



Waste to Energy – Frequently Asked Questions

What is Waste to Energy?

Waste to energy is a proven technology that recovers the energy from waste that can't be recycled or composted. For households, this is the contents of your general waste (red lidded) bin. The waste is heated to very high temperatures (at least 850°C) in a controlled process. The energy extracted is used to generate base load electricity for the South West Interconnecting System (SWIS).

There are over 450 waste to energy plants operating in Europe including some near the centre of cities such as London, Paris and Copenhagen, and in residential areas.

Do waste to energy plants cause pollution?

Modern Waste to Energy plants use filters and scrubbers to prevent air pollution. The Western Australian Waste to Energy plants will be continuously monitored and will operate within strict limits set by the Department of Water and Environmental Regulation (DWER). These limits match the European standards which are among the most stringent in the world.

Why is WMRC sending general waste to a Waste to Energy plant?

For waste which cannot be recycled or composted there are only two alternatives – disposal in landfill or Waste to Energy. Although some electricity is generated at modern landfill sites from methane from the slow breakdown of organic material, waste to energy plants generate electricity far more efficiently.

In addition, a \$70 per tonne State Government levy applies to landfilled waste. The waste levy effectively doubles the cost of landfill disposal. The waste levy is likely to keep increasing, incentivising waste reduction, recycling and energy recovery for remaining residual wastes.

What's the difference between Waste to Energy and the old incinerators?

Unlike the waste incinerators used in the early twentieth century, modern Waste to Energy plants are especially designed to recover energy safely and efficiently. They work at a very high temperatures to exacting pollution control standards set by the [Environmental Protection Authority](#) within the Department of Water and Environmental Regulation (DWER).

Is it still worth recycling?

Recycling remains an important component of the waste management hierarchy. Separating the five main recyclable materials (paper and cardboard, cans, glass and plastic containers) for recycling gives them a second life and reduces the demand for virgin materials. If you want more recycling information check out the [Recycle Right website](#).

WMRC Member Councils

Town of Claremont | Town of Cottesloe | Town of Mosman Park | City of Subiaco | Shire of Peppermint Grove
with Town of Cambridge

It is also important to separate out organic materials from the residual waste sent for energy recovery. Organic waste is processed into mulch and compost to improve our sandy soils for improving horticultural and agricultural land as well as for households, local government, and civil works.

Is Waste to Energy better than landfill?

As waste to energy treatment is specifically designed to recover energy from non-recyclable waste such as the contents of your general waste bin, it is a better form of disposal than landfill. The energy generated is exported to the power grid as non-intermittent green energy. We anticipate it will prove cheaper than landfill which attracts a waste levy currently set at \$70 per tonne (2020-21) and likely to rise sharply in the future.

What happens to the ash from the process?

The ash has 10% of the volume of the original waste, is inert and contains metals which can be recovered and recycled. The remainder of the ash can be used in the manufacture of construction materials.

Is the ash from a Waste to Energy plant toxic?

The ash from combustion at the plant is not toxic. There may be a small amount of toxic material generated in the flue gas treatment process. This will be carefully disposed of at an appropriate facility. Waste to energy processes mean that it is even more important to ensure that household hazardous wastes are not put in any of your kerbside bins but disposed of responsibly at collection centres. The [West Metro Recycling Centre](#) operates a free household hazardous waste collection centre and you can find [details of others here](#).

How does Waste to Energy relate to FOGO?

Turning household food and garden organic (FOGO) waste collected into compost to promote the healthy growth of food and other plants in our low nutrient sandy soils is environmentally preferable to recovering energy from it. Waste to Energy is only intended to be used for residual materials which can't be recycled or composted. The [State Waste Strategy 2030](#) includes a target for all Perth and Peel Councils to have a three bin FOGO collection system by 2025 and also to recover energy only from residual waste. Residual waste is that which goes in your general waste (red lidded) bin. WMRC will only consign residual waste to Waste to Energy.

Is WMRC committing a set amount of waste to the Waste to Energy plants?

No. Our contract with the successful Waste to Energy plant will be only on a 'waste arising' basis, with no minimum commitment. This leaves us free to help the community minimise waste that ends up in general waste bins. It also presents no barrier to rolling out a FOGO waste collection service with our councils as soon as is practical. This is all aligned with the [State Waste Strategy 2030](#).

Is it still worth taking hazardous and problematic waste like batteries, chemicals, and polystyrene to the West Metro Recycling Centre?

It is more important than ever! Household hazardous materials are not accepted by Waste to Energy plants. Such materials should never go into your general waste bin. Details of what you can take to the [West Metro Recycling Centre](#) for responsible processing or disposal are here.

Will this increase my rates?

One of the reasons for setting up a waste to energy contract before either of the plants are completed or accepting waste is that we can negotiate prices that are comparable with current landfill disposal costs. This will be cheaper than landfill in the future as increases in the waste levy forces up landfill charges. We strive to provide value-for-money, environmentally responsible waste management for our Member Councils and their residents. Please contact your Council if you have any queries on their budgeting and rate setting processes.

Where can I find out more?

The WMRC runs regular workshops and webinars on all things [waste and waste reduction](#) and we publish a [monthly newsletter](#). We also have active Facebook [WMRC Wastewatchers](#) and Instagram [@wmrc_wastewatchers](#) and [@westmetrorecyclingcentre](#) communities. And for specific queries you can contact us on the Recycling Hotline 9384 6711.

Visit us at the West Metro Recycling Centre!

The WMRC operates the [West Metro Recycling Centre](#) in Shenton Park. Most of our comprehensive range of recycling services are free to residents of our five Member Councils and Participating Council the Town of Cambridge. We operate the 4th most productive Household Hazardous Waste and E-Waste services in Western Australia. We're open to the public 7 days a week. A full range of our community recycling services is [here](#). While you're there, collect a load of [free mulch](#) we make available to residents as part of our commitment to creating a circular economy and a way of saying thanks to our many environmentally responsible customers.