

Energy from waste

New South Wales is transitioning to a circular economy over the next 20 years. This means we will continue to minimise what we throw away, and use and reuse our resources efficiently, making them as productive as possible.

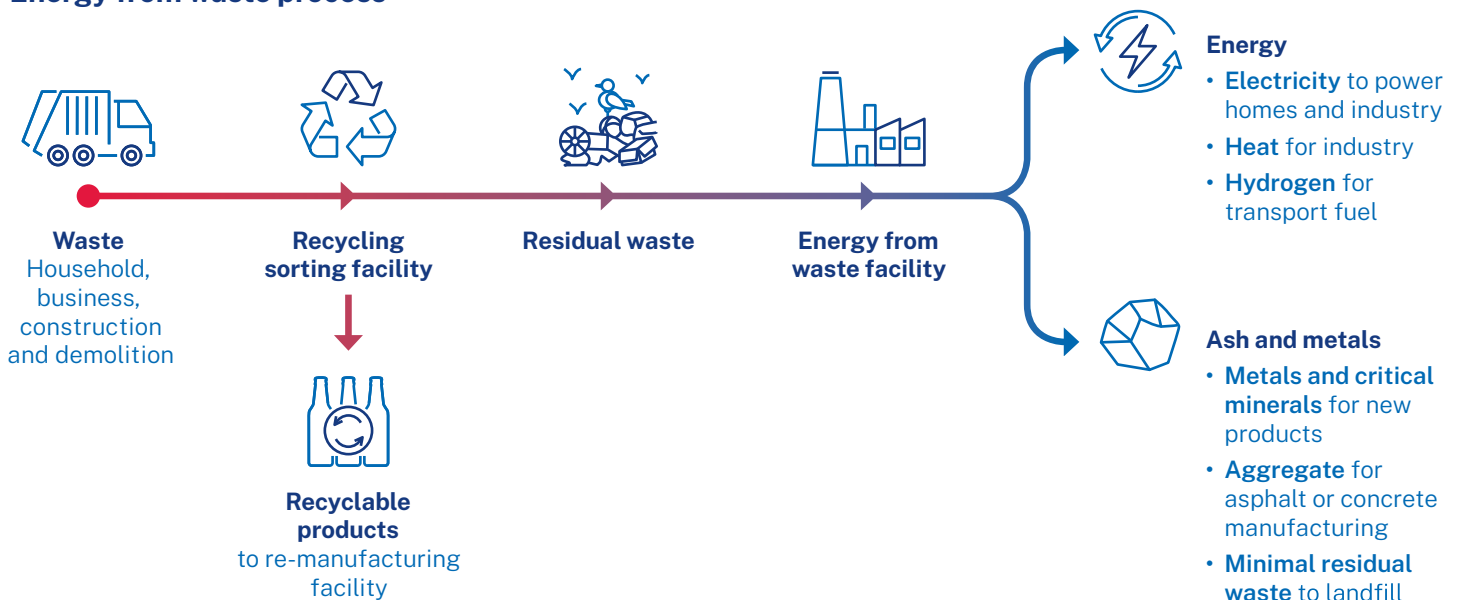
We will end up with less waste, less emissions and less harm to our environment while boosting innovation, to help drive our economy and create more jobs.

To achieve this, we need to have the services and infrastructure in place to deal with our waste safely and efficiently, to ensure it does not become a problem for future generations. We also need to work together with consumers, industries, and other governments to make the circular economy a reality.

Energy from waste is an effective way to manage residual waste that cannot be recycled. This waste is diverted from landfill and used to create energy, delivering positive outcomes for the community and the environment.

The NSW Government supports energy from waste in the right locations and where it is used to manage genuine residual waste – not as an alternative to waste reduction or recycling.

Energy from waste process



What is energy from waste?

Energy from waste is a process where residual waste (that cannot be recycled) is converted into energy through a biological or a thermal process to create heat, electricity or gas/liquid fuels.

The energy from waste process produces some waste, as ash, which may then be reused for road construction purposes and recovering metals for recycling.

What is residual waste?

Residual waste is the waste left over after all recyclable or re-usable material has been removed following a resource recovery process or source separation collection system. Residual waste is the waste that is currently sent to landfill.

Fast facts



Proven technology

Globally over 2,000 energy plants operating



Negative air pressure

The facility is designed so air pollutants and odours can't escape



Waste volume reduction

An energy from waste facility combusts waste under controlled conditions that reduce the waste volume by about 90 per cent.

What about pollution? Is it safe?

The NSW Environment Protection Authority (EPA) Energy from Waste Policy Statement requires proven technology, proven operator and a proven waste stream and provides some of the strictest requirements in the world for protection of human health. Any energy from waste facility in NSW would be required to have an Environment Protection Licence (EPL) that sets maximum emission limits in emissions from the facility, that cannot be exceeded. These emission limits are set under the Energy from Waste Policy.

