



Environment Protection Authority

Resource Recovery Innovation Pathway – Innovation Position Statement

November 2024



A vertical decorative strip on the left side of the page featuring intricate Aboriginal artwork. It includes a large circular motif with a central dot and radiating lines, a section with a grid of small dots, and a bottom section with wavy, flame-like patterns. The artwork is rendered in a light blue-grey tone against a white background.

Acknowledgement of Country

The NSW Environment Protection Authority acknowledges the Traditional Custodians of the land on which we live and work, honours the ancestors and the Elders both past and present and extends that respect to all Aboriginal people.

We recognise Aboriginal peoples' spiritual and cultural connection and inherent right to protect the land, waters, skies and natural resources of NSW. This connection goes deep and has since the Dreaming.

We also acknowledge our Aboriginal and Torres Strait Islander employees who are an integral part of our diverse workforce and recognise the knowledge embedded forever in Aboriginal and Torres Strait Islander custodianship of Country and culture.

Aboriginal artwork by Worimi artist Gerard Black

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Draft innovation position statement

The New South Wales Environment Protection Authority's innovation pathway supports credible science-based technologies and processes that enhance resource recovery and the NSW circular economy, and aims to help meet government-set waste diversion targets.

Definition of innovation for the innovation pathway

For the purposes of this innovation pathway, innovation is defined as the development, scaling, demonstration, and/or piloting of resource recovery ideas that result in a product or process that is new or unique and adds value to the circular economy.

Innovation pathway criteria

The innovation pathway is specifically designed for proposals that fall under the EPA's definition of innovation. Applications for the innovation pathway will be evaluated on a case-by-case basis, using the EPA's innovation pathway criteria. Generally, to be considered for the innovation pathway, a project must:

- be designed to test the development, scaling, demonstration, and/or piloting of a product or process
- be considered new to NSW
- align with the EPA's definition of innovation
- not be covered by existing resource recovery guidelines and approvals (including variations of existing EPA processes i.e. existing resource recovery orders and exemptions)
- aim to divert materials away from landfill and represents a higher-order use of the material than current uses. (See the EPA's webpage on the [waste hierarchy](#).)
- be time- and volume-limited
- be focused on developing new and improved approaches to resource recovery that achieve circular economy outcomes, contribute to resource recovery targets or align with other NSW EPA strategic targets
- have risk mitigation measures to protect human health and the environment
- allow for public sharing of knowledge, information and data resulting from the trial, to deliver public value
- be completed and submitted by a 'fit and proper person', and satisfy other requirements to support credibility, including qualifications or financial assurance.

Support for new approaches, higher-order reuse and improved environmental outcomes

The pathway is suitable for smaller, time-limited projects that are not operating at a commercial level. Participants can trial, test and upscale their new ideas (e.g. technology, processes and product specifications) under controlled conditions. A suite of innovation support actions will guide proponents along the innovation pathway, helping them to obtain the information they will need to satisfy environmental assessment and regulatory requirements as the project is scaled up.

Projects that don't meet the criteria for the pathway may still be able to proceed using existing mechanisms, such as the resource recovery order and exemption (RROE) framework or EPA licensing.

Energy from waste (EfW) falls outside of the scope of the pathway. The scope for thermal treatment will be addressed in the final design of the proposed **innovation trial licence**. The appendix gives examples of activities that are in and out of scope for the innovation pathway.

Encouraging stewardship and collaboration between commercial and research organisations

We will prioritise support for innovation projects that use collaboration to minimise risk and improve a project's chance of success. Innovators, research organisations and industry can benefit from shared knowledge, skills, experience and resources to enhance project planning and quality. As an environmental steward, the EPA supports scientific expertise and collaboration.

Environmental considerations and a balanced approach to trials

We recognise that not all trials succeed. Risk and opportunity must be balanced when investigating innovative ideas. The innovation pathway allows room for trial and error while managing environmental risks.

We will provide support to help proponents meet project requirements, such as proof of performance testing and trialling of materials or processes. Support is aimed at building capability and filling data gaps.

