayes – 2	Noes – 4
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch

Question Negatived.

Chapter 5 – Regulating what a waste-to-energy facility can emit

Dr Mansfield moved, at line 1431 the following text be deleted

help communities understand the evidence underpinning the technology, rather than simply assuring them that it is safe. To date, the Committee considers that the Victorian Government has not done enough to explain the evidence behind waste-to-energy facilities or help communities understand these proposals

and the following text be inserted so it now reads:

In these circumstances, the Committee considers that the Victorian Government has a particular responsibility to firstly, determine the safety of the technology, and then to help communities understand it. The Committee considers that neither has been achieved.

Question – put.

The Committee divided.

Ayes – 2	Noes – 4
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch

Question Negatived.

Dr Mansfield moved, that at line 1570 a section be converted into a finding in the following terms:-

[FINDING X: A lack of conclusive evidence should not be taken to mean that waste-to-energy facilities pose no risk to human health.]

Dr Mansfield also moved, that at line 1570 part of a section summary/introductory list text be converted into a recommendation in the following terms:

RECOMMENDATION X: In these circumstances, decision-makers should apply the precautionary principle by taking the possibility of harm into account, rather than waiting until harm has occurred before acting.

The two questions were moved together as a block.

Question – put.

The Committee divided.

Ayes – 2	Noes – 4
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch

Question Negatived.

Dr Mansfield moved, that at line 1759 a new finding be inserted in the following terms:

FINDING X: While the Committee heard a range of views about the risks vs benefits of thermal waste-to-energy facilities, it was not convinced that their safety has been established with sufficient confidence to justify their establishment in Victoria.

Question – put.

The Committee divided.

Ayes – 2	Noes – 4
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch

Question Negatived.

Dr Mansfield moved, at line 1759 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government adopt the precautionary principle with respect to thermal waste-to-energy facilities, and remove this technology from the current mix of available waste management options in Victoria.

Question – put.

The Committee divided.

Ayes – 2	Noes – 4
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch

Question Negatived.

Dr Mansfield moved, that at line 1907 text be deleted & additional text be added in finding 34 so it now reads:

FINDING 34: Waste-to-energy facilities emit greenhouse gases. The emissions are incompatible with Victoria's climate change and net-zero objectives.

Question – put.

The Committee divided.

Ayes – 2	Noes – 5
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch
	Mr Mulholland

Question Negated.

Chapter 6 – Regulating where a waste-to-energy facility can be built

Mr Ettershank moved, at line 2575 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government refrain from granting further planning or development approvals for new waste-to-energy facilities until the Auditor-General's review has been finalised and publicly released, and the Government has responded to, and where appropriate implemented, the review's recommendations.

Question – put.

The Committee divided.

Ayes – 2	Noes – 5
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch
	Mr Mulholland

Question Negated.

Mr Ettershank moved, at line 2575 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government impose regulatory restrictions to prohibit new thermal waste-to-energy facilities within metropolitan areas and instead require facilities to be located within designated regional industrial precincts. These precincts should have adequate separation from residential areas, schools, hospitals and agricultural land, and have direct access to major freight and logistics infrastructure.

Question – put.

The Committee divided.

Ayes – 1	Noes – 6
Ms Purcell	Ms Broad
	Mr McIntosh
	Mr Berger
	Mr Welch
	Mr Mulholland
	Dr Mansfield

Question Negated.

Dr Mansfield moved, at line 2740 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government amend relevant regulations to require all new thermal waste-to-energy facilities to have an environmental effects statement.

Question – put.

The Committee divided.

Ayes – 2	Noes – 5
Dr Mansfield	Ms Broad
Ms Purcell	Mr McIntosh
	Mr Berger
	Mr Welch
	Mr Mulholland

Question Negated.

Dr Mansfield moved, at line 2807 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government halt the approval of thermal waste-to-energy facilities given the uncertainty about safe buffer zones for residents, food production, and waterways.

Question – put.

The Committee divided.

Ayes – 2	Noes – 5
Ms Purcell	Ms Broad
Dr Mansfield	Mr McIntosh
	Mr Berger
	Mr Welch
	Mr Mulholland

Question Negatived.

Mr Ettershank moved, at line 2810 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That no WtE project be located within 5 Kilometres of a residential area and that the buffer around the facility be preserved by appropriate planning overlays.

