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Dear Mr Chappel

Re: NSW energy from waste (EfW) – Options Paper (December 2024)

Thank you for the opportunity to provide feedback on the above options paper in relation to the NSW energy from waste framework review (“EfW framework review”), which has identified three (3) potential changes to the existing framework:

1. Changes to the precincts where EfW facilities can be proposed and developed. This primarily relates to adding in the Tomago Precinct, removing the Richmond Valley precinct, and adjusting the borders of the existing West Lithgow Precinct to include the site of the Wallerawang Power Station;
2. Changes to the definition of thermal treatment to allow a broader range of materials to be thermally treated to create products or product inputs that produce a clear environmental benefit; and
3. Changes to the exception relating to powering industrial or manufacturing processes on site by adjusting the exception under clause 144(4) of the *Protection of the Environment Operations (General) Regulation 2022 (“the Regulation”)* to enable the EPA to consider and allow proposals that displace gas uses (on a case-by-case basis).

The Waste Management and Resource Recovery Association of Australia (WMRR) is the national peak body representing Australia’s \$17 billion waste and resource recovery (WARR) industry. With more than 2,300 members from over 410 entities nationwide, we represent the breadth and depth of the sector, including representation from business organisations, the three (3) tiers of government, universities, and Non-Government Organisations (NGOs), including research bodies. In NSW, WMRR represents over 750 individual members from more than 130 entities. Our membership includes an active EfW National Division and state based EfW working groups consisting of a broad cross section of technology suppliers, consultants, waste and resource management companies, and councils.

The context for this review is extremely significant. As reiterated by the Options Paper, Greater Sydney is projected to run out of landfill space by 2030. The NSW Waste and Sustainable Materials Strategy 2041 (“WaSM”) acknowledges that EfW can and should play an integral role in managing residual materials that cannot be safely recycled and suggests that Greater Sydney needs at least one (1) large scale EfW plant by 2030, and an additional three (3) by 2040. The targets of the WaSM are also supported by the draft Waste and Circular

Infrastructure (“the plan”) which opened for consultation towards the end of this separate consultation. The plan acknowledges that the private sector and local government have been prevented from investing in critical waste infrastructure due to the rigorous (and protracted) planning processes leading to potentially high costs and investment risks, and lack of strategic planning for waste infrastructure.

Consequently, the plan prioritises streamlining planning processes for extending the lifespan of existing priority landfills or expanding them (where doing so is necessary to avoid immediate landfill shortages in Greater Sydney), considering energy-from-waste (where doing so will reduce reliance on landfill, to build resilience in waste management, and maintain protections for human health) and strengthening strategic planning for waste and recycling infrastructure to meet the needs of Greater Sydney’s growing populations.

Currently, EfW is prohibited in NSW, unless the activity is excepted from the prohibition under the Regulation. EfW projects are explicitly prohibited in Greater Sydney and can only be carried out in one (1) of four (4) regional precincts identified in the NSW Energy from Waste Infrastructure Plan (2021). The *NSW Energy from Waste Policy Statement (“the policy”)*, released in 2015 and revised in 2021, establishes policy support for EfW and includes technical requirements that an EfW facility must meet, such as air emission limits, and requires operators to demonstrate supply of feedstock is in line with resource recovery criteria. However, as of May 2025 – ten (10) years after the initial policy – there are currently no existing EfW plants in NSW, which WMRR believes in large part is due to NSW requiring bespoke standards be met, making it impossible to provide necessary reference sites, hence frustrating progress in this area.

A number of EfW proposals have been developed over the last decade in NSW at significant cost, including the Botany Opal Paper Mill cogeneration plant and the Western Sydney Energy and Resource Recovery Centre (WSERRC) at Eastern Creek, which have not been able to progress due to the current framework, which was adopted whilst these projects were underway. The most progressed projects being Parkes and Woodlawn, remain in community engagement and preliminary planning and environmental approvals processes, despite by contrast, two (2) EfW plants nearing completion in WA, one (1) operating in Victoria and five (5) projects being in different stages of development. This is despite these facilities being in operation for many years globally, with more than 500 in Europe alone.

