

Inquiry into the Development and Expansion of Waste-to-Energy Infrastructure in Victoria

Submission by Julie Ahmad

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Executive Summary

This submission assesses the proposed Cleanaway Melbourne Energy Recovery Centre (MERC) in Wollert, including site suitability, emissions and exposure pathways, regulatory effectiveness, consultation processes, and the availability of lower-risk alternatives.

The proposal raises significant issues in relation to land-use planning, environmental and public health impacts, regulatory effectiveness, consultation processes, and the integrity of the evidence relied upon in decision-making.

Key findings of this submission are as follows:

- Waste-to-energy incineration facilities, including the proposed MERC, are not consistent with planning objectives where they introduce long-term industrial emissions sources into residential growth corridors, resulting in an inequitable distribution of environmental and health risks.^{1, 3}
- Evidence from environmental monitoring and international research indicates that pollutants associated with waste-to-energy incineration—including dioxins, heavy metals, and PFAS—may persist in environmental systems and enter food chains, contributing to ongoing risks to human health and ecosystems.^{6, 10, 19, 51, 53}
- Documented weaknesses in regulatory oversight—including limitations in monitoring, enforcement, transparency, and governance—reduce confidence in the adequacy of the current regulatory framework to manage these risks across waste-to-energy developments.²²⁻²⁷
- Consultation processes associated with waste-to-energy proposals have not consistently provided equitable or meaningful opportunities for participation, due to the volume and complexity of materials, limited timeframes, and cultural and linguistic barriers, and do not demonstrate the existence of social licence.^{3, 14, 35, 36, 45, 46}
- Concerns arise regarding the independence and integrity of expert evidence relied upon in waste-to-energy assessments, where overlapping advisory, regulatory, and consultancy roles may affect the objectivity of the evidence base used in decision-making.⁵³
- The absence of a full Environmental Effects Statement (EES) for proposals of this scale reduces transparency, limits independent scrutiny, and undermines public confidence in the assessment process.^{5, 21}
- Lower-risk and more sustainable alternatives are available, consistent with the waste hierarchy and circular economy objectives, including waste reduction, recycling, and landfill-based energy recovery systems.^{9-11, 19, 48, 52}

Taken together, these findings demonstrate that the risks associated with waste-to-energy incineration, including the MERC proposal, are persistent and cannot be fully addressed through regulatory controls alone.

In these circumstances, such proposals are not justified.

This submission therefore recommends that:

- the MERC proposal not proceed or be supported;
- waste-to-energy incineration not be adopted as part of Victoria's long-term waste management policy;

- environmental assessment and regulatory safeguards be strengthened, including the requirement for a full Environmental Effects Statement and independent monitoring;
- community consultation processes be reformed to ensure accessibility, equity, and meaningful participation; and
- decision-making processes prioritise independently verifiable, peer-reviewed evidence, supported by full disclosure of conflicts of interest and independent review.

Introduction

This submission assesses the proposed Cleanaway Melbourne Energy Recovery Centre (MERC) in Wollert, with particular regard to site suitability, environmental and public health impacts, regulatory effectiveness, consultation processes, and the availability of lower-risk alternatives.^{1-3, 5, 6}

While focused on the MERC proposal, this assessment raises broader considerations regarding the suitability of waste-to-energy incineration within residential growth contexts.

The proposal raises significant concerns across each of these areas. It involves the introduction of a long-term industrial emissions source within a designated residential growth corridor, where populations are increasing and communities are expected to remain for generations.^{1, 2} In this context, even small increases in pollution exposure may result in significant population-level impacts.⁶

Waste-to-energy incineration is a recognised source of particulate matter (PM_{2.5}), heavy metals, acid gases, and persistent organic pollutants, including dioxins and furans, arising from the combustion of mixed waste streams.^{6, 10, 12} These pollutants are associated with well-established risks to human health and the environment, particularly where exposure occurs over extended periods.^{6, 10}

The proposal also raises broader concerns regarding the capacity of regulatory systems to effectively manage these risks over time. Evidence from regulatory reviews, environmental monitoring, and operational incidents indicates that limitations in monitoring, enforcement, and transparency remain relevant considerations in assessing whether such risks can be adequately controlled.²²⁻²⁷

In addition, the scale and complexity of the material presented during the consultation process, together with documented community responses, raise questions regarding accessibility, equity, and the extent to which meaningful participation has been achieved.^{3, 14, 35, 36}

Taken together, these factors support a precautionary approach to decision-making.^{1, 13} This submission finds that the MERC proposal—and proposals of this kind in similar contexts—are not consistent with planning objectives, do not provide sufficient assurance of long-term environmental and public health protection, and are not supported by the surrounding community.^{1-3, 5, 6}

1. Suitability of Existing WtE Infrastructure Plans and Policies

1(a) Impact on Residential Communities and Transport Infrastructure

1.1 The proposed MERC would be located in close proximity to residential areas, placing a large-scale industrial emissions source near homes, schools, childcare centres, and community infrastructure. Public project information indicates nearby residential areas are approximately 1–2 km from the site.⁴

1.2 This proximity is inconsistent with established land-use planning principles, which are intended to separate incompatible uses and protect residential communities from long term environmental and amenity impacts. These principles are embedded in Victoria's planning framework and are particularly relevant in designated growth areas.²

1.3 Growth-area planning is specifically intended to support the development of safe, healthy, and liveable communities over the long term. The introduction of a continuous industrial activity such as a waste incineration facility is fundamentally incompatible with this objective.²

1.4 Combustion related air pollution is a well-established contributor to disease burden. Fine particulate matter (PM2.5) is associated with respiratory illness, including asthma and reduced lung development in children, cardiovascular disease, and premature mortality. Australia's State of the Environment reporting identifies these impacts as cumulative and long-term.⁶ Waste-to-energy incineration is a recognised source of PM2.5 and other pollutants. These include heavy metals, acid gases, and persistent organic pollutants such as dioxins and furans, produced during the combustion of mixed waste streams.²⁰

1.5 There is no safe level of exposure to PM2.5, meaning that any additional emissions incrementally increase health risk, particularly where exposure is continuous over extended periods.⁶

1.6 In this context, particular weight should be given to the protection of children and young people, who are more vulnerable to the effects of air pollution and long-term environmental exposure. Planning decisions in residential growth areas should not introduce additional sources of risk to young populations, even where those risks are characterised as low or compliant with regulatory limits.

1.7 The key planning question is therefore not only whether emissions can comply with regulatory limits, but whether it is appropriate to introduce a permanent source of pollution into a residential growth community. This concern is reflected in the Conference of Interested Persons report, which identifies proximity to homes and long term exposure as central issues.³

1.8 In a growth area context, populations are increasing and communities are expected to remain in place for generations. Even small increases in pollution exposure may therefore result in significant population-level impacts.^{2,6} Accordingly, approval would result in a land use outcome that is inconsistent with the objectives of protecting long term community health in residential growth areas.

