



Environment
Agency

Energy from waste plants

What you need to know



We are the Environment Agency.

It is our job to look after your environment and make it **a better place** not just for you but for the future generations that will follow us.

Your environment is the air you breathe, the water you drink and the ground you walk on.

We are working with business, Government and society as a whole to make your environment cleaner and healthier.

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Waste – the key issues

In 2007/2008 local authorities in England collected over 25 million tonnes of household waste.

While good progress is being made in recycling more of England and Wales' waste, we must do even more to reduce our effects on the environment. We need to make sure that we reduce the amount of waste produced in the first place and reuse and recycle as much of it as possible.



Unfortunately, there will continue to be some household waste that cannot be reused or recycled, either for technical or financial reasons. This is known as 'residual waste'. Most of this residual household waste is currently disposed of in landfill sites. This is the least environmentally friendly option and there is less and less landfill space available.

Under the European Union Landfill Directive, we must reduce the amount of waste that we send to landfill. This means we must find other ways of managing it.

Local authorities are responsible for managing our household waste. They make long-term plans to do this, identifying ways of increasing recycling and deciding how to dispose of the residual waste. At the moment, the main alternative to landfill is incinerating the waste in energy from waste plants. This is a proven technology which is widely used across Europe.



What are energy from waste plants?

Modern incinerators are often called energy from waste plants. These plants burn waste at high temperatures to reduce the amount of waste and the space it takes up. They also allow the energy produced during the burning process to be captured. This is used to generate electricity and, if possible, provide heating for local buildings or for use in industrial processes.

Our position on energy from waste plants

We need to create less waste, reuse and recycle more and make the best use of the energy contained in the waste that can't be recycled.

It may be appropriate for local authorities to include energy from waste plants in their long-term plans.



As long as this:

- does not affect their strategies to reduce the amount of waste produced or increase the amount that is reused and recycled
- forms part of a regional or local waste management strategy
- helps develop a network of waste disposal and treatment facilities so that waste is disposed of or treated near to where it is produced.

Planning application

Before an energy from waste plant (or any other waste incinerator) can be built, the operator must apply for, and be granted, planning permission from the local planning authority. The planning application will give details of the type of facility the operator plans to run and where it will be. We are consulted as part of this process. We will give our views on how the proposals could affect the environment. We do not decide if or where a facility is built or whether planning permission should be granted.

Environmental permits

As well as planning permission, the operator must get an environmental permit from us before they can run an energy from waste plant.

We use permits issued under the Environmental Permitting

Regulations 2007 to regulate many types of waste management facilities, including energy from waste plants. These permits have strict conditions to make sure the facilities will not cause significant pollution to the environment or harm people's health.

When applying for a permit, the operator will provide detailed information on the type of facility, how it will be built and run, and how it could affect the environment. We will only grant a permit if the operator applying has shown that the proposed facility meets the requirements of UK and European laws in how it will be designed and run. We will not grant a permit if we believe it is likely to cause significant pollution to the environment or harm people's health.



Emissions

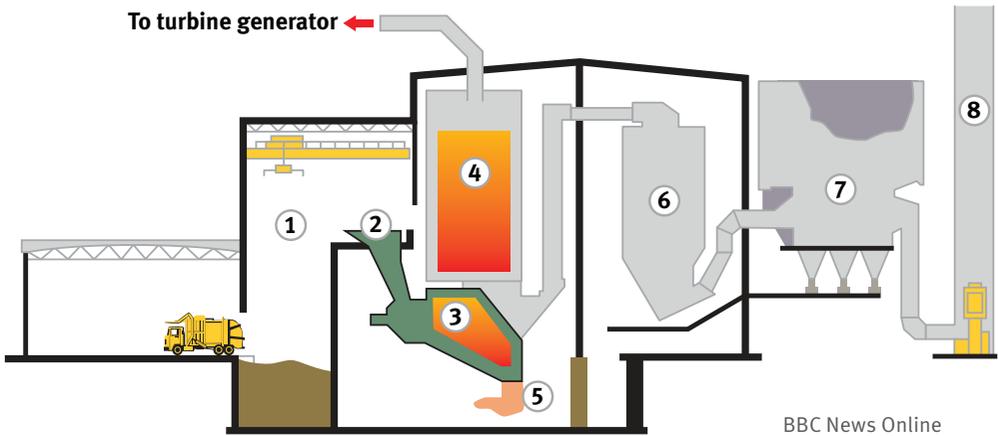
The incineration process, and the emissions which incinerating waste releases into the air, are tightly regulated and controlled by laws under the Waste Incineration Directive (WID) and the Integrated Pollution Prevention and Control Directive (IPPC). Under these European Directives, the plant must meet or go beyond strict controls on emissions.