WMRR welcomes this much-needed review of the EfW Framework, noting that there remain five (5) years to 2030, and other states are gaining pace towards establishing EfW as a valuable part of their resource recovery system at a much faster rate than NSW, without the catalyst of a landfill crisis. As mentioned above, the current framework has stifled the development of EfW and consequently slowed NSW’s progress towards its resource recovery targets primarily due to:

- i. *EfW being restricted to specific designated precincts (identified down to Lot number) in the EfW Infrastructure Plan.*

There is no doubt that the development of EfW in NSW has been hampered by the limitations of the precincts. This not only limits economic opportunities by excluding proposals for repurposing former industrial sites (and utilising existing infrastructure and local workforces) and adds logistical constraints to new proposals being outside of major urban areas where most of the source feedstock is generated, undermining the “proximity principle”. The entire policy and precincts concept in NSW appears to have been developed with large MSW fuelled projects in mind, however it also by default has captured other smaller projects, or those with different

fuels. WMRR has made this point in previous submissions regarding EfW policy in NSW. However, WMRR would like to see further detail provided on how proponents can propel a new location to be gazetted as an approved precinct or site – for example, an existing industrial site outside the precincts that seeks to develop EfW to support its existing operations to displace gas use, using alternative streams such as commercial and industrial residual feedstock. Clarity on how this will be enacted is needed in the revised EfW framework.

ii. *The broader NSW Waste and Circular Infrastructure Plan (not yet finalised).*

Having the role of EfW prioritised in the draft plan is welcomed, demonstrating that the NSW Government views EfW as a bona fide part of the waste management hierarchy, and as such a preferable solution to landfill for residual material. WMRR appreciates that there can be a highly emotive response from some in the community towards EfW, and that there is a need for the EPA to ensure appropriate controls are in place for these facilities. However, it is important in finalising the plan that the current imbalance that exists in the regulatory and policy framework, that appears to lend greater support for landfill expansion as opposed to new EfW developments (which enable energy recovery) is addressed. There is currently a disconnect in NSW which has no integrated strategy as yet for residual management, compared with for example Victoria and its Infrastructure Strategy that clearly identified the closing of landfills in the South East of Victoria and the movement of materials to EfW in this precinct, clearly articulating that energy recovery is a better outcome for Victoria than landfilling residual material as per the waste management hierarchy.

Further, it is often lost that EfW solutions play a significant role in reducing greenhouse gas (GhG) emissions via decreased reliance on landfills and promoting circular outcomes through energy recovery and innovative by-products that have proven value in other jurisdictions as construction aggregate substitutes. WMRR hopes that recognising EfW as part of the integrated WARR system in managing material safely in NSW will assist in shifting the paradigm in NSW towards positioning EfW facilities as part of NSW's necessary circular infrastructure, that like any other piece of infrastructure, must meet regulatory requirements.

iii. *EfW being too tightly controlled with stringent technical criteria (particularly around emissions levels that 'exceed world best practice') and the consequent lack of a reference facility - which is required by the existing policy.*

The issue of the suitability of air emission standards is a significant impediment to timely implementation of EfW in NSW. EfW technologies have been in use and operating safely in the USA, Europe and Asia for several decades and operate under strict emission controls - such as those set by the European BREF (Best Available Techniques Reference Document – Waste Incineration, 2019) - and are tested regularly by their respective environmental authorities. WMRR understands that EfW facilities in development within NSW would likely meet the BREF requirements but cannot meet the NSW emissions requirements. This is limiting proposals from being progressed, given lack of the required reference sites and the consequence that proposed EfW projects must adopt international best practice and be designed with worst-case emission scenarios in mind. However, there is ample evidence that EfW facilities are operating to the BREF and have successfully managed to avoid such risks. WMRR strongly encourages the EPA to align the technical requirements for EfW facilities in NSW with those already in operation in other jurisdictions. This approach would allow the EPA to focus attention and resources on technologies that are robust and proven. WMRR has highlighted this to Minister Sharpe and the NSW EPA via direct correspondence on 9 May 2025.

