



Environmental Defenders Office

16 May 2025

Energy from Waste Framework Review
NSW Environment Protection Authority
By email: energyfromwaste@epa.nsw.gov.au

Dear Environment Protection Authority,

NSW energy from waste framework review

EDO welcomes the opportunity to comment on proposed changes to the NSW energy from waste framework as set out in the [Energy from waste –options paper](#) (**Options Paper**).

EDO recognises that recovery of energy from waste can contribute to innovation in recycling and reprocessing technology, assist in reducing the amount of waste going to landfill, and may assist in reducing methane emissions from landfill. We are therefore not opposed to energy recovery from waste in principle, provided that it can be undertaken in a manner consistent with the principles of ecologically sustainable development (and in particular the precautionary principle), the right to a healthy environment, NSW's emissions reduction targets, and the waste hierarchy.

The waste hierarchy is set out at s 3(b) of the *Waste Avoidance and Resource Recovery Act 2001* (NSW) (**WARR Act**), which provides that an object of that Act is to:

ensure resource management options are considered against a hierarchy in the following order—

- (i) avoidance and reduction of waste,
- (ii) re-use of waste,
- (iii) recycling, processing or reprocessing waste,
- (iv) recovery of energy,
- (v) disposal.

Any amendments to the energy from waste framework must ensure that the framework furthers the waste hierarchy, meaning energy recovery from waste is only to be considered where higher order options (avoidance, reuse, recycling, processing or reprocessing) are not available. Caution must be exercised not to create a perverse incentive to create waste, jeopardising efforts to achieve a circular economy through waste avoidance, reuse, recycling, and processing and reprocessing waste.

Recommendation 1: Proposals for energy from waste facilities must not be permitted unless they can be undertaken in a manner consistent with the principles of ecologically sustainable development (and in particular the precautionary principle), the right to a healthy environment, NSW's emissions reduction targets, and the waste hierarchy.

T 1800 626 239

E sydney@edo.org.au

W edo.org.au

Suite 8.02, Level 8, 6 O'Connell Street Sydney, NSW 2000
ABN: 72 002 880 864

1. Changes to precincts

The Options Paper proposes changes to precincts in which the general prohibition on energy recovery from thermal treatment of waste does not apply.

EDO has no comment on the specific precincts under consideration. However, we emphasise that the construction and operation of any industrial facility, including facilities utilising energy from waste, must be consistent with the principles of ecologically sustainable development and the right to a healthy environment. Air and water pollution must be minimised to the lowest possible levels. Air pollution limits must be set that are consistent with levels safe for human health and the environment, international best practice, and considering the background quality of the regional airshed, as set out in the *Energy from Waste Report from the NSW Chief Scientist & Engineer* of May and November 2020.¹

Proposals for energy from waste facilities must be supported by best practice community engagement and consultation. Particular attention should be given to the rights and needs of overburdened people and communities, including First Nations Peoples.

Facilities must obtain a social licence to operate through meaningful, best practice, iterative community consultation. Proponents must be required to engage early and appropriately with relevant communities. Proposed technologies must be proved to be safe to human health and the environment, and consistent with the right to a healthy environment.²

EDO's [Principles for renewable energy transition projects](#) (**attached** to this letter for convenience) regarding public participation, environmental protection, and appropriate project design and location are relevant to facilities utilising energy from waste, notwithstanding that energy generated from waste is not itself renewable energy.

Recommendation 2: Proposals for energy from waste facilities must be supported by best practice community engagement and consultation, and must be safe for human health and the environment, consistent with the right to a healthy environment.

2. Changes to definition of thermal treatment

Clause 143 of the *Protection of the Environment Operations (General) Regulation 2022* (**POEO Regulation**) places a prohibition on the thermal treatment of waste if it involves or results in energy recovery from the waste, and one or more of the activities carried out at the premises are scheduled activities that require a licence (with exceptions to this prohibition set out at cl 144).

¹ Available at <https://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0019/357400/FINAL-Report_EFW-with-additional-advice.pdf>.

² See EDO's 2022 report *A Healthy Environment is a Human Right*, available at <<https://www.edo.org.au/publication/the-right-to-a-healthy-environment/>>.

Clause 142 of the POEO Regulation provides that that “thermal treatment” has the same meaning as in Sch 1, cl 50(1) of the *Protection of the Environment Operations Act 1997 (POEO Act)*,³ but does not include:

- (a) the incineration of waste for destruction or disposal,
- (b) autoclaving processes,
- (c) biological processes, including anaerobic digestion and composting,
- (d) thermal processes that do not involve a change in the chemical composition of the waste,
- (e) the thermal treatment of biosolids, contaminated soil or scrap metal,
- (f) the thermal treatment of waste plastic to produce plastic products, or inputs for plastic products, if at least 65% of the weight of the waste plastic thermally treated in a 12-month period is converted into plastic products or inputs for plastic products,
- (g) the use of waste-derived fuel by a vehicle.