Question – put.

The Committee divided.

Ayes – 2	Noes – 5
Ms Purcell	Ms Broad
Dr Mansfield	Mr McIntosh
	Mr Berger
	Mr Welch
	Mr Mulholland

Question Negatived.

Dr Mansfield moved, at line 2900 a new recommendation be inserted in the following terms:

RECOMMENDATION X: That the Victorian Government consider exhaust emissions from trucks transporting waste to and from waste-to-energy facilities as part of the health and environmental risk assessment.

Question – put.

The Committee divided.

Ayes – 4	Noes – 3
Dr Mansfield	Ms Broad
Mr McIntosh	Mr Welch
Mr Berger	Mr Mulholland
Ms Purcell	

Question Agreed.

Dr Mansfield moved, at line 2969 text be inserted so it now reads:

FINDING 53: Employment and regional economic benefits are an important consideration in assessing some waste-to-energy proposals, particularly in regions undergoing industrial transition. The extent of these benefits was not demonstrated during this inquiry. These benefits should be balanced with environmental, health and community considerations.

Question – put.

The Committee divided.

Ayes – 2	Noes – 5
Ms Purcell	Ms Broad
Dr Mansfield	Mr McIntosh
	Mr Berger
	Mr Welch
	Mr Mulholland

Question Negatived.**Adoption of Report**

Mr McIntosh moved, that the Draft Report (Chapters 1 to 6, including Findings and Recommendations, together with Appendices), be adopted as the Report of the Committee, and that it be Tabled on 25 August 2026.

Question – put.

The Committee divided.

Ayes – 6	Noes – 1
Ms Purcell	Dr Mansfield
Mr McIntosh	
Mr Berger	
Ms Broad	
Mr Welch	
Mr Mulholland	

Question Agreed.

Minority reports



Economy and Infrastructure Committee inquiry into the development and expansion of waste-to-energy (WtE) infrastructure in Victoria: Minority Report



Victorian Greens

Dr Sarah Mansfield MLC

14th August 2026

Foreword

The Victorian Greens did not support the adoption of the majority report. It contains a useful summary of community concerns, the technical and regulatory issues surrounding thermal WtE, and we support some of the findings and recommendations.

However, the fundamental problem with the majority report is that it is founded on the premise that thermal waste-to-energy (WtE) is an accepted component of Victoria's waste management system. It therefore focuses on strengthening regulation of WtE and providing more education to the community, rather than questioning whether WtE should be a part of our waste management options at all. Note that for the purposes of this minority report, thermal WtE includes incineration, gasification and pyrolysis.

The evidence received during this inquiry, including information from health and environmental experts, as well as community members, provided a compelling case to - at a minimum - halt approvals of thermal WtE facilities in Victoria. Therefore, we do not accept the premise of the majority report.

Fundamental to this position is the need to adopt the precautionary principle. While industry representatives argued that the lack of evidence of harm justifies the use of thermal WtE, the precautionary principle stipulates that a lack of established causality does not mean there is no risk of harm.

Further, it is our view that there is in fact evidence of harm from thermal WtE. This harm applies not only to human health, but to our climate through greenhouse gas emissions, and to the environment by undermining the circular economy. This brief minority report does not revisit all of the detail included in the majority report; rather, it outlines why the Greens believe that the appropriate conclusion from the evidence gathered in this inquiry is for the Victorian Government to prohibit thermal WtE in this state.

Impact on human health:

As noted in the majority report, there is an established evidence base linking a variety of health impacts with older forms of waste incineration. While some industry and government agency witnesses argued that newer facilities have mitigated that risk, Janek Vahk, Policy Manager at Zero Waste Europe, explained to the Committee that their research from recent years across six countries, including of state-of-the art modern facilities, shows high levels of emissions and dioxins at levels that 'if you were growing some food, it would not be recommended for consumption'. (public hearing, 26th May)

Further, even if emissions are reduced, evidence received by the committee emphasised that there are some substances that are emitted by thermal WtE for which there is no safe level, including persistent organic pollutants, PM2.5, PM10, and heavy metals in air dust, (for example, submissions 397, 423, and 622).

Finding: While the Committee heard a range of views about the risks of modern thermal waste-to-energy facilities, evidence from Europe has found they still emit toxins of a nature and at levels that pose a risk to human health.

