



WHITE PAPER

MEDIUM COMBUSTION PLANT DIRECTIVE
- REGULATORY COMPLIANCE

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Medium Combustion Plant Directive - Regulatory Compliance

WHAT IS THE MCPD DIRECTIVE?

The Medium Combustion Plant Directive (MCPD) forms part of the European Union's (EU) Clean Air Policy Package and regulates emissions of dust, NO_x and SO₂ to reduce air pollution, environmental damage, and the risk to human health.

The Medium Combustion Plant Directive (MCPD) imposes permitting, monitoring and emission compliance requirements on medium combustion plants (MCP) with a thermal input of between 1 and 50MWth, regardless of the type of fuel used.

The UK has also introduced additional requirements ('specified generator regulations') for combustion plants in this size range that are used for electricity generation. A generator is a combustion plant that generates electricity and includes: engines, gas turbines, boilers – that operate as a combined heat and power (CHP) combustion plant.

A heat only combustion plant is not classed as a generator but is a medium combustion plant.

AIR EMISSIONS RISK ASSESSMENT

There are 3 types of permit for a stationary or mobile MCP;

- standard rules permit (SRP) – low risk,
- simple bespoke – low risk / does not require air dispersion modelling,
- complex bespoke permit – high risk / requires air dispersion modelling.

Your specified generator must not cause a breach of an air quality standard and must ensure it protects human health (sensitive receptors, and conservation sites) known as habitats.

You must make sure your MCP must comply with the rules in a standard rules permit on sensitive receptors and habitats. If you cannot meet the conditions in a SRP you must apply for a bespoke permit and conduct an air quality emissions risk assessment to quantify the impact on sensitive receptors and habitats. As a result of your assessment, the regulator may set stricter permit conditions which could require you to: meet a lower ELV, better disperse or reduce hours of operation.

If there is a habitats site within the screening distance of your MCP you must submit your air emissions risk assessment report with your application. This is to demonstrate the MCP's effect on the site if you're operating within;

- 2km of a designated Site of Special Scientific Interest (SSSI) for any fuel,
- 5km of a designated Special Protection Area (SPA), Special Area of Conservation (SAC) or Ramsar site if the fuel is natural gas or low sulphur diesel,
- 10km of a designated SPA, SAC or Ramsar site if the fuel is biogas or landfill gas.

If your MCP is not a generator, for example it's a boiler, you must find out if your MCP is located within a local authority AQMA and included in your application you must provide details of the AQMP and actual emissions from the MCP.

The regulator will consult the local authority to check if your MCP is identified in the associated air quality management plan.

If it is, your MCP emissions may be identified as adversely affecting air quality in the area. The local authority, in their plan, will identify how much stricter the ELV needs to be to make a noticeable improvement to air quality. The regulator will include the agreed stricter ELV in your permit conditions.

Element can guide you through the Planning Process and Air Quality Assessment and provide the required air quality dispersion modelling required in your application.



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PERMIT COMPLIANCE TIMEFRAME

The Medium Combustion Plant Directive already applies to plants that began operating after 20th December 2018, and will apply to existing plants (put into operation before 20th December 2018), from 1st January 2025 or 2030 depending on their size.

Permits need to be applied for and be in place by 1st January 2024 if it's an existing MCP and the capacity is between 5MWth and 50MWth, and 1st January 2029 if it's an existing MCP and the capacity is between 1MWth and less than 5MWth.

Permits are standalone unless the MCP or generator is part of an Industrial Emissions Directive (IED) installation permit or a Part B environmental permit.

If your combustion plant generates electricity both the MCPD and/or specified generator regulations may apply to your plant. You must make sure you're complying with the correct regulations. If both apply, you must meet the stricter controls by the earliest deadline.

REGULATION OF MCPD

The Environment Agency for England and NRW (National Resource Wales) for Wales will mostly regulate the MCPD requirements of Part A activities either through bespoke Permits or Standard Rules Permits.

