

First standalone, large-scale waste-to-energy plant set to open in Rockingham south of Perth

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Unlike its Copenhagen counterpart, Australia's first standalone, large-scale waste-to-energy plant won't have a ski slope on its roof.

Key points:

- Waste-to-energy plants burn rubbish to generate energy
- One incinerator is due to open in early 2024
- The Greens say waste-to-energy is an easy option but not the right one

Neither will it resemble Disney World, like [Osaka's waste incinerator, Maishima](#).

But the East Rockingham waste-to-energy plant, nearing completion south of Perth, is already sparking debate about how broadly this technology should be deployed in Australia's war on waste.

While everyone agrees we need to be recycling more and generating less waste, proponents of waste-to-energy argue burning rubbish has an important back-up role.

For Jason Pugh from East Rockingham Waste to Energy, the technology ticks two major boxes — diverting huge quantities of waste from landfill, and powering homes in the process.

Mr Pugh is the chief executive of East Rockingham Waste to Energy. (ABC News: Claire Moodie)

“When we put waste into landfill, it emits methane and methane is 28 times more damaging as a greenhouse gas than carbon dioxide,” Mr Pugh said.

“We generate carbon dioxide through this energy recovery, but we emit zero methane, which is really important.

“It's also quite a significant power station in its own right, so we're offsetting fossil fuel for energy production as well.

“We'll save about 380,000 tonnes of carbon every year that this plant operates.”

Power for 80,000 homes

Together with another plant being built by Avertas Energy, in Kwinana south of Perth, these two facilities will process about 700,000 tonnes of waste a year.

[Global recycling lessons](#)

[South Korea, Sweden and the United Kingdom are innovating in their recycling industries, leaving Australia to play catch up.](#)

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This includes about two-thirds of the rubbish from homes in the Perth and Peel areas.

They'll feed the electricity they generate into the state's main grid, enough to power more than 80,000 homes.

Mr Pugh has been with the East Rockingham project since its inception about 10 years ago.

It has been a long haul with huge disruptions and logistical problems due to the COVID pandemic.

But, when it finally opens in the first quarter of 2024, it's expected supporters and opponents of other facilities currently in the pipeline in Victoria and New South Wales will be watching closely.

The locations include a plant at Lara, north-east of Geelong that would provide electricity for up to 50,000 homes, and a similar sized facility in an industrial park north of Canberra.

Gayle Sloan from the Waste Management and Resource Recovery Association believes the technology would be vital if Australia was going to reach its target of recovering 80 per cent of its waste by 2030.

Ms Sloan supports the technology's use.(ABC News: Marcus Stimson)

"If we get to nirvana and zero waste, where everything could be recycled, arguably we wouldn't need landfill or energy recovery," Ms Sloan said.

"However, we're a really long way away from that point."

According to the latest figures from the National Waste Report, Australia's recycling rate remains stagnant at about 60 per cent, while the amount of waste we are producing is increasing.

Not the preferred solution

Other countries have been burning waste on a large scale for decades, some plants becoming tourist attractions.

East Rockingham's plant would use the same thermal waste treatment technology as facilities already operating in London and suburban Paris.

But is waste-to-energy the perfect solution, a “transitional” step towards more recycling, or an easy way out?

According to the so-called [“waste hierarchy”](#), which Australian state and territory governments use to guide policy, it’s not the preferred option.

Recovering energy is below recycling, reusing waste and avoiding and reducing waste, according to the diagram.

Opponents of waste to energy are concerned it would lead to less investment in recycling initiatives like food organics and garden organics (FOGO), the scheme designed to take household food and garden waste and turn it into compost.

FOGO operates in about a third of Australian councils.

Greens Senator Peter Whish-Wilson said waste-to-energy was not a solution to waste or pollution problems.

“The bigger picture here is that we should be looking at our consumption, how we consume plastics and packaging and eliminating waste from our waste stream,” he said.

The senator said he feared the plants would encourage plastic consumption and be seen as an easy way forward.

“It is actually surrender,” Senator Whish-Wilson said.

“It’s the total opposite of what we need to be doing right now and that is knuckling down, investing in new technologies and changing the way we live.”

A 'net' in the system

Jason Pugh agreed it was important that Australia does not lose key messages about reducing and recycling but believes waste-to-energy is the “net that sits at the bottom”.

He said about half of the councils the East Rockingham plant would service already had the FOGO system.

“And, we expect the balance of our customers to move over to FOGO in the early stages of the project,” he said.



The East Rockingham waste-to-energy facility is expected to open in the first quarter of next year in an industrial precinct.(ABC News: Aran Hart)

“We’re very supportive of FOGO and we’ve designed the plant to manage that shift.”

Mr Pugh said the plant itself would have a recycling component and expected 7,000 tonnes of metals to be recovered each year for re-use.

The facility would also operate an education program, focusing not on waste-to-energy, but on how people can reduce, recycle and re-use it.