Recommendation: That the Victorian Government exclude thermal waste-to-energy facilities from the state's waste management systems given the evidence about potential harm to human health, and inability to determine safe buffer zones to protect residents, food production and waterways.

Impact on climate:

While proponents of thermal WtE argue that it is a form of renewable energy, this position was strongly contested in much of the evidence received.

As noted in the majority report, thermal WtE facilities emit greenhouse gases, releasing more carbon dioxide to the atmosphere per megawatt-hour than coal. Further, the feedstock for these facilities is not infinite, comprises embedded carbon, and typically consists of high volumes of plastics, which themselves are derived from petrochemicals. This cannot be considered 'renewable'.

Finding: Thermal waste-to-energy facilities are a source of non-renewable electricity, and the associated emissions are incompatible with Victoria's climate change and net zero objectives.

Recommendation: That the Victorian Government exclude thermal waste-to-energy from the state's waste management systems given its incompatibility with climate and net zero objectives.

Impact on the circular economy and waste management:

The Committee heard substantial evidence questioning the current Victorian waste policy settings, including the incorporation of thermal waste-to-energy in the circular economy, and its placement in the waste hierarchy. Several witnesses, including Toxics Free Australia, argued that landfill with full pre-treatment (that is, investment in higher order waste reduction and recycling) was superior to waste incineration in terms of costs to climate, air quality and health (submissions 397 and 423, and Dr Marion Cincotta public hearing 8th May).

Evidence was also provided that indicated how thermal WtE creates ‘structural disincentives for waste reduction, reuse, recycling, and the separate collection of organics’ (Zero Waste Europe, submission 268). This occurs because WtE facilities rely on a constant volume of waste and achieve this through long-term contracts with waste suppliers such as councils and industry (submission 622). This suppresses the drive to innovate, and creates relatively high barriers to entry for alternative technologies.

Additionally, while proponents of thermal WtE facilities argued that employment benefits should be considered a justification for their establishment, there was no convincing evidence provided about the relative employment and economic benefits of thermal WtE compared with alternative waste management options.

Finding: Thermal waste-to-energy undermines the circular economy by creating structural disincentives for waste reduction and higher order waste management strategies.

Recommendation: That the Victorian Government amend The Circular Economy (Waste Reduction and Recycling) Act 2021 to make it explicit that thermal waste-to-energy sits at the bottom of the waste hierarchy, and prohibit establishment of these facilities in Victoria.



Dr Sarah Mansfield MLC
Western Victoria Region

Minority Report

Inquiry into the development and expansion of waste-to-energy infrastructure in Victoria

Introduction

The *Inquiry into the development and expansion of waste-to-energy infrastructure in Victoria* arose from a resolution of the Legislative Council, moved by Legalise Cannabis Victoria in August 2025.

The call for an Inquiry was in response to the distress expressed by residents, particularly in Sunbury, Lara, Wollert, Hampton Park and surrounding areas, at the prospect of large-scale Waste-to-Energy (WtE) incinerators and associated infrastructure close to residents and services, including schools and childcare centres. In particular, residents were deeply concerned by the government's lack of response to their concerns.

The Inquiry provided a unique opportunity for residents to express their views on the proposed WtE developments and were joined by a broad cross-section of stakeholders, including environmental advocates, WtE proponents, academics and government agencies.

At the outset, in making the following critique, it is not contested that there is a significant problem with the level of waste going to landfill, and the limited availability of alternative sites to receive same. This issue is doubly problematic given the abject failure of the government to make any real progress in diverting waste away from landfill in line with circular economy principles (and the government's own policies).

It is also clear that the systems and infrastructure do not exist to ensure that only residual waste is being incinerated.

In this context, there is a well-founded concern within the community that WtE is not so much a supplement to recycling and other processes that reduce landfill, but rather a dirty, cheaper, and easier-to-implement alternative, capitalised by the private sector.

Cause for concern?

The Committee found that the WtE plants produce a range of toxic emissions and by-products, including:

- **Particulate Matter** (PM), such as PM2.5 and PM10, which are tiny airborne particles
- **Gases**, such as Nitrogen Oxides (NOx), Sulphur Dioxide (SO2) and Hydrogen Chloride (HCl)
- **Heavy metals**, such as Mercury and Lead
- **Dioxins and Furans**, which describe a family of compounds with varying degrees of toxicity
- **Greenhouse gases**, such as Carbon Dioxide (CO2) and Nitrous Oxide (N2O) and
- **PFAS**.

