

Energy from waste and health

There is significant public concern about the possible health risks of energy from waste (EfW) plant emissions.

Our role

We have a statutory role to safeguard the environment and human health from all processes and activities we regulate, including EfW plants.

We use information provided by the EfW plant applicant to consider the health effects of EfW plants. We do this by:

- comparing emissions with industry best practice and limits set by regulations. The Waste Incineration Directive has strict limits that should prevent any unacceptable impact;
- looking in detail at what the EfW plant will release and how this could impact on the local environment;
- considering expert scientific opinion and research reports on health effects due to emissions;
- seeking advice from specialist bodies like the Food Standards Agency and the local Primary Care Trust (England) or Local Health Board (Wales);
- involving local communities to listen to and take on board their concerns.

If we decide to issue a permit we make sure that the operator operates the EfW plant in line with the conditions of the environmental permit. We inspect the plant, review their monitoring data and carry out our own monitoring to audit their figures. If there is any breach of permit condition the operator must tell us. We can take enforcement action against any operator who fails to prevent or minimise harm to the environment or public health.

Expert opinion

The Health Protection Agency (HPA) provides authoritative advice to government, agencies and the public.

The HPA has published a position statement on incineration of municipal solid waste that states “Modern, well-managed waste incinerators will only make a very small contribution to background levels of air pollution”; “provided they comply with modern regulatory requirements, such as the Waste Incineration Directive, they should contribute little to the concentrations of monitored pollutants in ambient air”.

This opinion is based on comprehensive review of available research.

Research

A great deal of detailed research has been carried out, both at specific sites and nationally, to investigate whether EfW plants do, in fact, damage human health.

The majority of published studies concentrate on the health effects from the older generation of incinerators. But, modern, well-managed EfW plants must now meet much tighter emission standards under the European Waste Incineration Directive. They release far less chemicals than the old incinerators and, therefore, only make a small contribution to background levels of air pollution. Indeed, dioxin emissions have been reduced by 99.8 per cent since 1990.

The most recent independent review of evidence on the health effects of household waste treatment and disposal was published by the Department for Environment, Food and Rural Affairs (Defra) in 2004. The *“Review of the Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes”* considered 23 high quality studies of the patterns of disease around EfW plants and also four review papers looking at the health effects of EfW plants. It concluded that there is no convincing link between EfW plants and adverse effects on public health.

The report considered cancer, respiratory disease and birth defects and found no evidence for a link between the incidence of the disease and the current generation of incinerators. It concluded that present day practice for managing solid municipal waste has only a minor effect on human health and the environment.

This should be viewed in the light of the benefits of collection and disposal of the waste that we all generate. If waste were not collected, treated and disposed, it would cause disease, odour and litter.

An earlier report by the Medical Research Council’s Institute for Environment and Health *“Health Effects of Waste Combustion Products”* also concluded that epidemiological studies on people who work or live near incinerators have shown no consistent excess of any specific disease.’

The Government’s expert advisory Committee on the Carcinogenicity of Chemicals in Food, Consumer Products and the Environment reviewed a large study by the Small Area Health Statistics Unit that examined 14 million people living within 7.5km of 72 municipal solid waste incinerators, which operated up to 1987. The Committee concluded that, ‘any potential risk of cancer due to residency (for periods in excess of ten years) near to municipal solid waste incinerators was exceedingly low and probably not measurable by the most modern techniques.’

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