- iv. *Also unclear under the EfW framework is the interplay between the EPA's regulatory framework and existing planning legislation.*

There is some confusion regarding which takes precedence – the NSW Planning framework, or the EfW Regulatory Framework, noting that some areas of the policy appear to place additional requirements on the proponent to go above and beyond the requirements of the NSW planning system. The policy includes requirements for 'public consultation and the good neighbour principle' – which arguably is not necessary given the *Environmental Planning and Assessment Act 1979* (EP&A Act) already governs land use planning and environmental assessment and legislates requirements for community consultation in various planning and development processes.

There is also a lack of clarity around the interpretation of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* which suggests that EfW development in Greater Sydney is prohibited only if it is (b) on land identified in the [Thermal Energy From Waste Prohibition Map—Greater Sydney](#), and (c) is prohibited by the Regulation. The Regulation establishes exceptions for EfW activity being generally prohibited, with the precincts exception often cited. In addition to the named precincts, the Regulation at 144(1)(c) notes that there is also an exception for gazetted former mine premises and electricity premises, and Activation and Regional Jobs Precincts. Given the use of the word 'and', not 'or' in the planning instrument, this should create a pathway for additional sites to be gazetted, potentially within Greater Sydney. Given the economic benefits of utilising former industrial to maximise efficiencies afforded from the use of existing local workforce, utilities and transport connections, it would be beneficial for this review to make options under this potential pathway clearer.

WMRR concedes that the three (3) proposed changes to the EfW framework will assist in addressing some of the unnecessary rigidity of the current framework. However, as indicated above, in WMRR's view, the proposed changes do not go far enough to remove the fundamental barriers to effectively implementing EfW in NSW. WMRR has also made additional comments seeking amendments to the policy regarding the feedstock acceptance criteria, the need for consideration of EfW end-products and the recommendation for the policy to make a clearer link between reducing landfill methane emissions and promoting EfW to assist in the decarbonisation of the WARR industry. WMRR trusts that these comments will assist to develop a robust policy framework in NSW to enable the actual investment and development of EfW infrastructure in NSW, thereby reducing reliance on landfill, increasing the resilience of NSW's waste management system, and delivering positive outcomes for communities and the environment.

WMRR's responses to the consultation questions can be found at [Annexure A](#). Please contact the undersigned if you wish to further discuss WMRR's submission.

Yours sincerely



Gayle Sloan

Chief Executive Officer

Waste Management and Resource Recovery Association of Australia

Annexure A

Survey Questions - NSW Energy from Waste Regulatory Framework Review	
Survey Question	WMRR Comment
How strongly do you agree with the proposed changes to precincts - Richmond Valley Jobs Precinct no longer identified as a priority infrastructure area and the map revoked - West Lithgow Precinct boundaries extended to include the former Wallerawang power station and a map gazetted - A new priority infrastructure area is established for Tomago and a map gazetted - A new priority infrastructure area is established for Tomago and a map gazetted - No changes to Parkes Special Activation Precinct and Southern Goulburn Mulwaree Precinct	WMRR agrees with the proposed changes to the precincts and welcomes further additions and amendments to the precincts to expand opportunities for EfW solutions. WMRR accepts that the precincts are part of the EfW Framework, and supports the proposed changes, noting that the inclusion of the Wallerawang Power Station within the West Lithgow Precinct and the new priority infrastructure area for Tomago. However we do have concerns that this approach can hinder competition, by picking “winners” and as such as mentioned in the paper there must be other pathways to open locations to be broader than specific lots so as not to give commercial advantages to individual companies, and enable the development of projects that are looking to replace gas for, for example, residual commercial feedstock. WMRR also reiterates that the precincts can send a confusing signal about EfW being appropriate in some locations and not others creating for example a regional v rural divide and ignoring the ‘proximity principle’. This is despite scientific evidence demonstrating compliance of fully operational EfW facilities in other markets with health and safety standards. This review should aim to reposition EfW as a safe technology. As noted in our cover letter, the interplay between the planning instruments and the Regulation is not exactly clear, however the Tomago example may help build a pathway for additional precincts and sites to be identified – which could fall within Greater Sydney. EfW projects in the regions will require significant transport infrastructure to move the majority of residual waste from Greater Sydney to the permitted EfW location, and will likely require access to secure transfer stations, additional to current networks. It is foreseeable that repurposing a manufacturing or industrial site within the Greater Sydney area may be more appropriate as well as being more economically viable. However, to date, the framework has been applied as creating a blanket ban of thermal Energy from Waste in Greater Sydney – and limiting proposals to the precincts. One way to preference such outcomes would be for the EfW framework to rely on the <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>. It prohibits thermal energy from waste development at Division 28, 2.171 if it:

Survey Questions - NSW Energy from Waste Regulatory Framework Review	
Survey Question	WMRR Comment
	(a) involves, or is carried out to enable, the thermal treatment of waste involving or resulting in energy recovery from the waste, and (b) is on land identified on the Thermal Energy From Waste Prohibition Map—Greater Sydney, and (c) is prohibited by the Protection of the Environment Operations (General) Regulation 2022, Chapter 9, Part 4. The use of the word ‘and’ in this drafting would suggest that EfW development is not prohibited under the planning instrument if it only meets (a), (b) or (c). Thus, a proposal for EfW development could be progressed in Greater Sydney if it is not prohibited by the Regulation. WMRR would again encourage the EPA to review the framework to provide further detail on how proponents can propose a new location to be gazetted under the Regulation 144 (1)(c) – for example, an existing industrial site in Greater Sydney. The proposed Regulation changes to exceptions for powering onsite industrial or manufacturing processes support this pathway is being explored. In this regard, there is an opportunity for the revised EfW framework to provide absolute clarity on how the Planning Instrument relates to the EfW Framework, noting that currently, the EfW Infrastructure Plan precludes EfW development unless in a nominated precinct.
Do you agree with the proposed changes to the definition of ‘thermal treatment’ - Expand the exclusions to allow processes that treat waste to produce ‘like for like’ products or inputs for those products, not only for plastic - Expand the exclusions to allow for processes that make a product that has a clear environmental benefit in line with criteria specified in the Regulation or guidelines	WMRR supports these changes which promote innovations that can help reduce GhG emissions, divert waste from landfill, and displace fossil fuels. WMRR recognises the important role that smaller, modular technologies can play in addressing resource recovery of problematic streams (like soft plastics). Previous WMRR submissions to the EPA have supported that fuel production - such as SAF – should not be considered a thermal activity as the outcome is producing a marketable fuel. In addition to SAF, other liquid fuel projects should be included such as renewable diesel. These innovations should be supported and not precluded by the framework. In the case of EfW facilities, comprehensive evidence from existing operating facilities (i.e. reference sites) is required to be provided in any development proposal. The same level of rigor should be applied to any other thermal treatment proposals, as many are unproven, pilot scale and/or commercially unviable.