To do this, the plant must be equipped with technology which will limit the amount of polluting substances that are released. The facility must also be fitted with equipment which will monitor the gases released into the air and report the results to us. We will regularly check that the operator is meeting the conditions of the permit. If they do not keep to these conditions, we will take appropriate action against them to make sure they do.



Veolia Environmental Services Energy from Waste facility in Sheffield

How it works: mass burn incineration



Waste is tipped into a holding area ① where it is picked up by grabs and dropped into a hopper ②. The waste is pushed gradually into the incinerator ③ which runs at a temperature of 850 degrees Celsius. Heat from the burning waste is used in a boiler ④ and steam from this is piped to a turbine generator to create electricity. The heaviest ash falls into a collection point ⑤ and is passed over with an electromagnet to extract metal content for recycling. Flue gases containing fine ash then pass through a scrubber reactor ⑥ to treat acid pollutants such as SO₂ and also dioxins. The gases then pass through a fine particulate removal system ⑦ and are released through the chimney stack ⑧.

Health

We have an important role to play in protecting health as part of our legal duties. We use information provided by the operator to consider how the facility may affect people’s health. This includes comparing emissions with industry standards and limits set by regulations.

We will look in detail at what emissions the facility will release and how this could affect the local environment. As part of this, we will consider expert scientific opinion and research reports on health effects due to emissions. We are not health professionals, so to make this assessment we work closely with medical and public-health experts at the Department of Health, Health Protection Agency and National Public Health Service.

The Health Protection Agency has published a statement on incinerating solid waste, which says that “modern, well-managed waste incinerators will only make a very small contribution to background levels of air pollution”. This opinion is based on a detailed review of the research available.



Public consultation

We want to make the best decision when we issue an environmental permit. As a result, we consult widely with organisations and members of the public, inviting them to make any comments and ask any questions they may have about the details in the application. Our consultation period will usually last for 20 working days and we will advertise the details of the application in local newspapers and on our website.



Once we have decided on the application, we will issue a draft decision and consult the public and other people involved before we issue our final decision.

The facility can only begin incinerating waste when it has been granted both planning permission and an environmental permit.

Who we are

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Your environment is the air you breathe, the water you drink and the ground you walk on. We are working with business, Government and society as a whole to make your environment cleaner and healthier.

The Environment Agency. Out there, making your environment a better place.

What we do

We protect and improve water and air quality and make sure waste management activities do not cause pollution or harm to human health.

We regulate waste disposal and those industrial processes with the greatest potential for causing pollution.

Our role is to make sure that energy from waste facilities are designed, built and run to meet strict environmental standards and the conditions of their environmental permits.

Where can I find out more information?

For more information about energy from waste incineration and our role in planning and issuing permits for these, visit our website at: www.environment-agency.gov.uk/energyfromwaste

Health Protection Agency (HPA)

To see the HPA's statement on incinerating solid waste, visit the following website:
www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733829068

Department for Environment, Food and Rural Affairs (Defra)

To see Defra's guidance on incinerating solid waste, visit the following website:
www.defra.gov.uk/environment/waste/wip/newtech/pdf/incineration.pdf

County or unitary council

Contact your county or unitary council to find out about their strategies and plans for waste, including the:

- municipal waste management strategy
- waste development plan
- policy on recycling waste
- regional waste strategy the council contributes to.

Contact us

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Would you like to find out more about us, or about your environment?

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