The Options Paper proposes changes to this definition to further exempt the following processes from the general prohibition on energy recovery from the thermal treatment of waste:

- “processes that treat waste to produce ‘like for like’ products or inputs for those products, not only for plastic”; and
- “processes that make a product that has a clear environmental benefit in line with criteria specified in the regulation or guidelines”.

“Like-for-like”

Although the Options Paper notes that the current exception to the definition of thermal treatment relating to plastic at (f)⁴ may be too narrow, it does not specify other processes that are in contemplation. In order for the community and industry to provide meaningful feedback about this proposal, the EPA needs to provide greater transparency about the specific products, processes, or technologies it envisages this amendment might encompass.

In principle, we do not oppose changes to the definition of thermal treatment to facilitate a circular economy where “waste” inputs can be used as feedstock for products, and as a secondary benefit energy produced incidentally can be harnessed.

We note that the prohibition at cl 143 is on the thermal treatment of waste *if it involves or results in energy recovery from the waste* and one or more of the activities carried out at the premises are scheduled activities that require a licence. If the thermal treatment of waste does not involve energy recovery from that treatment, the cl 143 prohibition is not enlivened with respect to the activity. That is, the cl 143 prohibition does not *in itself* prohibit “other types of waste to be thermally treated to produce new products or inputs for those products”⁵ if there is not also energy recovery. However we recognise that it is preferable that any energy generated incidentally be able to be recovered and used, rather than wasted.

³ **thermal treatment** means the processing of wastes by burning, incineration, thermal oxidation, gasification, pyrolysis, plasma or other thermal treatment processes.

⁴ “(f) the thermal treatment of waste plastic to produce plastic products, or inputs for plastic products, if at least 65% of the weight of the waste plastic thermally treated in a 12-month period is converted into plastic products or inputs for plastic products”.

⁵ Options Paper, p 5.

If the intent of the “like for like” option proposed by the Options Paper is as above, to provide for a recycling or processing/reprocessing processes, with energy generation incidental to that primary process, any exception to the general prohibition should include a maximum percentage of energy recovery or minimum percentage of product produced (as is currently specified for plastics) that is permissible. This would ensure that the recycling or resource recovery process remained the primary activity (rather than the energy recovery), thus ensuring the resource management hierarchy set out at s 3(b) of the WARR Act is implemented.

Recommendation 3: The EPA should provide transparency on the specific technologies, processes, or materials envisaged to fall under a like-for-like exclusion, and provide an opportunity for informed community feedback on these before making any changes.

Recommendation 4: Ensure that any like-for-like exclusion provides only for the recovery of energy as incidental to the production of products from the waste by, for example, prescribing a maximum percentage of energy recovery or minimum percentage of product produced.

“Clear environmental benefit”

It is difficult to comment on the proposed additional exception of “clear environmental benefit” in the absence of more specific details about the sorts of products and processes envisaged as falling within the exception or the proposed criteria for determining whether the process has a clear environmental benefit or not.

The proposal at present is very broad and could conceivably be used by proponents to try to argue for the use of native forest material or other wood (thereby incentivising deforestation), on the erroneous basis that this would have an “environmental benefit” by displacing fossil fuels. Native forest biomass burning can be more emissive than coal and increases greenhouse gas emissions in the electricity sector, and has a significant and detrimental impact on biodiversity.⁶ This would be a perverse outcome and any proposed exception must be drafted so as to explicitly exclude this possibility.

In our view, appropriate criteria that must be met for a clear environmental benefit should be included in the changes, and would include (but not be limited to):

- has a net negative greenhouse gas emissions profile compared to the alternative fuel;
- complies with the resource management hierarchy set out at s 3(b) of the WARR Act (ie, of the waste feedstock material cannot feasibly be used for a higher purpose);
- does not involve the thermal treatment of wood waste, forestry or sawmilling residue or paper pulp (**‘woody waste’**) (including, but not limited to native forest bio-material); and

⁶ See, for example: Brendan Mackey, David Lindenmayer and Heather Keith, *Burning Forest Biomass for Energy: Not a Source of Clean Energy and Harmful to Forest Ecosystem Integrity* (Griffith Climate Action Beacon Policy Discussion Paper, February 2022) 3-4; John Sterman et al, ‘Does Wood Bioenergy Help or Harm the Environment?’ (2022) 78(3) *Bulletin of the Atomic Scientists* 128, 130; Legislative Assembly of New South Wales Committee on Environment and Planning, *Sustainability of Energy Supply and Resources in New South Wales* (Report 2/57, August 2021) 16.

- the energy from waste technology is to be safe for human health and the environment.

Recommendation 5: Explicit criteria must be prescribed for ‘clear environmental benefit’, including with respect to greenhouse gas emissions, safety for human health and the environment, and to explicitly exclude the use of native forest bio-material or other woody waste for energy.

