

About advanced waste processing



Overview

Advanced waste processing solutions are proven technologies that make better use of household waste than burying it in the ground.

Advanced waste processing facilities are being used safely and reliably around the world, including in the United Kingdom (UK), Europe, Asia and North America.

Part of a total solution

Advanced waste processing solutions have great potential as part of a total approach to managing the waste we produce.

Alongside recycling, and separating food and green waste for composting, advanced waste processing is just a smarter solution for household waste than burying it in the ground.

Best outcomes will be achieved by minimising our waste, reusing or recycling, and then what is left over can go to advanced waste processing.





Used reliably and safely around the world

Best practice facilities have strong safety track records and are characterised by:

- proven and efficient technology
- strict emission controls and safety standards
- appropriate locations and a design that is complementary to the surrounding area
- excellent transport links
- ongoing and effective community engagement.

Strict safety controls

Modern waste to energy facilities use sophisticated emission control equipment to minimise pollution.

The newest facilities in Europe and North America are designed to meet strict emissions standards. Facilities have real-time emission monitoring and they are inspected and tested regularly to ensure safety standards are achieved, and many outperform standards.

All large industrial facilities must manage the risks of pollution. The Environment Protection Authority (EPA) Victoria has strict standards for new waste to energy facilities to protect people's health and the environment.

Reducing reliance on landfill in the European Union

In 2017, there were:

492 waste to energy facilities in Europe.

96 million tonnes of waste were processed.

Only 23% of household waste from 28 European Union countries went to landfill.

Germany, the Netherlands, Austria, Norway, Belgium, Denmark, Sweden and Finland sent **less than 4%** of waste to landfill using a combination of recycling, composting and waste to energy.

Source: www.cewep.com

How facilities work

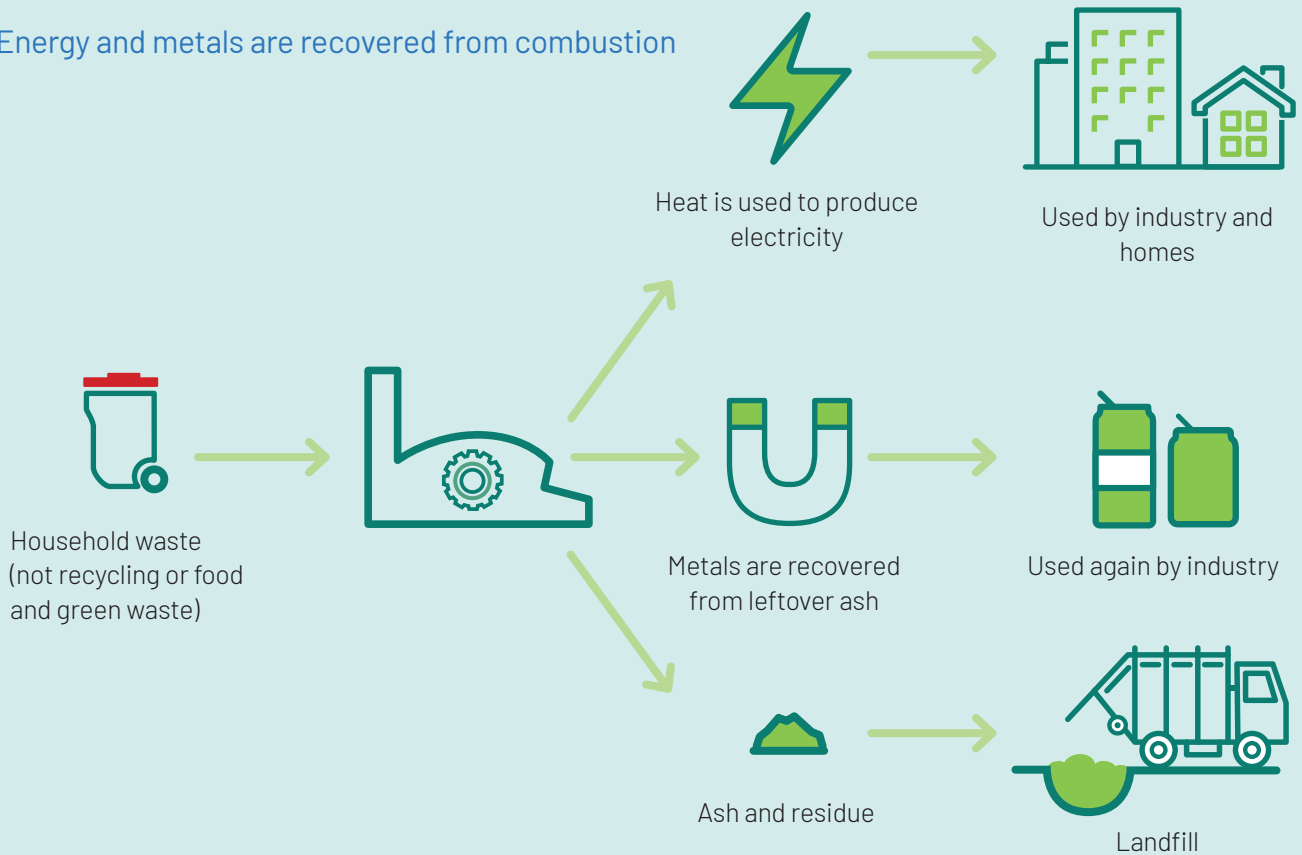
Waste to energy using combustion

Waste is burned at controlled temperatures in an enclosed furnace to produce heat. The heat is used to create steam that turns a turbine to produce electricity.

Valuable metals, like steel and aluminium, are extracted from the ash that is left over. Modern facilities use sophisticated air pollution control systems to minimise emissions and meet stringent air quality standards.

Ash and residues are sent to landfill. Combustion is the most commonly used technology overseas to recover materials and produce energy from waste.

Energy and metals are recovered from combustion



Case studies from overseas

Here are just a few examples of advanced waste processing facilities from the UK and Europe



96% less waste to landfill

Sevenside energy recovery centre, UK

Since 2016, Sevenside in South Gloucestershire has processed 350,000 tonnes of waste a year from six boroughs in West London. This combustion facility allows the West London Waste Authority to send 96% less waste to landfill.



Growing greenhouse tomatoes in Toulouse

Econotre eco-pole heating network, France

Near Toulouse, 6,000 tonnes of tomatoes are produced each year in greenhouses that are heated with steam from a nearby combustion facility. The facility uses household waste from surrounding municipalities and produces enough electricity for 17,700 households.



Tourist attraction in the heart of Vienna

Spittelau waste to energy facility, Austria

If you visit Vienna, you can take a guided tour of this eye catching facility that processes 250,000 tonnes of household waste every year to produce electricity, heat and scrap iron. The tour provides an opportunity for visitors to learn how the facility works.



The benefits of advanced waste processing



A lot less waste is sent to landfill



Valuable materials can be recovered from household waste



Waste can be transformed into electricity to power homes and businesses



Reduced greenhouse gas emissions from landfill



Less smell, litter and pests at landfills, which is better for the communities that live nearby



Less waste will be transported across Melbourne to landfills