

Supplementary incineration and co-incineration (Energy from Waste) basic pre-application advice

This document provides supplementary basic advice for the above sector and is in addition to the general advice document.

This document does not cover pyrolysis/gasification applications where syngas is being cleaned to IED article 42 and end of waste standards. We also recommend that these sites and those proposing to accept clinical or hazardous wastes apply for enhanced pre application advice.

How much will my permit cost?

In addition to the charges information already provided in the general advice document, this section is intended to give more sector specific advice which might help you to supply the correct fee for your application.

Baseline charge

The application charge will depend on the type of incinerator:

The fees for each type of incinerator can be found in table 1.6 of our table of charges.

For a new bespoke application the fee will be the full application fee for the first incineration line and then 10% for each subsequent incineration line if all lines have the same listed activity description. Please see section 2.12 of the charging scheme guidance.

The variation charge will depend on the type of variation:

- Minor technical
- Normal
- Substantial

These are described in section 3 of our charging guidance. The fees for each type of variation can be found in table 1.6 of our table of charges. As described in our guidance the following should be used when calculating your variation fee.

1. If you want to vary a permit that covers more than one activity you must pay a variation charge for each activity you want to vary. If your change affects other activities on the same permit, that means they will also need to be changed. You will need to pay a variation charge for each of the other activities affected.

2. If you have a permit that covers the same activity multiple times, you pay a variation charge when changing each repeat activity. However, if you want to make the same change, at the same time, to a second or subsequent repeat activities, you do not need to pay another variation charge. This is because the changes to the second or subsequent repeat activities are regarded as administrative changes which are free of charge.
3. If you have a permit that covers multiple activities and you apply to change any plant or infrastructure (for example replacing the boilers, or extending the site boundary), you pay the highest variation charge of the activities affected. Any changes to the other activities are then regarded as administrative variations and will be free of charge. This applies if it's a minor, normal or substantial variation.
4. If you want to add an activity to your permit, you must pay the charge for a new permit application for that type of activity

Add-on charges

There will be additional charges for the following if assessments are required to be submitted as part of your application.

A fixed charge of £779 for a habitats assessment if:

- There is European Site within the meaning of the Conservation of Habitats and Species Regulations 2017 or a site referred to in the National Planning Policy Framework 2018 as requiring the same assessment as a European Site within 10 km of the Installation.
- If there is a site of special scientific interest within the meaning of the Wildlife and Countryside Act 1981 within 2 km of the installation.
- If emissions could impact on marine conservation zone within the meaning of the Marine and Coastal Access Act 2009.

Also additional fees for:

- a pests management plan – a fixed charge of £1,241
- an emissions management plan – a fixed charge of £1,241
- odour management plan – a fixed charge of £1,246
- noise and vibration management plan – a fixed charge of £1,246

There is no additional charge for the fire prevention plan for incinerator applications.

Supporting documents specific to Energy from Waste (EfW)

In addition to those already mentioned in the general advice document below we give more details in certain areas and additional supporting documents which are associated with the EfW activity you are applying for.

EWC code list

A list of the waste types and EWC codes that will be received and incinerated must be provided. The same applies if you are varying your permit and new waste types are proposed, in addition you must submit an assessment of whether any changes to control measures will be required and whether emissions will change if so a revised risk assessment may be required.

Odour Management Plan

Depending on the findings of your risk assessment an odour management plan may be required. If it is required you should follow the [H4 guidance](#). In the case of a variation if your risk assessment shows that the changes will lead to increased odour risk you may need to submit a new or updated plan.

Emissions (Dust) Management Plan

Depending on the findings of your risk assessment an Emissions Management Plan may be required that addresses the risk of dust with your application. This needs to address the aspects listed under 'Emissions that do not have set limits' in our [guidance control and monitor emissions for your environmental permit](#)

Noise Impact Assessment

You must provide a noise impact assessment (NIA) based on BS4142:2014+A1:2019 – 'Methods for rating and assessing industrial and commercial sound'.

<https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#noise-and-vibration-management-plan>

Where your assessment has used calculations or modelling to predict sound pressure levels at receptors, you must follow our guidance on the presentation of your acoustic data: Noise impact assessments involving calculations or modelling.

<https://www.gov.uk/guidance/noise-impact-assessments-involving-calculations-or-modelling>

[For a variation a revised NIA will be required where the proposed change could increase the risk from noise.](#)

Noise Management Plan

Where your risk assessment cannot screen out impacts from noise and vibration beyond your site boundary you must produce a noise and vibration management plan. The aim of the management plan is to prevent, or where that is not possible minimise, impacts to receptors.

Your noise management plan must take into consideration the outcomes of any noise and vibration impact assessment and provide evidence that appropriate mitigation measures have been taken to control the risks from the activity and operations undertaken on your site.

The Environment Agency have published guidance on appropriate measures and requirements of a management plan to assist you in the preparation of the plans.