The Committee also found that these plants produced large amounts of highly toxic byproducts that either needed to be stored (in impermeable landfill) on site or transported by road to alternative locations.

This requirement to transport enormous amounts of residual waste to the sites for incineration, and then lesser amounts of highly toxic fly and bottom ash from the sites after incineration, added to community concerns about both the health risks and loss of amenity associated with the WtE plants.

Various stakeholders raised concerns about the impact of long-term contracts between Councils and WtE operators (up to 25 years), with potential perverse consequences, including a disincentive to reduce waste, improve recycling, or implement other waste management solutions. Additionally, there are concerns that locking Councils into contracts with WtE plants will result in increased costs to Councils, which will need to be passed on to ratepayers.

Finally, the entirely opaque nature of how licences were calculated and allocated to specific proponents raises major concerns. The government's abject failure to provide transparency on key questions such as selection processes and commercial contracts further undermined community confidence in the safety of the WtE sector and the integrity of government processes.

Response

The report presents a range of findings that identify and contextualise key elements of the WtE industry, operational concerns, and associated risks. Stakeholders expressed diverse views to the Committee through both submissions and evidence.

I commend both the Committee secretariat and members for the intelligent and strategic manner in which these were identified and captured in formal findings.

There are also a number of **recommendations** that have great merit and warrant a timely and appropriate response from Government.

Among the more positive recommendations:

- that monitoring of emissions and waste be subject to continuous real-time monitoring and reporting
- That the Victorian Auditor General undertake a review of the adequacy of the WtE regulatory framework and the concerns expressed by both the community and in the report.

Unfortunately, there were also a range of recommendations that were rejected by both the Government and Opposition representatives on the Committee. Some of the more egregious rejections included:

- A narrow application of the precautionary principle to WtE projects (apparently preferring to have any hazards resulting from WtE development confirmed through health and mortality data after the incinerators are in operation).
- That the safety of WtE be established before the approval of the technology and planning permits are issued
- That all WtE projects have an Environmental Effects Statement as part of the approval process.

- That minimum buffers be established around WtE facilities or that they be located in more remote locations (close to rail infrastructure).
- In the context of the referral to the Auditor General to review the regulatory framework, a rejection of a moratorium on approvals until that review is completed.

The absence of any alternative to minimum buffers or more remote locations (such as in New South Wales) being enforced suggests that Government either doesn't understand the threat these technologies present to the community, or simply doesn't care.

The need for the government to respond promptly to the community's concerns and the critical findings of this report is self-evident.

Let us hope that, unlike so many reports received by government, this one is not left to moulder for an extended period followed by a tepid set of responses.

Any failure by the Government to act in a prompt and appropriate manner to address the concerns raised by the community and in this report could only result in a punishing response from the electorate.

The optics of state and federal government MPs and Ministers openly condemning the proposed WtE facilities in their respective electorates lay bare the government's false assertions of confidence in the safety of this technology.

Once again, the government has demonstrated its unique talent for scoring own goals, while simultaneously alienating swathes of people in the northern and western suburbs. That the opposition adopts a similar laissez-faire position (in fact, they opposed the establishment of this inquiry) can only serve to engender a "plague on both your houses" response from the affected communities.

In closing

I would like to express my profound thanks and appreciation to the Committee Secretariat for their outstanding efforts in the conduct of this inquiry. I acknowledge the long and dedicated service of Michael Baker, who is retiring after more than 20 years behind the wheel of some of the most challenging inquiries. I am also profoundly heartened by the wealth of talent and intellect of new Secretariat officers, who will doubtless continue Michael's fine example.

Finally, I would like to recognise the army of community campaigners whose love of their communities and their commitment to preserving our collective safety and amenity made this Inquiry possible.

David Ettershank

17/8/26

Victorian Parliamentary Inquiry into the Development and Expansion of Waste-To-Energy Infrastructure in Victoria

Liberals and Nationals Minority Report

The Liberal and Nationals MPs thank the 627 submitters and 59 witnesses who contributed to this Inquiry and acknowledge the work of the Committee and the secretariat. The report provides a useful overview of Victoria's waste management challenges, the regulatory framework governing waste-to-energy, and the concerns held by affected communities.