Survey Questions - NSW Energy from Waste Regulatory Framework Review	
Survey Question	WMRR Comment
Expand the exclusions to allow for processes that make a product that has a clear environmental benefit in line with criteria specified in the Regulation or guidelines	
Do you agree with the proposed changes to exceptions for powering onsite industrial or manufacturing processes Adjust the exception under clause 144(4) of the Regulation to enable the EPA to consider and allow proposals to replace liquefied petroleum gas, natural gas, and liquefied natural gas with energy recovery from waste, on a case-by-case basis	WMRR supports these changes. Currently, EfW to replace gas fuels is not permitted under the Regulation. The proposed change would see this exception include waste fuels displacing liquefied petroleum gas, natural gas and liquefied natural gas assessed on a case-by case basis. The revision makes sense to minimise the use of fossil fuels. However, we caution against a policy that is enacted inconsistently across NSW. A policy to allow gaseous fuel displacement by EfW should apply state-wide rather than on a case-by-case basis, as any proposal will already be subject to existing planning and environmental assessment requirements to determine project-specific impacts. WMRR would support the exemption being expanded beyond gas to include any fuel where an environmental benefit can be demonstrated. For example, the replacement of virgin wood combustion projects for waste derived biomass and fuels has a material carbon benefit through the avoidance of methane from landfill, and also frees up the virgin biomass for higher order uses than combustion. It is noted that this exception retains the 90% limit for energy recovered being used behind the meter. This is unnecessarily high and prevents good projects achieving significant environmental benefits from proceeding. Whilst the material percentage is supported in principle, but practically and from a scale perspective 90% is unrealistic, and WMRR would encourage the EPA to revise this limit, with industry given we know of a number of projects that have community support are currently being frustrated by what appears to be an arbitrary number, projects that will create regional jobs and investment. WMRR also notes that prohibition on thermal energy within Greater Sydney may limit the application of this beneficial change (i.e.. It is not apparent how many industrial processes are using gas outside the Greater Sydney area that could become eligible sites).
Additional Recommendation:	NSW elected to develop its own EFW policy including emission limits and monitoring, whereas other Australian states have adopted European Industrial Emissions Directive 2010/75/EU (IED) and their associated measurement methods, as well as refer to the Best Available Techniques (BAT) Reference Document for Waste Incineration (BREF WI). The policy

Survey Questions - NSW Energy from Waste Regulatory Framework Review	
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Amend the emissions and air quality criteria to align with – rather than exceed – international best practice.	requires that EfW facilities meet both minimum air emission standards for industrial facilities contained in the <i>Protection of the Environment Operations (Clean Air) Regulation 2010 (the Clean Air Regulation)</i> and adopt international best practice. However, despite going it alone, the NSW policy still requires that there be a reference site yet there is no other jurisdiction to compare to. Quite simply this means that it is not possible to provide a reference site for a proposed technology. The NSW policy also includes bespoke emission levels with unique interval levels. In the European Union, EfW facilities are required to maintain strict emission limit values (ELVs) over a 24-hour period, with allowance for higher peaks in the short-term (half-hourly) monitoring period and confidence intervals. In comparison, the NSW EfW Policy sets stricter maximum ELVs over short averaging periods (hourly) and does not include longer-term (24-hourly) limits. Whilst this makes it impossible to compare technology, it also has the real possibility of resulting in poorer environmental outcomes by possibly leading to higher overall emissions in the environment in the longer term. Confidence intervals also play a vital role in assessing compliance with regulatory standards. By establishing these intervals around emission thresholds, it gives certainty if measured levels comply with acceptable limits by removing ambiguity of data from the measurement equipment and calibration tolerances. This information is crucial for identifying non-compliance instances, enforcing appropriate actions, and ensuring environmental protection. The use of confidence limits and quality assurance/quality control and clarity to both industry and regulator. It's not clear why standards proven in the EU and acceptable in Victoria and WA aren't suitable for NSW. This approach is counterproductive for encouraging investment into EfW in NSW and essentially stops EfW technology suppliers who have proven capability from operation in other states and countries from bringing their technology to NSW. It would make sense for NSW to adopt the European emission standards, which are documented in the EU's Industrial Emissions Directive (IED) and Best Available Technology (BAT) guidance. This would harmonise NSW standards with Europe - the major market for EfW plants - meaning that technology designed to comply with European standards could be brought to NSW. As noted in our cover letter, WMRR has written directly to Minister Sharpe articulating this important issue.