Transport impacts

1.9 The MERC would require continuous delivery of waste and removal of ash and other by-products, resulting in sustained heavy vehicle traffic through local road networks. The facility is designed to operate continuously and depend on regular freight movements to transport waste and residual materials.^{1,4}

1.10 Estimated operational impacts include approximately 380 truck movements per day, as shown in the infographic on Cleanaway's current MERC project webpage for the expanded proposal.^{4,7} This equates to near continuous heavy vehicle traffic associated with waste delivery and the removal of ash and other by-products. Earlier exhibition material for the smaller 380,000 tpa proposal identified substantially lower traffic volumes, demonstrating that transport impacts have increased significantly as the scale of the proposal has expanded.⁷

1.11 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.⁸

1.12 The resulting impacts would include increased congestion, reduced accessibility for residents, elevated accident risk for pedestrians, cyclists, and school children, and a sustained decline in residential amenity due to noise, vibration, and

visual intrusion. In addition, increased diesel emissions and road wear would contribute to local air pollution and long term public infrastructure costs.⁸

1.13 These impacts are not temporary or transitional. They would persist across the operating life of the facility, creating a continuous and cumulative burden on the surrounding community over decades.⁷

1.14 The scale of transport activity also reflects the broader function of the facility as a metropolitan waste hub. With a proposed capacity of up to 760,000 tonnes per year, the MERC would service multiple municipalities, concentrating the transport and environmental impacts of Melbourne's waste system within a single residential community.¹

Scale, intensity, and permanence

1.15 The MERC is proposed to process up to 760,000 tonnes of waste per year, a scale that clearly indicates the facility is intended to service a large metropolitan catchment rather than local waste needs.¹

1.16 This level of throughput requires continuous operation and a consistent supply of waste, effectively embedding the facility within the long term waste management system of the state. Cleanaway describes the facility as part of Melbourne's broader waste infrastructure network.¹

1.17 The facility includes a major flue stack and is expected by Cleanaway to operate for approximately 25–30 years, meaning impacts would be experienced across multiple generations of residents.⁷

1.18 The combination of scale and duration means that impacts are long term and effectively irreversible. The facility becomes effectively permanent infrastructure, and the community is exposed to environmental and amenity impacts for decades.^{2,7}

1.19 Once constructed, such infrastructure creates a path dependency, whereby continued operation is required to justify the initial investment, even if policy settings or community expectations change. This dynamic is widely recognised in relation to capital intensive infrastructure and long term system planning.⁹

Proximity to environmental and water assets

1.20 The proposed facility is located near environmentally sensitive waterways associated with Merri Creek and within regional proximity of water supply assets including Yan Yean Reservoir and Greenvale Reservoir, raising concerns regarding environmental exposure pathways and long-term catchment impacts. These concerns were also reflected in community submissions and the Conference of Interested Persons process.³

1.21 These locations raise concerns regarding potential environmental exposure pathways, particularly in relation to deposition of airborne pollutants onto land and water surfaces, transport of contaminants through runoff into waterways, and accumulation of pollutants in sediments and ecosystems over time.⁶

1.22 Persistent pollutants associated with incineration, including dioxins and heavy metals, may remain in the environment for extended periods, bioaccumulate within food chains, and contribute to long term ecological degradation.¹⁰

1.23 While individual emission events may comply with regulatory limits, the cumulative effect of continuous emissions over decades presents a different level of risk that is not adequately captured by point in time compliance measures.⁶

1(b) Annual Caps on Waste for WtE

1.24 The Victorian waste-to-energy cap system is intended to limit the amount of waste that can be processed through thermal treatment. However, its design and implementation raise concerns regarding its effectiveness in practice.^{1,11}

1.25 The cap framework now permits MERC to process up to 760,000 tonnes of residual waste per year, suggesting that cap allocation can facilitate very large-scale thermal treatment rather than operating as a fixed constraint aligned with waste reduction objectives.¹

1.26 The allocation of capacity under the cap lacks transparency from the perspective of affected communities, making it difficult to assess whether decisions are aligned with broader policy objectives, including waste minimisation and circular economy outcomes.^{1,11}

1.27 Once capacity is allocated and infrastructure is constructed, there is strong financial pressure to utilise that capacity in order to recover capital costs. Waste-to-energy facilities are capital intensive projects that rely on long term waste supply agreements to remain economically viable.⁹

1.28 This creates a structural incentive to maintain or increase waste generation, divert recyclable materials away from recovery systems, and prioritise incineration over higher-value waste management options. This dynamic is widely recognised in waste policy literature as a form of infrastructure lock in.^{9,11}

1.29 As a result, the cap system risks functioning as a mechanism that guarantees waste throughput, rather than limiting it, particularly where infrastructure investment depends on consistent feedstock supply.

1.30 This outcome is inconsistent with Victoria's stated policy objectives to reduce waste generation, increase recycling and resource recovery, and transition toward a circular economy.¹¹

1(c) Regulatory Framework

1.31 In order to adequately protect both the environment and human health, the regulatory framework should require continuous, 24 hours per day, 7 days per week monitoring of emissions, with real-time public reporting to ensure transparency and accountability.

1.32 Although continuous emissions monitoring is recognised for some pollutants, EPA Victoria's Energy from Waste Guideline confirms that monitoring does not extend continuously to all pollutants of concern, including dioxins, heavy metals, and ultrafine particles.¹²

1.33 This limitation is significant given that many of these pollutants are associated with long-term and cumulative health risks, and may not be adequately captured through periodic sampling regimes.^{12,13}

1.34 Real-time, publicly accessible monitoring data would enable communities to understand actual emissions and exposure, improve transparency and trust in regulatory oversight, allow rapid identification of abnormal emission events, and strengthen accountability of both facility operators and regulators.^{12, 13}

1.35 This approach is consistent with the Environment Protection Act 2017 (Victoria), which emphasises prevention of harm to human health and the environment through proactive risk management and transparent information sharing.¹³

1.36 Given the continuous nature of emissions from waste-to-energy facilities, and the limitations of periodic monitoring, a continuous and publicly transparent monitoring system should be regarded as a minimum requirement, particularly where facilities are located in or near residential communities.^{12, 13}

1.37 However, the adequacy of the regulatory framework must be assessed not only in theory, but in light of the demonstrated performance of the regulator responsible for implementation. EPA Victoria is the primary authority responsible for assessing, approving, and enforcing compliance for WtE facilities, including the proposed MERC.^{12, 13}

1.38 Multiple independent reviews and documented incidents indicate systemic weaknesses in EPA Victoria's regulatory performance.²²⁻²⁷ These findings are directly relevant to whether regulatory controls are sufficient to manage the risks

of a large-scale facility in a residential area. ^{2, 22-27} Public health policy bodies, including the Public Health Association of Australia, have emphasised the need for precautionary approaches to waste incineration due to uncertainties in long-term exposure and cumulative health risks. ⁴⁰

1.39 A 2020 independent review by Ernst & Young, undertaken after the 2018 West Footscray chemical warehouse fire, identified serious deficiencies in EPA Victoria's regulatory systems, including failures to track hazardous waste and dangerous chemicals, inadequate monitoring and record keeping, and broader weaknesses in risk identification and oversight. ²² The review described these as "unacceptable practices" and a "litany of failures." ²²

1.40 The West Footscray fire itself involved the combustion of large volumes of untracked and improperly stored hazardous chemicals, producing toxic smoke that affected multiple suburbs and resulted in significant community disruption, health concerns, and long-term environmental impacts. ²²⁻²⁹ This incident demonstrates that serious risks can remain undetected within the regulatory system until a major failure occurs.

1.41 These findings demonstrate that regulatory failures may occur prior to major environmental and public health incidents. ²² This is directly relevant to the MERC proposal, which involves the long-term handling and combustion of mixed and potentially hazardous waste streams.

1.42 Similar concerns arise from the Victorian Ombudsman's investigation into the West Gate Tunnel Project, which identified deficiencies in EPA Victoria's approach to community consultation and decision-making, including failures to properly consult affected communities, inadequate transparency, and reduced public confidence in regulatory decisions. ²³ These findings indicate that consultation deficiencies are not isolated, but form part of a broader pattern of regulatory practice. ²³

1.43 EPA Victoria has also been subject to legal challenge in relation to its regulation of air pollution from coal-fired power stations, raising broader questions about the effectiveness of oversight in managing emissions-based risks. ²⁵ Long-running pollution cases, including landfill gas and industrial odour matters, further demonstrate that regulatory intervention may be delayed or insufficient to prevent ongoing community impacts. ²⁶ In the Cranbourne landfill case, more than 5,000 complaints were recorded before significant enforcement action was taken, highlighting the potential for prolonged exposure prior to regulatory intervention. ²⁶

1.44 A 2016 independent inquiry into EPA Victoria identified broader structural issues, including governance weaknesses, potential conflicts of interest, and misallocation of resources, indicating that these concerns extend beyond isolated incidents. ²⁷

1.45 These patterns are directly relevant to the assessment of the MERC proposal, which relies heavily on regulatory controls to manage emissions from continuous combustion, the handling of mixed waste streams, the transport and disposal of toxic ash, and long-term environmental and health risks. ^{12, 22-27}

1.46 In this context, reliance on regulatory compliance as the primary safeguard for a large-scale waste-to-energy facility is insufficient.