Waste-to-energy has a role in Victoria, but location is everything

The Liberal and Nationals MPs support waste-to-energy in principle. The Committee heard substantial evidence that Victoria's landfills are filling up and are projected to begin running out of capacity in the mid-2030s. Landfill releases methane, generates leachate and occupies land permanently.

Where genuine residual waste remains after avoidance, reuse, recycling and organics recovery have been exhausted, recovering energy from that waste is a better outcome than burying it.

However, these facilities must be located appropriately. That was the central issue for the communities who appeared before the Committee. Around two-thirds of submissions argued that the proposals were too close to residential areas. Yet as Finding 46 records, there is no prescribed minimum separation distance or benchmarks guide for communities or proponents. Every buffer is set case by case, leaving communities no objective measurement to judge whether a proposal is too close to where they live.

Regulators have wasted social licence and showed no sign of looking to restore it.

The Committee heard substantial community support for the concept of Waste-to-Energy, especially on environmental grounds. However, the Committee heard from communities who, on their account, believed regulators did not listen to their concerns, which created cynicism, and in turn hardened their resistance to a Waste-to-Energy plan in their community.

This should have prompted serious reflection from EPA Victoria and Recycling Victoria as to why trust had been lost.

While being eloquent advocates for Waste-to-Energy (particularly versus Landfill), no regulator was able to explain why precautions used for making facilities both safe and non-detrimental to community - eg Waste-to-Energy facilities being subject to a 'cap licence' and sited alongside existing waste management or industrial infrastructure - had not translated to public acceptance. No regulator was able to explain the progressive loss of social licence for WTE plants across the State, nor reflect on their own role in this.

Equally, no government agency witness before the Committee acknowledged that the erosion of social licence at existing waste sites as a problem, or took any ownership of it, or offered any account of what they intend to do differently in future to assist in restoring it.

Government Ministers are campaigning against their own Government's policy

Over the past two years, a number of Victorian Labor Government MPs publicly opposed proposed waste-to-energy facilities in their own electorates. This includes the Hon Lily D'Ambrosio MP, who as Minister for Energy and Resources at the time, carried responsibility for the Waste-to-Energy policy itself. This created the extraordinary scenario of a Government Cabinet Minister petitioning against her own policy in her own portfolio.

Finding **42** records that inconsistent public messaging from the Victorian Government, particularly from its Ministers, has the potential to undermine public confidence in the safety of waste-to-energy technology.

The Victorian Government are asking residents to accept a technology on the strength of the evidence, while its own Ministers actively campaign against that technology where it is politically inconvenient.

An inconsistent planning framework that serves neither communities nor industry

The Committee heard the framework described as inconsistent, and as creating regulatory uncertainty that delays investment and confuses industry. The Minister for Planning decides which assessment pathway applies, whether an Environment Effects Statement is required and, under the planning scheme amendment pathway, whether public notice and consultation apply at all.

The largest allocation to date, 760,000 tonnes a year at Wollert, required no Environment Effects Statement, and the Committee could not identify what would ever trigger one. This is the 'worst of both worlds': communities with no confidence that risks have been independently examined, and industry with no confidence about what the rules are.

Community consultation has failed, and that failure belongs to the Government

The Committee heard from community after community that consultation on these proposals had failed. The Government allocated 94 per cent of the statewide cap and made waste-to-energy central to its landfill diversion strategy, then told those communities almost nothing, with some residents finding out about proposals from a sign in a neighbour's front yard.

Finding **60** records that community confidence is undermined where the Government does not take a clear leadership role. We would go further.

Telling Victorians that statutory consultation will come later, once applications are lodged, is no answer when the Government has already decided where these facilities are going. The problem is worse in Wollert, Sunbury and Dandenong South, where communities with large culturally and linguistically diverse populations were handed lengthy technical documents in English and given short periods to respond. Releasing information is not the same as consulting.

The Liberals and Nationals support the Committee's recommendation; that the Victorian Government ensure planning decisions for waste-to-energy facilities are informed by independent scientific evidence, rigorous environmental and public health assessments, strategic waste planning, meaningful community and stakeholder consultation, and are consistent with best-practice regulatory standards.

Richard Welch MP
Member for North Eastern Metropolitan

Gaelle Broad MP
Member for Northern Victoria

Evan Mulholland MP
Member for Northern Metropolitan