<https://www.gov.uk/government/publications/environmental-permitting-h3-part-2-noise-assessment-and-control>

If you are unsure as to whether a Noise Impact Assessment and Noise Management Plan are required for your proposal please request [enhanced pre application advice](#). We may return the application, and potentially retain part of your fee, if we find a Noise Impact Assessment and Noise Management Plan should have been included as part of your application.

Air Quality Assessment

Almost all applications will require dispersion modelling. Your modelling report needs to follow this guidance <https://www.gov.uk/guidance/environmental-permitting-air-dispersion-modelling-reports>

Specific items that should be included are:

- Pollutants listed in IED annex VI and in the draft BAT conclusions compared to Environmental Standards (ES).
- If there are AQMAs nearby an assessment of pollutants at specific receptors including the most impacted within the AQMA will be needed.
- Further consideration of metals based on our guidance: <https://www.gov.uk/government/publications/waste-incinerators-guidance-on-impact-assessment-for-group-3-metals-stack>
- PCBs and PAHs compared to the Environmental Standards
- IED abnormal operation impacts.
- Electronic copy of model input files.
- Justifications of the background data that was used.
- Modelling should be carried out at maximum throughput.
- The correct Emission Limit Values need to be used taking into account whether it is an incinerator or a co-incinerator.

If you are varying your permit and the change will result in an increase in impacts for emissions to air or a change to the emission source parameters such as temperature, flow rate etc.) then the dispersion modelling will need to be updated.

Human Health Risk Assessment

A health risk assessment for dioxin and furans. Methods for doing this could be the USEPA Human Health Risk Assessment Protocol or the HMIP 1996 report.

The assessment needs to compare dioxin intake to the COT tolerable daily intake of 2 pg/kg bodyweight/day (TDI). The assessment needs to include dioxin like PCBs in the assessment.

An electronic copy of the model input files will be needed.

If you are varying your permit and it will result in an increase in impacts for emissions to air the health risk assessment for dioxin and furans will need to be updated.

Incinerator BAT Assessment

An assessment of the options based on H1 taking into account cost vs benefits for:

- Furnace choice
- Abatement options and reagents used
- Cooling method
- Options for recovering heat

Energy efficiency and global warming potential need to be included in consideration of the options.

Where predicted NO₂ impacts are above the insignificance threshold (1%) attention needs to be paid to the primary NO₂ control measures and abatement measures. A cost benefit analysis of SNCR (Selective Non-Catalytic Reduction) vs SCR (Selective Catalytic Reduction) will be needed. This is particularly important where the impacts are >1% in an AQMA; you should consider whether emissions lower than the BAT AEL can be achieved.

If you are varying your permit the BAT assessments that are required will depend on what is changing. For example if the variation is to amend the furnace type then a revised furnace BAT assessment will be required.

Industrial Emissions Directive

An assessment of how the plant will comply with the requirements of chapter IV of the industrial emissions directive is required with your application.

If you are varying your permit and new equipment (for example a new abatement or new incineration line) is being installed an assessment of how it will comply with the above requirements will be required.

BAT conclusions

An assessment of how the plant will comply with BAT conclusions will be required. In the case of a variation you must provide an assessment of how any new plant or equipment will comply with the BAT conclusions. The [BREF](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018D1147&from=EN) and BAT conclusions are available here <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018D1147&from=EN>

Energy Efficiency

Energy efficiency measures should be described. This should include measures to recover as much energy as practicable from the waste.

An assessment of options to utilise waste heat needs to be supplied.

A Cost Benefit Analysis on being CHP - if required by the Energy Efficiency Directive.

A CHP-ready assessment – in line with the CHP ready guidance. This would only be required for a variation if a new incineration line was being added.

A clear energy balance should be provided.

For variations you will need to describe any new equipment energy efficiency measures.

CEMS (Continuous Emission Monitoring System) and Monitoring

Application must contain full details of chosen techniques and detail whether back up CEMS will be available. Sampling points/locations to be fully compliant with M1.

For variations if changed to the CEMS are proposed then it must contain the above.

And additional requirements for gasification and pyrolysis plants (this is applicable to new permits and variations where there is a change proposed to that particular aspect)

Process

Identify the type of system and number of retorts. Continuous or batch?

Syngas combustion or use clearly described – combustion in engine/ steam cycle/ gas turbine, export off site, injection into grid

Auxiliary burners if a steam cycle process

Is the source of heat described?

What is the source of oxygen if used?

If there is a by-pass stack its use should be clearly described

End of Waste

If claiming that the syngas meets end of waste and can cause emission no higher than natural gas – see IED article 42.

This will affect the listed activities(s) that apply. If you plan to claim this we recommend you request enhance pre-application advice

Syngas cleaning

Techniques should be described.

Measures to deal with wet scrubbing effluent should be described

Flaring

Situations when the flare will be used needs to be clearly described

Residues

Will char meet 3% TOC or 5% LOI?

Will residues be burned to generate energy? If so emissions will be subject to IED chapter IV