1.47 These concerns are further compounded where regulatory decisions rely on expert evidence that may not be fully independent. In the Victorian context, EPA Victoria's assessment framework relies on both regulatory guidance and project-specific Human Health Risk Assessments. Publicly available material indicates that the same consultancy has contributed to both, including the preparation of Human Health Risk Assessments for waste-to-energy proposals, creating a structural overlap between policy development and project assessment. ⁵³

1.48 This overlap raises concerns regarding the independence, objectivity, and robustness of the evidence base relied upon in regulatory decision-making, particularly where such evidence forms a key component of project approval processes.⁵³

1.49 These concerns are reinforced by comparable regulatory frameworks in other Australian jurisdictions, which impose stricter controls on waste-to-energy development, including location restrictions and heightened evidentiary requirements.⁵⁴ This is reflected in policy settings such as the ACT's prohibition on waste incineration and restrictions applied in parts of Sydney, demonstrating a precautionary approach to managing the long-term risks and uncertainties associated with the technology.^{38, 39}

1.50 Taken together, these findings demonstrate that the effectiveness of the regulatory framework cannot be assumed. Where monitoring, enforcement, decision-making, and evidentiary independence are subject to documented limitations, reliance on regulatory compliance alone is insufficient to ensure the protection of human health and the environment.

Industrial fire, malfunction, and abnormal event risk

1.51 The risks associated with the proposed MERC must also be assessed in the context of abnormal operating conditions, including fires, explosions, and system failures. While waste-to-energy (WtE) facilities are typically assessed based on normal operating conditions, a substantial body of international and Australian evidence demonstrates that the most significant risks to nearby communities arise during these abnormal events, when emissions are uncontrolled, highly concentrated, and least effectively monitored.²⁸⁻³⁴

1.52 Real-world industrial fire incidents consistently show that nearby residential populations can experience immediate, medium term, and long term health impacts following exposure to toxic smoke and airborne contaminants. These impacts are well documented across multiple jurisdictions and industrial contexts.²⁸⁻³²

1.53 In Victoria, the 2014 Hazelwood coal mine fire burned for 45 days, exposing nearby communities, particularly Morwell, to prolonged smoke pollution. Air quality exceeded safety standards for extended periods, and long term research found measurable health impacts, including accelerated lung ageing of approximately 4.7 years, along with ongoing respiratory and psychological effects.²⁸

1.54 Similarly, the 2018 West Footscray chemical warehouse fire involved the combustion of illegally stored hazardous chemicals within a suburban area, resulting in toxic smoke affecting multiple suburbs. Residents were advised to remain indoors, and reports identified ongoing health concerns weeks after the incident, as well as environmental impacts including wildlife deaths, indicating broader contamination pathways.²⁹

1.55 International incidents reinforce these findings. The 2019 Lubrizol chemical plant fire in Rouen, France resulted in widespread reports of headaches, nausea, and respiratory symptoms among residents, with subsequent research identifying elevated rates of post traumatic stress disorder (6%), anxiety (15%), and depression (18%) in affected populations, with impacts increasing with proximity to the site.³⁰

1.56 Other incidents—including chemical fires in the United States (BioLab), large scale toxic gas releases in Spain, and refinery explosions in Louisiana—demonstrate that industrial fires can lead to evacuation of tens of thousands of residents, acute health effects, and long term community disruption and legal consequences.³¹

1.57 Scientific literature consistently shows that industrial fires release a complex mixture of hazardous pollutants, including fine particulate matter (PM2.5), volatile organic compounds, heavy metals, and persistent organic pollutants such as dioxins. These pollutants are associated with respiratory illness, cardiovascular disease, cancer risk, and psychological harm, particularly where exposure is concentrated or repeated.³²

1.58 Importantly, these risks are amplified in waste and incineration contexts. During fires or “off normal” operating conditions, pollution control systems may fail, be bypassed, or operate ineffectively, resulting in emissions that can significantly exceed regulated limits. Government and scientific reviews identify these events—variously described as “upset conditions”, “operational transients”, or malfunctions—as periods of highest emissions variability and greatest uncertainty in risk assessment.³³⁻³⁴

1.59 During these events, emissions may exceed regulatory limits by significant margins, particularly for dioxins, particulates, and heavy metals. 20 As recognised in zero waste literature, these emissions are a key reason why residual waste incineration is considered incompatible with public health and environmental protection.²⁰

1.60 Evidence demonstrates that such events can produce short-term emission spikes significantly above normal operating levels, which are not adequately captured by averaged monitoring systems.^{33,34}

1.61 These emission spikes are of particular concern because:

- they occur over short timeframes and may not be captured by routine monitoring;
- they can result in high concentration exposure for nearby residents;
- they are not well reflected in regulatory risk models, which focus on average emissions;^{33,34}

1.62 As a result, the highest risk exposure scenario for communities is not normal operation, but abnormal events such as fires, malfunctions, and system failures—precisely the conditions under which regulatory oversight is least effective.^{33,34}

1.63 These risks are further heightened in circumstances where regulatory systems have demonstrated limitations in monitoring, enforcement, and response, as outlined above.^{22,27}

1.64 The proposed MERC involves the continuous combustion of mixed waste streams, including materials that may generate toxic emissions when burned under uncontrolled or suboptimal conditions. In the event of a fire or malfunction, this creates the potential for acute exposure to hazardous pollutants affecting nearby residential areas.^{12,33,34}

1.65 Given the proximity of the proposed facility to a growing residential community, including homes, schools, and sensitive populations, even low probability events must be assessed in terms of their potential consequences. The evidence demonstrates that when such events occur, impacts can be immediate, widespread, and long lasting.^{28,34}

1.66 In this context, reliance on regulatory compliance under normal operating conditions does not adequately address the most significant risk scenario. The combination of demonstrated regulatory limitations and well documented high consequence outcomes from industrial fire events creates a risk profile that is inconsistent with the protection of human health and the environment, and inconsistent with the principles of precautionary planning in a residential growth area.^{13, 22-34} Accordingly, approval of the proposal would be inconsistent with precautionary planning principles, as it would permit a foreseeable, high-consequence risk within a residential community.

1.67 The current regulatory framework does not provide clearly defined or accessible mechanisms requiring proponents of waste-to-energy facilities to address how affected communities would be compensated in the event of environmental harm, accidents, or long-term exposure. While environmental legislation provides for enforcement and the recovery of clean-up costs, it does not establish a direct or readily accessible pathway for individuals to obtain compensation.

1.68 In practice, affected residents would need to rely on private legal action to seek compensation, requiring proof of causation, liability, and harm. This is complex, resource-intensive, and particularly difficult in cases involving cumulative or long-term exposure.

1.69 Unlike other sectors where structured compensation or insurance frameworks exist, there is no equivalent mechanism ensuring that communities affected by industrial pollution or environmental incidents will be compensated.

1.70 This creates a structural gap in which the risks associated with long-term emissions and operational incidents are borne by the community, without corresponding assurance of compensation if those risks materialise.