MCP and specified generator regulations apply to some Part B activities, in particular for combustion activities (1.1) from combustion plant including boilers, furnaces, gas turbines and compression ignition engines and incineration of waste wood (5.1)

Part B activities are currently regulated by Local Authorities. Where an activity is both Part B and MCP or specified generator, from the date your combustion plant qualifies, they are regulated by:

- Environment Agency for England
- NRW for Wales
- Department of Agriculture, Environment and Rural Affairs (DAERA) for Northern Ireland
- The Scottish Environment Protection Agency (SEPA) for all of these activities in Scotland
- Environmental Protection Agency (EPA) in Ireland

MONITORING REQUIREMENTS AND EMISSIONS TESTING

Operators must test emissions from each unit to demonstrate compliance with emission limits.

For a new MCP you must start monitoring its emissions within 4 months of the permit being issued or the start of operation, whichever is the latest. For an existing MCP you must start monitoring within 4 months of permit issue. The frequency after this will be specified in the permit conditions.

You are required to do periodic monitoring at least every 3 years for a MCP less than or equal to 20MWth and annually for a MCP greater than 20MWth.



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Emissions monitoring parameters are fuel dependant; gas fired processes typically require only emissions monitoring for NO_x (Oxides of Nitrogen) to comply with an ELV though CO (Carbon Monoxide) is generally required in addition but not subject to an ELV. For combustion of biogas or solid fuels and biomass ELVs will apply for dust and Sulphur Dioxide in addition to NO_x.

The permit will specify the monitoring method you must use. Usually for low risk standard rules permits and simple bespoke permits require you to use the monitoring method set out in Environment Agency Technical Guidance Note M5. Complex bespoke permits require you to verify emissions using the Environment Agency's Monitoring Certification Scheme – MCERTS.

Where dust emissions monitoring is undertaken this requires the use of isokinetic testing methods. With isokinetic testing, it's important to note the access requirements for equipment (sampling ports) and personnel (permanent and/or temporary sampling platform) along with the location of sampling plane, needs to fully meet the requirements of the Standards, and Environment Agency Technical Guidance Note M1. These are prescriptive to ensure samples can be taken in compliance with the Standard and safely in accordance with MCERTS requirements.

Element is the largest provider of ISO 17025 and MCERTS accredited testing in the UK and Ireland, operating from 10 regional laboratories we are ideally placed to support your MCERTS compliance monitoring requirements. We can provide expert assistance on all aspects of emissions monitoring and requirements of the Standard Reference Methods to ensure full compliance with your permit.

COMPLIANCE REQUIREMENTS

You must keep records of the plant operation for at least 6 years. You must notify the regulator immediately of any non-compliance event and ensure compliance is restored within the shortest possible time. You must notify any changes to the combustion plant which could affect the applicable ELVs.

The Regulator will assess compliance by doing desk based and/or site inspections and will use the monitoring returns you submit to assess compliance.

If you do not comply, the Regulator can require you to suspend plant operations if your MCP or specified generator fails to comply with ELVs, and causes significant damage to air quality. If non-compliance continues, the Regulator may take enforcement action against you.

Element can support you with guidance and expertise in resolving compliance issues for combustion plants ranging from small to large power plants.

THE ELEMENT ADVANTAGE

Element provides comprehensive support for all aspects of compliance, including permitting, stack emission measurements and air quality assessments.

Element's consultants can provide;

- expert guidance throughout the permitting process and planning applications,
- advice on compliance and engagement with Regulator,
- assessment of the air quality impacts through detailed air quality dispersion modelling,
- ISO 17025 and MCERTS accredited emission testing to demonstrate compliance with MCPD ELVs.

FURTHER READING

[Medium Combustion Plant Directive MCPD](#)

[Air Quality Testing](#)

[Ambient Air Quality and Dispersion Modeling](#)



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