Survey Questions - NSW Energy from Waste Regulatory Framework Review	
Survey Question	WMRR Comment
Additional Recommendation: <i>Include endorsement for EfW by-product pathways particularly for APCr (Air Pollution Control residue) & IBAA within the revised policy</i>	Whilst this EfW framework review and the draft plan are focused on improving settings to facilitate the establishment of EfW infrastructure, essential to the feasibility of any EfW facility is the ability to forecast profit and loss during operation – and this necessarily requires consideration of markets for end products such as IBAA/ APCr. The regulatory pathway for these products is not yet clear in NSW. The current NSW Resource Recovery Framework prohibits re-use of any waste that is, or has been at any time prior to treatment, classified as ‘hazardous’ under the NSW Waste Classification Guidelines. This blanket prohibition unnecessarily restricts consideration of beneficial re-use of APCr from EfW facilities. APCr can be treated by existing proven methods to form a manufactured limestone product which is valuable as a lightweight aggregate replacement in building materials. Similarly, IBAA has been primarily used in the construction industry as a cost-effective, low-carbon aggregate alternative to natural aggregates, particularly for road construction. Pathways for IBAA are in development for Victoria, Queensland and WA, and WMRR would encourage NSW to keep pace. Furthermore it will be vital no matter whether these pathways are approved that as part of the Infrastructure plan that a suitable licensed landfill for these EfW residual materials is developed, noting that with these pathways approximately 95% of feedstock can be recovered.
Additional Recommendation: <i>Provide clarity on the variability of acceptable feedstocks</i>	The policy should recognise that it is impractical and unnecessary to exclude small incidental quantities of items such as batteries, light globes and electronics which may be placed in residual bins and contaminate a waste stream. Such input restrictions on residual waste (i.e. Table 4 in the policy allows “red bin” waste from source separated systems) are impractical as we see at present with the ongoing incidence of fires due to these items being placed in kerbside. The Regulation should focus on the facility outputs and their impact on human and environmental health. The onus is then on the operator to meet the output standards, regardless of the plant inputs. Further, this could be interpreted as requiring extensive and expensive pre-sorting and pre-treatment, which again seriously impacts the economic viability of these plants (no such requirement at landfill), does not align with EU best practice, with the BREF applying to facilities treating both hazardous and non-hazardous waste (including MSW) and fails to acknowledge there is in fact no market for material sorted at this stage in the process, and the most effective approach is separation at source and hence why we have a source separated bin systems. There needs to be a similar approach to

Survey Questions - NSW Energy from Waste Regulatory Framework Review	
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	acceptance criteria for residual as to landfill, given both the challenge and cost posed with getting contaminants out of existing collected waste streams and the lack of market! Furthermore, NSW's efforts towards the safe recovery of batteries and other hazardous products under the recently passed <i>Product Lifecycle Responsibility Act 2025</i> should further negate the need for such statements to be included in the policy.
Additional Recommendation: <i>Revise the policy to acknowledge the role of EfW as a key contributor to NSW's broader resource recovery, circularity and Net Zero goals.</i>	EfW is part of the system needed for NSW to transition to a safe circular economy and can be directly linked to the WaSM and the Net Zero Plan, which underscore the state's goals to: • Transition to a Circular Economy by 2041 - shifting from a "take-make-dispose" model to one focused on reuse, repair, re-manufacturing, and recycling reducing landfill disposal and supporting circular infrastructure that creates marketable end products. EfW clearly has a role to play in this transition to displace the use of landfills where no higher order recovery can be achieved. This view has been articulated by the draft Waste and Circular Infrastructure Plan, which is open for consultation at the time of this review. • Achieve an 80% average recovery rate of materials from all waste streams by 2030 – which necessarily involves improving end markets for recovered materials. This includes energy as well as innovative by- products of EfW such as incinerator Bottom Ash Aggregate and Air Pollution Control Residue (APCr) which have found markets in other jurisdictions to replace the use of virgin materials, particularly in construction. • Reach Net zero emissions by 2050 and a 50% emissions reduction by 2030 – which includes reducing methane emissions from landfills. In this regard, EfW solutions are preferable to increased landfill. It would be prudent for the policy to state the opportunity for EfW to decarbonise the waste sector.