1.71 Accordingly, the Committee should give significant weight to the risks associated with abnormal operating conditions, including fires and system failures, when assessing the MERC proposal. The evidence supports the conclusion that these events represent a foreseeable and high consequence risk that is not adequately mitigated by existing regulatory frameworks.²²⁻³⁴

2. Impact of Waste-to-Energy

2(a) Separating Recycling and Organic Material from WtE Streams

2.1 Waste-to-energy (WtE) facilities are premised on the assumption that waste streams are effectively sorted prior to incineration; however, this does not reflect real-world conditions, where sorting is inconsistent and contamination is common.¹¹

2.2 National waste reporting demonstrates persistent mis-sorting and uneven material recovery across Australian systems, indicating that waste streams are routinely mixed rather than cleanly separated.¹¹

2.3 As a result, WtE operations depend heavily on households correctly separating recyclables and organics from general waste and excluding hazardous materials such as batteries and electronic waste, despite clear evidence that this does not consistently occur.^{11, 14, 15}

2.4 This reliance is unrealistic. Sorting behaviour is influenced by convenience, education, cultural and linguistic diversity, and system limitations such as inconsistent bin infrastructure.^{11, 14} This variability is widely recognised in zero waste research, which identifies residual waste streams as inherently mixed and unsuitable for consistent industrial processing.²⁰

2.5 In the City of Whittlesea, these challenges are further intensified by linguistic diversity, with a substantial proportion of residents speaking a language other than English at home. This can reduce the effectiveness of education campaigns and contribute to inconsistent sorting practices.¹⁴

Bin fires and hazardous waste risks

2.6 A key consequence of incorrect sorting is the increasing incidence of fires across waste systems, particularly those caused by lithium-ion batteries that are frequently disposed of improperly.¹⁵

2.7 These fires occur at multiple stages, including kerbside bins, collection vehicles, and processing facilities.¹⁵

2.8 Government and industry guidance confirms that batteries are a major and growing cause of such incidents, demonstrating that hazardous materials continue to enter waste streams despite education efforts.¹⁵

2.9 The presence of these materials in WtE feedstock introduces additional risks, including fire and explosion hazards, uncontrolled emissions during combustion, and risks to workers and surrounding communities.

2.10 These conditions demonstrate that waste streams are inherently unpredictable and cannot be fully controlled at the source, particularly where systems rely on human behaviour.

System accountability gap

2.11 WtE proponents are not required to verify or enforce sorting accuracy at the point of collection. As a result, contaminated and hazardous materials may enter the incineration stream, while recyclable and compostable materials are destroyed.¹⁵

2.12 This creates a system in which responsibility for sorting is placed on households, without corresponding accountability across the waste management system.

Synthesis: systemic risk, public health, and community trust

2.13 Taken together, these factors demonstrate that WtE facilities rely on assumptions about waste composition that are inconsistent with real-world conditions. Variability in feedstock undermines the reliability of emissions modelling and regulatory assumptions based on controlled inputs.^{11, 12, 15}

2.14 The combustion of mis-sorted materials—including plastics, treated waste, electronic waste, and batteries—can alter combustion conditions and generate pollutants such as fine particulate matter, heavy metals, and dioxins, all associated with established health risks. While regulatory frameworks focus on end-of-pipe controls, they do not adequately address upstream variability, creating a gap between theoretical compliance and real-world operation.^{6, 10, 12} This limitation is well recognised in zero waste research.²⁰

2.15 A further concern is that contamination pathways extend beyond the immediate vicinity of a facility. Pollutants such as dioxins, PFAS, and heavy metals may accumulate in soil, water, and locally produced food, allowing exposure to occur through the broader food system.

2.16 This creates a pathway for indirect exposure beyond the immediate host community, including through the broader food system, where affected products cannot be easily identified or avoided. This represents a form of involuntary exposure, raising broader public health and food safety concerns.

2.17 These uncertainties mean that safe operation depends not only on regulatory design but also on the proponent's capacity to manage variable and potentially hazardous waste streams in practice. Where operators have documented safety incidents or regulatory breaches, this raises legitimate concerns about their ability to manage these risks over time. Publicly reported matters involving Cleanaway include a fatal incident at the Melbourne Regional Landfill, an enforceable undertaking accepted by Comcare, and a prosecution arising from a truck crash in Adelaide.^{16, 17, 18} This contributes to a risk profile that cannot be effectively controlled or mitigated and is therefore incompatible with the protection of public health at a population level.

2.18 In this context, the issue extends beyond technical compliance to public confidence. Where operations depend on ongoing management under uncertain conditions, documented safety issues directly affect trust in both the facility and the integrity of the planning process.

2.19 These uncertainties also engage the precautionary principle, which requires that where there is a risk of serious or irreversible harm, lack of full scientific certainty should not justify proceeding. In this case, variability in waste composition, limitations in monitoring, and long-term cumulative exposure mean risks cannot be fully characterised in advance. In these circumstances, a precautionary approach supports avoiding the introduction of a continuous emissions source within a residential growth community.¹³

2(b) Nature and management of emissions, waste, and ash by-products

2.20 Waste-to-energy facilities produce a range of outputs, including airborne emissions and residual waste products, which must be managed over the long term. EPA Victoria's guideline confirms that combustion produces ash residues requiring ongoing management.¹²

2.21 The proposed facility would generate substantial ash volumes as a continuing waste stream that must be transported, stored, treated, reused, or disposed of. International incineration guidance confirms that ash production is an inherent and significant by-product of waste combustion.^{12,19}

2.22 The management of this ash introduces additional environmental and logistical risks, including transport, identification of appropriate disposal or treatment facilities, and long-term storage requirements.^{12, 19}

2.23 Ash produced from incineration may contain concentrated contaminants, including heavy metals and other toxic substances, meaning it cannot be treated as ordinary waste and requires careful regulatory oversight.^{10, 19}

2.24 International regulatory frameworks reinforce these risks. European best available techniques material recognises that incinerator residues, particularly fly ash and air-pollution-control residues, require strict handling controls due to their contaminant profile.¹⁹

2.25 The handling and disposal of ash therefore creates a secondary waste stream, rather than eliminating waste, as materials are transformed into a more concentrated and potentially hazardous form.

2.26 In addition to ash, WtE facilities emit pollutants into the air, some of which are persistent in the environment, capable of bioaccumulation, and associated with long-term health risks. These include fine particulate matter (PM2.5 and PM10), volatile organic compounds (VOCs), acid gases (hydrogen chloride, sulfur dioxide), heavy metals (mercury, lead, cadmium, chromium, arsenic), polycyclic aromatic hydrocarbons (PAHs), and persistent organic pollutants such as dioxins and furans.^{20, 38}

2.27 These emissions may disperse over wide areas, affecting communities beyond the immediate vicinity of the facility and depositing into soil and waterways over time, creating extended environmental exposure pathways.⁶

Groundwater, waterways, and drinking water risks

2.28 The management of ash and the deposition of airborne pollutants present significant risks to groundwater, surface water systems, and drinking water sources. These risks are heightened by the proximity of the proposed facility to environmentally sensitive areas and established community concerns identified through the Community Information Process (CIP).^{3, 6}

2.29 Pollutants associated with waste-to-energy incineration, including heavy metals and dioxins, may enter environmental systems through multiple pathways, including atmospheric deposition onto land and water surfaces, transport via stormwater runoff into creeks and waterways, and leaching from stored or disposed ash into soil and groundwater.^{6, 10, 19}

2.30 Once introduced into soil or sediment, these contaminants may persist for extended periods and migrate through environmental systems, including into groundwater, particularly where containment systems degrade or fail over time.^{6, 10}

2.31 These substances accumulate in sediments and aquatic ecosystems and may enter food chains through plants and animals.¹⁰

2.32 The proximity of the proposed facility to the Merri Creek catchment, and its regional proximity to Yan Yean and Greenvale Reservoirs, increases the significance of these risks, as contamination pathways may extend beyond the immediate site and affect broader water systems.³

2.33 Regulatory frameworks primarily focus on emissions at the point of discharge and do not fully account for the long-term behaviour of pollutants following deposition, including their persistence, mobility, and accumulation within groundwater and drinking water systems.⁶

2.34 The continuous operation of a waste-to-energy facility over multiple decades introduces sustained pollutant inputs into the environment, creating a risk profile that differs fundamentally from short-term or isolated industrial activities.