Time- and volume-limited trials are used to reduce the risks posed by innovative projects. We will evaluate information proponents provide about environmental risks, including the pollution that could be caused, impacts such pollution might have, and how it could reasonably be mitigated. Support will not be offered to projects with risks that the EPA considers unacceptable.

Public sharing of knowledge, information and data to encourage innovation

Transparent reporting of trial data, and data sharing, will be encouraged to drive public benefits and further innovation. We will consider if not disclosing a project's information may impede

transparency or industry development. We will consider factors such as the information's relevance to the project's goals, and whether aggregated data could be published to give insights to industry and for regulation.

Public data-sharing requirements will be decided on a case-by-case basis. We invite you to comment on the minimum level of data sharing that will be expected of innovation pathway participants, to understand any concerns.

We will comply with our obligation not to disclose information that might be considered a 'commercial secret' under section 319 of the POEO act. However, there is an exception in s 319 whereby the EPA can publish this information if it is given consent by the stakeholder.

Different types of data will differ in how they can be shared: for example 'public-shared' data differs from IP-oriented data (which remains private) and emissions data (which is to be shared through a database). We expect that data collected for the innovation pathway will be broadly similar to information gathered as part of the Environmental Impact Statement (EIS) process of planning approval, which becomes public also.

Alignment with NSW Government objectives

Our innovation pathway aligns with NSW Government objectives. It encourages market development for recovered resources and recycled materials through initiatives such as the Plastics Research Program, Net Zero Manufacturing Initiative (NZMI), Boosting Business Innovation Program (BBIP), Carbon Recycling and Abatement Fund (CRAF), Circular Innovation Fund (CIF) and Circular Economy Marketplace (CEM).

Supporting tools

These tools can help to assess whether a project meets the innovation pathway criteria.

- *Guide to Planning and Designing Trials in NSW*: provides guidance on how to undertake a trial, including data collection and trial processes.
- Technology readiness level (TRL): indicates the maturity level of a specific technology or process.
- Resource recovery orders and exemptions: some land application of recovered resources may already be considered standard in NSW, and therefore outside the innovation pathway scope.
- *Protection of the Environment Operations Act 1997*: key legislation administered by the EPA, including Schedule 1 – Scheduled activities and Section 83 – Fit and proper persons.
- EPA's Guide to licensing: details the requirements for progressing to an Environment Protection Licence (EPL), including obligations even if you are not required to hold an EPL.
- Energy recovery facilities: outlines the NSW Government's Energy from Waste framework.

Appendix: Examples of activities that are in and out of scope for the innovation pathway

Scope condition	Activity	Description
Out of scope	Order and exemption	Application of waste to land, use of waste as fuel, or waste in thermal treatment, where the proponent is already licensed for the process, or is covered by the RROE framework.
	Environment Protection Licence (EPL)	Project activities that would otherwise be licensed under the POEO Act and are not considered innovative.
In scope	Innovation on existing licensed premises	<p>An existing EPL holder wants to trial changes to their process or use waste inputs that differ from what is currently approved on their EPL. The proponent does not have a research partner and is not interested in research collaborations.</p> <p>Trial conducted through special conditions. If trial successful, licence is varied.</p>
	Collaboration on existing licensed premises	<p>Proponent is licensed and wants to innovate within licensed activity for environmental benefit. Has a research partner (idea may have come from research partner – lab tested but ready for real-world testing).</p> <p>Trial conducted through special conditions, or an RROE trial. If trial successful, licence is varied.</p>
	Collaboration towards new licence for innovative project	<p>Proponent is not licensed but is seeking to scale their project towards a potential licence threshold.</p> <p>The proponent must be undertaking an activity deemed innovative and ‘circular’ by the EPA. Projects cannot fall under ‘business as usual’ processes and must not have existing examples in NSW.</p>
	Innovation trial licence	Novel project proposal to replace ‘business as usual’ processes that clearly links to EPA priorities and is likely to require a licence. The proposal has not presented unreasonable risk in small-scale trials below licensing thresholds but is not yet ready for commercial scale.



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