3. Change to exceptions for powering onsite industrial or manufacturing processes

The Options Paper proposes amendments to “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”. It is not clear whether the proposal is to simply amend the definition of “less environmentally sound fuel” to include liquefied petroleum gas, natural gas, and liquefied natural gas (**‘gas fuel’**), or whether the proposal seeks to expand the exception in other ways as well.

In our view to the greatest extent possible “less environmentally sound fuel”, including gas fuel, should be replaced by renewable energy sources, rather than thermally treated waste or other highly polluting energy sources.

Any case-by-case assessment of a proposal to replace gas fuel with thermally treated waste in on site processes must ensure that the proposal would genuinely achieve a more environmentally sound outcome (including human health outcomes). Factors to consider in making this assessment should be explicitly set out and include:

- that the technology has been proven to be safe to human health and the environment;
- that the project complies with international best available technology and controls;
- that emissions to air, water, and land are minimised, and do not exceed international best practice;
- that the proposal will result in negative or neutral net greenhouse gas emissions (compared to the process using gas fuel);
- that the proposal applies the waste hierarchy (that is, that waste inputs are residual waste that cannot be reused or recycled); and
- that the proposal does not involve the thermal treatment of wood waste or paper pulp (including, but not limited to native forest bio-material).

Decisions in relation to such proposals must be required to comply with the principles of ecologically sustainable development, and in particular the precautionary principle - where there are threats of serious or irreversible damage to the environment, lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation.

Recommendation 6: Any case-by-case assessment of a proposal to replace gas fuel with thermally treated waste in on site processes must ensure that the proposal would genuinely achieve a more environmentally sound outcome against specified criteria (including human health, environmental, life-cycle greenhouse gas emissions, and not involving woody waste especially native forest bio-material).

4. Other options the NSW Government should be considering for changes to the energy from waste framework

Prohibit the use of native forest bio-material or other wood waste for energy

EDO **strongly recommends** that the energy from waste framework be amended to explicitly prohibit the thermal treatment of any wood waste, forestry or sawmilling residue or organic residue from paper pulp materials (**‘woody waste’**) for energy recovery, and in particular prohibit *without exception* the use of native forest bio-material for that purpose. Allowing the thermal treatment of native forest bio-material and woody waste for energy removes carbon sinks, encourages native forest logging and other deforestation, has impacts on biodiversity, contributes to particulate pollution, and emits substantial GHG pollution.

This amendment should be given effect by:

- Enlivening the prohibition on the use of native forest bio-material to generate electricity at cl 139 of the POEO Regulation by:
 - amending the definition of ‘native forest bio-material’ at cl 138 of the POEO Regulation to remove all exceptions (ie (a)-(c)); and
 - repealing cl 140; and
- Amending the list of “eligible waste fuels” in the *NSW Energy from Waste Policy Statement*⁷ and *Eligible Waste Fuel Guidelines*⁸ to remove the following materials from the list:
 - forestry and sawmilling residues
 - uncontaminated wood waste
 - organic residues from virgin paper pulp activities.

Recommendation 7: Amend the POEO Regulation and list of eligible waste fuels to prohibit the burning of any native forest bio-material or woody waste for electricity.

Summary of recommendations

1. Proposals for energy from waste facilities must not be permitted unless they can be undertaken in a manner consistent with the principles of ecologically sustainable development (and in particular the precautionary principle), the right to a healthy environment, NSW’s emissions reduction targets, and the waste hierarchy.
2. Proposals for energy from waste facilities must be supported by best practice community engagement and consultation, and must be safe for human health and the environment, consistent with the right to a healthy environment.
3. The EPA should provide transparency on the specific technologies, processes, or materials envisaged to fall under a like-for-like exclusion, and provide an opportunity for informed community feedback on these before making any changes.

⁷ Available at <https://www.epa.nsw.gov.au/sites/default/files/21p2938-energy-from-waste-policy-statement.pdf>

⁸ Available at <https://www.epa.nsw.gov.au/Publications/waste/22p3822-Eligible-Waste-Fuels-Guidelines>

4. Ensure that any like-for-like exclusion provides only for the recovery of energy as incidental to the production of products from the waste by, for example, prescribing a maximum percentage of energy recovery or minimum percentage of product produced.
5. Explicit criteria must be prescribed for 'clear environmental benefit', including with respect to greenhouse gas emissions, safety for human health and the environment, and to explicitly exclude the use of native forest bio-material or other woody waste for energy.
6. Any case-by-case assessment of a proposal to replace gas fuel with thermally treated waste in on site processes must ensure that the proposal would genuinely achieve a more environmentally sound outcome against specified criteria (including human health, environmental, life-cycle greenhouse gas emissions, and not involving woody waste especially native forest bio-material).
7. Amend the POEO Regulation and list of eligible waste fuels to prohibit the burning of any native forest bio-material or woody waste for electricity.

Please do not hesitate to contact us if you require any further information on 1800 626 239 or rachael.chick@edo.org.au.

Yours sincerely,

Environmental Defenders Office



Rachael Chick
Senior Solicitor