2.35 International evidence indicates that modern waste-to-energy facilities operating under European Union regulatory standards are subject to updated design and control requirements; however, epidemiological studies have not consistently identified population-level health impacts, in part due to methodological limitations and challenges in capturing long-term, cumulative, and indirect exposure pathways.^{49, 50}

2.36 Environmental monitoring and emerging peer-reviewed research have identified persistent pollutants, including dioxins, per- and polyfluoroalkyl substances (PFAS), and heavy metals, in soils, water, and locally produced food near operating waste-to-energy facilities, in some cases exceeding established safety thresholds.^{51, 53} These findings indicate that such substances may not be fully destroyed during incineration, but instead redistributed through flue gas, ash, and process residues, with subsequent entry into environmental and food-chain pathways.

2.37 These findings support the need for precautionary assessment and conservative regulatory approaches.⁵⁴

2.38 Under the Environment Protection Act 2017 (Victoria), risks must be minimised so far as reasonably practicable, including where uncertainty exists. In this case, long-term exposure, environmental contamination, and operational variability mean risks cannot be fully characterised in advance. A precautionary approach is therefore required, including continuous independent monitoring and testing, and transparent reporting. Proceeding with the proposal would be inconsistent with the General Environmental Duty.¹³

2(c) Cost–Benefit of Waste-to-Energy

2.39 Waste-to-energy facilities are capital intensive and expensive to construct and operate, requiring significant upfront investment and ongoing operational costs. These projects typically rely on long-term contracts and financing structures due to their capital intensity and operational complexity.⁹

2.40 Compared with alternative energy sources, particularly renewable technologies such as solar and wind, WtE is more expensive per unit of energy generated, less flexible in operation, and dependent on a continuous fuel source in the form of waste.⁹

2.41 Australian energy planning and cost evidence consistently identifies renewable energy technologies as the lowest-cost forms of new electricity generation in Australia, and these systems continue to expand alongside storage and efficiency measures.⁹

2.42 By contrast, WtE facilities depend on long-term waste supply arrangements to remain economically viable, creating financial risk if waste volumes decline in line with policy objectives focused on waste reduction and recycling.^{9, 11}

2.43 The costs associated with WtE are ultimately passed through the broader waste and infrastructure system, affecting households, businesses, and local government.

2.44 In addition, WtE may compete with recycling systems for materials, reducing the economic viability of resource recovery industries and undermining higher-value uses within the circular economy.¹¹

2.45 In a system increasingly transitioning toward decentralised renewable energy, supported by rooftop solar, battery storage, and efficiency measures, the need for additional electricity generation from WtE is not clearly established.⁹

2.46 The key policy question is therefore whether it is appropriate to invest in a high-cost, emissions-producing technology when lower-cost alternatives are available and waste volumes are intended to decline under circular economy policies.^{9, 11}

2.47 On this basis, WtE does not represent a cost-effective or necessary solution where lower-cost, lower-risk alternatives exist.

2.48 These cost considerations are further reinforced by inconsistency with the State's broader energy affordability objectives, as outlined below.

Inconsistency with Energy Affordability Objectives

2.49 The Victorian Government has re-established the State Electricity Commission (SEC) with a clear objective of delivering affordable, reliable electricity through investment in low-cost renewable energy.⁴⁷ This reflects a broader policy direction toward reducing electricity prices by prioritising the lowest-cost forms of generation, particularly solar and wind.

2.50 At the same time, the State is enabling large-scale thermal waste-to-energy (WtE) infrastructure through the Waste to Energy Scheme. This creates a clear policy inconsistency: one arm of government is pursuing lowest-cost electricity, while another is facilitating infrastructure associated with comparatively higher-cost generation.

2.51 Australian and international evidence consistently demonstrates that utility-scale solar and onshore wind represent the lowest-cost forms of new electricity generation when assessed on a levelised cost basis.^{9, 48}

2.52 Renewable energy has also been a key driver of lower wholesale electricity prices in Australia, reinforcing its central role in energy affordability policy.⁴⁸

2.53 This establishes a clear benchmark: policies aimed at reducing electricity costs should prioritise these lowest-cost technologies.

2.54 Thermal waste-to-energy is not recognised as a low-cost electricity generation option. It requires substantial capital investment, ongoing operational costs, and complex emissions control systems, while producing comparatively lower energy output per unit than renewable technologies.⁴⁸

2.55 Electricity generated from WtE is typically a by-product of waste disposal rather than a primary, cost-efficient energy solution.

2.56 As a result, WtE is not deployed as a least-cost energy strategy, but as a waste management approach with secondary energy recovery.

2.57 WtE facilities are long-life infrastructure assets, typically operating for 20–30 years and requiring stable revenue streams through waste supply contracts and energy sales.⁹ Once established, these facilities create structural "lock-in", where continued operation is required to recover capital investment, even if lower-cost alternatives become more available. Supporting such infrastructure risks embedding higher-cost generation within Victoria's energy system, which may conflict with the State's objective of reducing electricity prices.

2.58 WtE facilities derive revenue from both electricity generation and waste gate fees. This creates a form of cross-subsidisation, where households and councils pay for waste disposal while electricity is generated at relatively high cost. This raises further equity concern: communities may effectively pay twice — once through waste charges and again through the energy system — without receiving the benefit of lower-cost electricity.

2.59 Government support for waste-to-energy is delivered through regulatory approvals, policy frameworks, and targeted funding programs, including Sustainability Victoria's Waste to Energy – Bioenergy Fund, which provides public funding to support the development of waste-to-energy infrastructure in Victoria.⁵⁵ At the same time, consultation processes have required community members to review and respond to substantial volumes of technical material, as documented in the Conference of Interested Persons report.³ This creates a structural imbalance between the resources available to proponents and those available to affected communities.³

2.60 These measures reduce investment risk and facilitate project development, even where WtE is not cost-competitive with renewable energy generation. This indicates that WtE development is being facilitated through policy settings rather than driven by market-based cost efficiency.

3. Alternative Waste Management Approaches

3.1 A range of established and emerging waste management approaches exist that are more consistent with circular economy principles and policy objectives than waste-to-energy incineration, including waste reduction, reuse, recycling, and organics processing.¹¹

3.2 Engineered landfill systems with methane capture and energy recovery represent a lower-risk alternative to waste-to-energy incineration. Facilities such as Wollert demonstrate the capacity to generate renewable energy (8.8 MW; approximately 75,000 MWh annually)⁵² while reducing methane emissions and, in some cases, resulting in lower greenhouse gas emissions than waste-to-energy incineration. This approach supports precautionary, public health, and sustainability objectives.

3.3 It is important to recognise that not all materials placed in recycling systems are actually recyclable in practice, particularly plastics, where system limitations, contamination, and market constraints significantly reduce actual recovery rates.¹¹

3.4 Australian and international evidence shows that only a limited proportion of plastic waste is effectively recycled, with the majority landfilled or otherwise lost from productive use.^{11, 21}

3.5 These outcomes do not support increased reliance on incineration. Instead, they highlight the need for product redesign, source reduction, improved collection systems, stronger producer responsibility, and more effective recovery infrastructure.

3.6 In the context of WtE, however, non-recyclable plastics can become a primary feedstock, meaning materials that cannot be recovered are instead burnt as fuel. This shifts plastic waste from landfill to combustion, converting it into emissions and ash rather than addressing the underlying causes of waste generation.^{11, 21}

3.7 These dynamic risks embedding a system in which plastics that cannot be recycled are routinely incinerated, reducing incentives to minimise plastic use, redesign products, and invest in improved recycling systems.