Modern pollution control equipment for industrial plants, such as energy from waste facilities, use a variety of measures to control and measure particulate and other gaseous emissions.

For example, using the best available controls, as required by the approval conditions, can see 99 per cent or more of fine particulates removed from emissions.^{a,b}

Ongoing sampling, monitoring and reporting of pollutants in emissions will be a condition of approval for any energy from waste facility in NSW. This will ensure best practice in health risk management well into the future of operations.

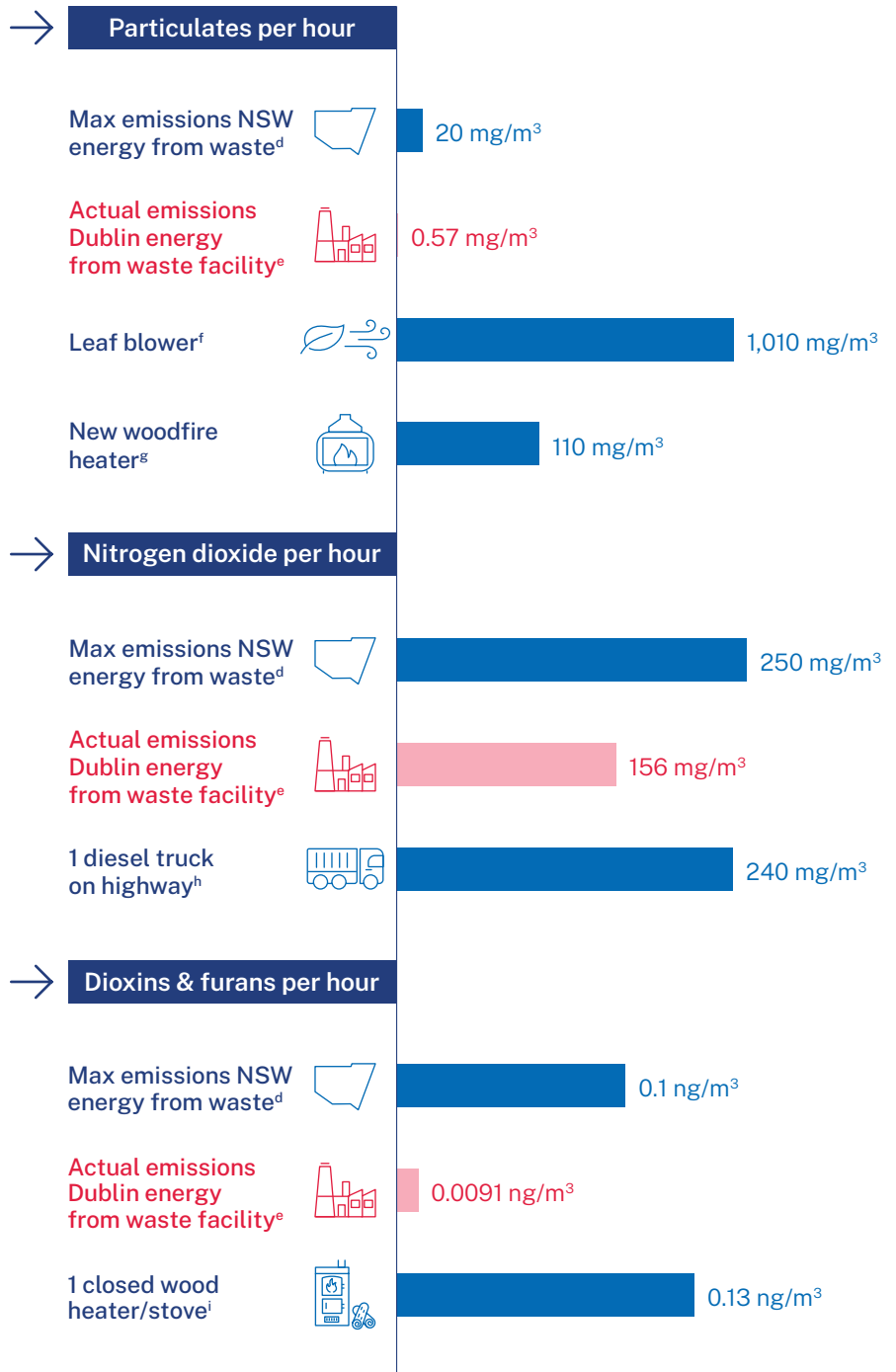
Improved technology means lower emissions

The technology used to control or prevent emissions from energy from waste facilities has improved significantly over the past 25 years, in line with the enforcement of increasingly strict emissions standards worldwide.

For instance, Japan has over 1,000 energy from waste facilities, where the technological improvements and emission controls saw a 99 per cent reduction in dioxin emissions from their facilities between 1997 and 2010.^c

Emissions from proposed NSW energy from waste facilities are required to be no greater than the emissions standards set in the NSW EPA Energy from Waste Policy Statement, that meet and exceed world's best practice.

Emission comparisons



References

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