3.8 Circular economy frameworks prioritise the retention of material value through reuse, repair, and recycling; however, WtE operates at the lowest level of the waste hierarchy by destroying materials through combustion, preventing their re-entry into productive use.¹¹

3.9 The reliance of WtE on residual waste streams therefore creates a structural conflict with circular economy objectives, as these facilities depend on a continuous supply of material to remain economically viable, thereby reducing incentives to minimise waste generation and maximise resource recovery.^{9, 11} This structural conflict is recognised in zero waste frameworks, which identify waste-to-energy as incompatible with circular economy principles due to its reliance on continuous waste generation and destruction of recoverable materials.²⁰

3.10 The use of plastics as a fuel source in WtE facilities further undermines circular economy outcomes, as plastics represent a material that should be reduced, redesigned, or recycled, rather than incinerated for energy recovery.

3.11 As a result, WtE risks embedding a linear waste system based on extraction, consumption, and disposal, rather than supporting a transition to a circular economy based on material recovery, reuse, and sustainability.

4. Adequacy of Community Consultation

4.1 The adequacy of community consultation is a critical issue in assessing the proposed MERC, as effective consultation is necessary to ensure decision-making processes are fair, transparent, and informed by those most directly affected by a proposal of this scale and duration.

4.2 In this case, the consultation process did not meet these standards. Structural, linguistic, and procedural barriers limited meaningful participation and undermined confidence in the process. Accordingly, the consultation process does not meet the standard of procedural fairness required for infrastructure of this scale and duration.

4.3 These concerns are reinforced by documented issues with EPA Victoria's performance in monitoring, transparency, and environmental decision-making, which reasonably affect trust in regulatory assurances.²²⁻²⁷

Volume and complexity of information

4.4 A key barrier to participation was the volume and complexity of information provided. Consultation materials exceeded 3,000 pages and were highly technical, with the Conference of Interested Persons report noting that many community members found them difficult to access and understand.³

4.5 This imposed an unreasonable expectation on residents to interpret technical reports, understand modelling assumptions and regulatory frameworks, and assess risks across multiple disciplines within limited timeframes.

4.6 As a result, many community members were effectively excluded from meaningful participation, as the information was not presented in an accessible or user-friendly format.

Time constraints

4.7 These challenges were compounded by limited consultation timeframes. Communities were given insufficient time to review extensive documentation, seek independent advice, and prepare informed responses for a proposal with long-term and potentially irreversible impacts.^{3, 21}

Cultural and linguistic barriers

4.8 These barriers were intensified by the demographic context of the affected area. The City of Whittlesea is a culturally and linguistically diverse municipality, with approximately 45.1% of residents speaking a language other than English at home.¹⁴ However, consultation materials were not adequately adapted to this context.

4.9 This created significant barriers for residents with limited English proficiency, newly arrived communities, and individuals without technical backgrounds, resulting in a substantial proportion of the community being unable to engage meaningfully with the proposal.

4.10 These factors collectively reduced the accessibility of the consultation process.

Structural imbalance and access to justice

4.11 These challenges were reinforced by a broader structural imbalance within the consultation process. Proponents have access to technical experts, consultants, legal support, and financial resources, while community members are expected to engage independently with complex material.

4.12 This limits the ability of affected communities to influence outcomes.

4.13 This imbalance extends beyond consultation to the ability of communities to challenge or review decisions. In practice, community members and local groups have limited financial and technical capacity to pursue legal or administrative review processes.

4.14 This disparity creates a structural inequality in access to justice, particularly in communities with lower socio-economic capacity where the cost and complexity of legal proceedings can be prohibitive.

4.15 As a result, the existence of formal review pathways does not equate to meaningful access, and cannot be relied upon as an effective safeguard for community interests.

Industry influence and evidentiary environment

4.16 In addition to these structural limitations, concerns arise regarding the integrity of the consultation environment. Industry-led engagement activities during the inquiry period, including site tours coordinated by the Victorian Waste Management Association in partnership with major waste companies such as Cleanaway Waste Management, introduce a further layer of imbalance.⁴⁴

4.17 This creates unequal access to information and influence within the consultation process.^{41, 43}

4.18 These activities do not provide a reliable basis for assessing long-term emissions performance, operational failures, regulatory non-compliance, or cumulative health impacts, and should not be treated as equivalent to independent, peer-reviewed evidence.⁴²

4.19 Accordingly, greater weight should be given to independently verifiable material, including emissions data, long-term health studies, lifecycle analyses, and assessments against the waste hierarchy and circular economy objectives.⁴²

4.20 The timing of these activities may influence stakeholder views during the inquiry process.^{41, 42}

4.21 The Committee should therefore ensure that its findings are based on independently verifiable evidence, rather than perceptions formed through industry-led engagement.^{41, 42}

Consultation outcomes and community response

4.22 The effects of these limitations are reflected in consultation outcomes. EPA received 764 submissions, approximately 99% opposing the proposal.³

4.23 However, only 24 submissions provided detailed responses, indicating that while concern was widespread, most participants were not able to engage at a technical level.³

4.24 The Conference of Interested Persons report also records distrust in EPA, concerns regarding inadequate communication, and dissatisfaction with the absence of a full Environmental Effects Statement.³

Substantive concerns raised

4.25 Community concerns were consistent and substantive, including health risks, air quality, proximity to residential areas, adequacy of monitoring, waste and ash management, regulatory oversight, economic viability, and alignment with circular economy principles.³

4.26 Responses from the proponent relied primarily on technical assurances and compliance-based arguments and did not substantively resolve these concerns.

4.27 This indicates that community input was not meaningfully incorporated into decision-making.

Broader evidence of opposition

4.28 These outcomes are reflected in the scale and consistency of community opposition. Petitions to the Victorian Parliament and public campaigns have attracted thousands of signatures, demonstrating sustained concern. The Wollert Change.org petition carries 6,371 signatures and the Victorian Parliament petition holds 2,462 signatures. ^{36, 45, 46}

4.29 This level of participation indicates that opposition is broad-based and not limited to a small or highly engaged group.

Social licence

4.30 In this context, social licence—the ongoing acceptance of a project by the community—is directly relevant and widely recognised as critical to the legitimacy of major infrastructure. ³⁵

4.31 The consistent opposition demonstrated across submissions, petitions, and broader engagement indicates that social licence has not been achieved. ^{3, 37, 45, 46} Comparable opposition at other proposed waste-to-energy facilities across metropolitan Melbourne further indicates that this issue is systemic rather than site-specific.

Conflict of Interest and Evidentiary Integrity

4.32 In addition to the absence of social licence, concerns arise regarding the independence of expert evidence relied upon throughout the assessment process. This is particularly relevant to the proposed MERC in Wollert, where EPA Victoria's assessment relies on both regulatory literature and project-specific Human Health Risk Assessments prepared within the same consultancy context. ⁵³

4.33 In comparable jurisdictions, waste-to-energy proposals are subject to stricter policy controls and evidentiary requirements, reflecting the recognised need for independent, transparent, and precautionary decision-making frameworks. ⁵⁴

4.34 Publicly available documentation indicates that individuals involved in advising government bodies, contributing to regulatory guidance, and providing expert evidence to parliamentary inquiries have also undertaken paid consultancy work for waste-to-energy and gas industry proponents. ⁵³

4.35 These roles create potential conflicts of interest, particularly where the same expert contributes to both regulatory framework development and project-specific risk assessments. ⁵³

4.36 In this context, reliance on consultant-prepared Human Health Risk Assessments and commissioned regulatory reviews, without independent verification, raises concerns regarding the neutrality and robustness of the evidence base. Best-practice governance frameworks require full disclosure of interests, transparency in expert engagement, and independent peer review where such overlaps exist. ⁵³

4.37 These issues affect the credibility and independence of the evidence presented to decision-makers and the community. ⁵³

4.38 In these circumstances, it cannot reasonably be concluded that social licence exists for the proposed MERC.

Proponent credibility and public trust

4.39 These concerns are further compounded by issues relating to proponent credibility. Publicly reported incidents involving Cleanaway include a fatal workplace incident, an enforceable undertaking, and a prosecution relating to a truck crash. ^{16, 17, 18}

4.40 While these matters arise in a workplace context, they are relevant to community perceptions of risk, particularly in relation to transport, waste handling, and operational safety associated with the proposed facility.

Absence of Environmental Effects Statement and implications for public trust

4.41 Concerns regarding consultation are further reinforced by the level of environmental assessment applied to the proposal. The MERC was not subject to a full Environmental Effects Statement (EES), the highest level of environmental assessment in Victoria.⁵

4.42 This reduces confidence in the robustness of the assessment process.^{5, 21}

4.43 In its absence, assessment is fragmented across multiple reports, reducing transparency, limiting independent oversight, and constraining meaningful community engagement.^{3, 5, 21}

4.44 For a project of this scale and duration, this represents a lower level of scrutiny than would reasonably be expected, particularly given the complexity and potential long-term impacts involved.^{1, 3, 5}

4.45 In a community already facing barriers to participation, the absence of a comprehensive and transparent assessment framework further undermines confidence in both the process and its outcomes.^{3, 14}

4.46 Where long-term environmental and health risks are central to a proposal, public confidence depends on clear evidence that the highest level of independent scrutiny has been applied.

4.47 The absence of an EES therefore contributes directly to reduced transparency and limited accountability within both the proponent's assessment and the broader regulatory system.

4.48 The Committee should consider whether this has diminished the rigour of assessment, constrained meaningful participation, and contributed to a loss of public confidence.

5. Any Other Related Matters

Environmental Justice

5.1 Environmental justice is central to assessing the proposed MERC, requiring that no community bears a disproportionate share of environmental burdens, particularly where those burdens arise from infrastructure serving a broader population.

5.2 The proposed facility would process up to 760,000 tonnes of waste per year, reflecting a metropolitan-scale operation serving multiple municipalities rather than the local community alone.¹

5.3 Wollert would therefore become a centralised waste processing location and receiving point for waste generated across metropolitan Melbourne.

5.4 This creates a situation in which the benefits of waste disposal are distributed broadly, while environmental, health, and amenity impacts are concentrated within a single community.

5.5 Residents of Wollert would bear long-term exposure to emissions, sustained heavy vehicle traffic, and risks associated with ash, pollutants, and cumulative impacts.

5.6 This issue extends beyond Wollert and reflects a broader principle: incineration infrastructure should not be imposed on any community.

5.7 Relocating the facility would not resolve the issue, but transfer the same environmental, health, and social burdens elsewhere else.

5.8 WtE infrastructure inherently requires a host community, and that community will bear disproportionate and long-term impacts.

Planning Conflict

5.9 The proposed MERC presents a clear conflict with established land-use planning objectives for Wollert and surrounding areas.

5.10 Wollert has been identified as a residential growth corridor, with significant investment in housing, schools, childcare, transport infrastructure, and community services.²

5.11 Introducing a large-scale industrial waste incineration facility into this context is inconsistent with the intended function, character, and long-term vision of the area.

5.12 Planning systems are designed to separate incompatible uses, protect residential amenity, and ensure sustainable and coherent urban development.

5.13 The MERC conflicts with these principles by introducing a continuous emissions source, high volumes of industrial traffic, and long-term industrial activity into a residential environment.

5.14 Once established, the facility would represent a long-term and effectively irreversible land-use decision, limiting future planning flexibility and alternative development opportunities.

Precautionary Principle

5.15 The precautionary principle requires that where there is a risk of serious or irreversible harm, lack of full scientific certainty should not justify delaying preventative action. The proposed MERC involves uncertainties and risks, including long-term health impacts from cumulative exposure, environmental effects from pollutant deposition and bioaccumulation, limitations in monitoring systems, and risks associated with start-up, shutdown, and malfunction events.^{6, 10, 12} Public health bodies, including the Public Health Association of Australia, have emphasised the need for precautionary approaches due to uncertainties in long-term exposure and cumulative health risks.⁴⁰

5.16 While proponents argue that modern waste-to-energy facilities can operate within regulatory limits, this submission finds that such compliance does not adequately address cumulative, long-term, and uncertain risks in a residential growth context. Compliance with regulatory standards does not eliminate uncertainty, particularly in relation to cumulative exposure over decades, combined pollutant effects, and impacts on vulnerable populations.

5.17 The scale and duration of the facility mean that even small uncertainties may result in significant long-term consequences at a population level.

5.18 The irreversible nature of the infrastructure means that, once constructed, it cannot easily be removed, relocated, or fundamentally altered.

5.19 In these circumstances, the precautionary principle requires that the proposal not proceed, as the risk of serious or irreversible harm cannot be ruled out and cannot be adequately mitigated.^{9, 11}

Recommendations

The Committee should:

1. Reject the MERC proposal

Recommend that the proposed Cleanaway Melbourne Energy Recovery Centre (MERC) not proceed or be supported, on the basis that it is inconsistent with planning objectives, poses long-term environmental and public health risks, and lacks regulatory assurance and community support. ^{1, 2, 3, 6, 22-27, 45, 46}

2. Prohibit waste-to-energy incineration in Victoria

Recommend that the Victorian Government adopt a precautionary, state-wide policy position that does not support the development of waste-to-energy (WtE) incineration infrastructure, recognising that:

- the risks associated with such facilities are inherent, systemic, and not site-specific; and
- other Australian jurisdictions have imposed significant restrictions on WtE development, including prohibitions in metropolitan areas and strict location controls, reflecting recognised risks to human health, the environment, and community acceptance. ^{9-11, 49-51, 54}

3. Strengthen environmental assessment and regulatory safeguards

Require that any proposal involving large-scale waste processing or emissions undergo the highest level of environmental assessment, including a full Environmental Effects Statement (EES), supported by independent review, continuous 24/7 emissions monitoring by an independent body, and publicly accessible reporting. ^{5, 12, 13, 21}

4. Reform community consultation and decision-making processes

Establish clear, enforceable standards for consultation that ensure accessibility, equity, and meaningful participation, including culturally and linguistically appropriate engagement and a transparent framework for assessing and responding to community opposition and social licence. ^{3, 14, 35}

5. Prioritise circular economy and lower-risk alternatives

Prioritise waste reduction, reuse, and recycling in accordance with the waste hierarchy, recognising that energy recovery is a lower-order waste management option and should only be considered after higher-order alternatives have been exhausted. ^{9-11, 19, 48, 54}

Engineered landfill systems with methane capture and energy recovery should be prioritised as a lower-risk alternative. Facilities such as Wollert demonstrate the capacity to generate renewable energy (8.8 MW; approximately 75,000 MWh annually) ⁵² while reducing methane emissions, without the long-term risks associated with combustion-based infrastructure. This approach supports precautionary, public health, and sustainability objectives.

6. Ensure independence and integrity of expert evidence

Require full disclosure of conflicts of interest for all expert evidence relied upon in environmental and planning assessments, including advisory, regulatory, and consultancy roles. ⁵³

Require independent, conflict-free scientific review of all Human Health Risk Assessments and regulatory literature used to support waste-to-energy proposals, including those informing EPA Victoria's assessment framework. ⁵³

Ensure that EPA Victoria does not rely on regulatory literature or project-specific assessments prepared by consultants with concurrent commercial engagements in the same sector, unless independently reviewed and verified. ⁵³

Ensure that decision-making processes prioritise independently verifiable, peer-reviewed evidence and apply the precautionary principle where risks are uncertain, cumulative, or potentially irreversible.¹³

Conclusion

The evidence presented in this submission demonstrates that the proposed Melbourne Energy Recovery Centre (MERC) is not consistent with Victoria's planning objectives, environmental protection framework, or principles of responsible risk management.^{1, 2, 5, 6, 22-27}

The proposal introduces a long-term industrial emissions source into a residential growth corridor, creating an avoidable and inequitable distribution of environmental and health risks.³

Evidence from environmental monitoring, regulatory reviews, and international research demonstrates that risks associated with waste-to-energy incineration are persistent and cannot be fully addressed through regulatory controls alone.^{6, 10, 12, 49-51, 53}

These risks are compounded by documented weaknesses in regulatory oversight, limitations in consultation processes, and concerns regarding the independence of expert evidence relied upon in assessment and decision-making.^{3, 22-27, 53}

The absence of a comprehensive Environmental Effects Statement further reduces transparency, limits independent scrutiny, and undermines public confidence in the assessment process.^{5, 21}

Lower-risk and more sustainable alternatives are available and align with the waste hierarchy and circular economy objectives.^{9-11, 19, 48, 52}

In these circumstances, approval of the MERC cannot be justified.

The proposal should not proceed, and waste-to-energy incineration should not form part of Victoria's long-term waste management policy.

Footnotes

1. Cleanaway, Melbourne Energy & Resource Centre project page, stating that in August 2025 MERC received a Waste-to-Energy cap licence allowing it to process up to 760,000 tonnes of residual waste each year; see also Cleanaway, Cleanaway welcomes Recycling Victoria's Waste-to-Energy cap allocation (19 August 2025).
<https://www.cleanaway.com.au/melbourne-energy-and-resource-centre>
<https://www.cleanaway.com.au/newsroom/cwy-rv-waste-to-energy-cap>
2. Department of Transport and Planning, Plan Melbourne 2017–2050; City of Whittlesea, Wollert Precinct Structure Plan; Victorian Government, Planning Victoria – MERC referral page.
<https://www.planning.vic.gov.au/guides-and-resources/strategies-and-initiatives/plan-melbourne>
<https://www.whittlesea.vic.gov.au/Services/Building-planning-and-development/Strategic-planning/Strategic-Land-Use-and-Precinct-Structure-Plans/Wollert-Precinct-Structure-Plan>
<https://www.planning.vic.gov.au/environmental-assessments/browse-projects/referrals/melbourne-energy-resource-centre>
3. MosaicLab, Conference of Interested Persons Report – Cleanaway Operations Pty Ltd (APP024914), recording community concerns, trust issues, and that EPA received 764 submissions and 24 detailed submissions.
https://cleanaway2stor.blob.core.windows.net/cleanaway2-blob-container/2024/09/conference-of-interested-persons-report-cleanaway-operations-pty-ltd-app024914_d500.pdf
4. Cleanaway, Melbourne Energy & Resource Centre project page, including current project description, FAQ content and infographic material on the proposal. The page text confirms the 760,000 tpa cap licence; the 380 trucks per day figure is shown in the infographic on that same webpage, as identified by the submitter.
<https://www.cleanaway.com.au/melbourne-energy-and-resource-centre>
5. Victorian Government, MERC referral / reasons for decision confirming that a full EES was not required for the original proposal; Department of Transport and Planning, Environment effects statements in Victoria.
<https://www.planning.vic.gov.au/environmental-assessments/browse-projects/referrals/melbourne-energy-resource-centre>
<https://www.planning.vic.gov.au/environmental-assessments/environmental-assessment-guides/environment-effects-statements-in-victoria>
6. Australian Government, Australia State of the Environment 2021 – Air quality: outlook and impacts; WHO, Global Air Quality Guidelines; AIHW, Air pollution and health.
<https://soe.dcceew.gov.au/air-quality/outlook-and-impacts>
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<https://www.aihw.gov.au/reports/burden-of-disease/abds-2018-interactive-data-risk-factors/contents/air-pollution>
7. Cleanaway, MERC FAQ / community information materials, including operating life of approximately 25–30 years and earlier exhibited project material showing lower traffic volumes for the smaller proposal; see also Community info session pack – April 2024.
<https://cleanaway2stor.blob.core.windows.net/cleanaway2-blob-container/2023/06/Community-info-session-pack-April-2024.pdf>
8. Victorian Government exhibited material, Attachment 14 – Socioeconomic Impact Assessment, identifying traffic and access impacts as relevant assessment issues.
https://www.planning.vic.gov.au/_data/assets/pdf_file/0018/641133/Attachment-14_-Socioeconomic-Impact-Assessment.pdf
9. CSIRO, GenCost; Australian Energy Market Operator, Integrated System Plan.
<https://www.csiro.au/en/research/technology-space/energy/Electricity-transition/GenCost>
<https://www.aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/planning-and-forecasting/integrated-system-plan>
10. Australian Government, National Dioxins Program and related materials concerning persistence, bioaccumulation, and pollutant risk.
<https://www.dcceew.gov.au/environment/protection/publications/dioxins-program-report>
11. Victorian Government, Recycling Victoria: A New Economy; Australian Government, National Waste Policy Action Plan and National Waste Report.
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12. EPA Victoria, Guideline: Energy from Waste, Publication 1559.1.
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13. Environment Protection Act 2017 (Vic).
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<https://www.sustainability.vic.gov.au/recycling-and-reducing-waste/at-home/dispose-of-household-items/batteries>
<https://www.frv.vic.gov.au>

16. Cleanaway, Fatal incident at Melbourne Regional Landfill.
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17. Comcare, Cleanaway enforceable undertaking / reasons for decision.
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18. Comcare, Cleanaway charged over Adelaide truck crash.
<https://www.comcare.gov.au/about/news-events/news/cleanaway-charged-over-adelaide-truck-crash>
19. European Commission, Best Available Techniques (BAT) Reference Document for Waste Incineration.
<https://eippcb.jrc.ec.europa.eu/reference/waste-incineration>
20. Global Alliance for Incinerator Alternatives (GAIA); Zero Waste Australia / Zero Waste Network Australia, position and research materials on incineration pollutants, residual waste variability, and incompatibility with circular economy outcomes, identifying key pollutant classes such as dioxins/furans, heavy metals (mercury, lead, cadmium), VOCs, acid gases, PAHs, and fine particulates. Available at: <https://www.no-burn.org> and <https://zerowasteaustralia.org>
21. Engage Victoria, Cleanaway Operations Pty Ltd (APP024914) project page and timeline; OECD, Global Plastics Outlook; UNEP, Turning off the Tap.
<https://engage.vic.gov.au/cleanaway-operations-pty-ltd-app024914>
<https://www.oecd.org/environment/plastics/>
<https://www.unep.org/resources/report/turning-off-tap>
22. ABC News, reporting on the Ernst & Young review following the West Footscray fire, including “litany of failures” findings.
<https://www.abc.net.au/news/2020-07-22/epa-review-after-west-footscray-toxic-fire/12479262>
23. Victorian Ombudsman, Investigation into the West Gate Tunnel Project.
<https://www.ombudsman.vic.gov.au/our-impact/investigation-reports/investigation-into-the-west-gate-tunnel-project/>
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<https://www.theguardian.com/australia-news/2019/oct/29/west-gate-tunnel-toxic-soil-decision>
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25. Environment Victoria legal action regarding EPA regulation of air pollution from coal-fired power stations.
<https://environmentvictoria.org.au>
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<https://www.reuters.com>
32. World Health Organization and peer-reviewed public health literature on air pollution and health impacts, including PM2.5, VOCs, and dioxins.
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