

Medium Combustion Plant Directive – News for CEA Members

Now that the recent election is over Defra are able to re-engage with Stakeholders on current projects, the most pressing being MCPD.

A number of matters have arisen over the last few weeks:

Consultation

The Government's consultation on the implementation of the MCPD ran between 16 November 2016 and 8 February 2017, and the results were published at the end of June.

Of the 112 responses received, the largest number of responses were from the Energy sector, followed by Industry, Local Authorities and Regulators.

In the summary of the Government's response to that consultation, the following 'cross cutting' issues were raised:

- There were calls for reviewing the Clean Air Act (1993), which helps to control emissions of pollutants including particulate matter (PM) and sulphur dioxide (SO₂). The Act gives Local Authorities powers to control emissions of dark smoke, grit, dust and fumes from industrial premises and furnaces and to declare "smoke control areas" in which it is an offence to emit smoke from the chimney of any building (e.g. domestic, commercial and industrial).

Defra are currently looking at what other measures are needed to curb emissions as part of work on implementing the UK's emission reduction goals, including the types of emissions covered by the Clean Air Act.

- There were also calls for Local Authority Fees and Charges to be reviewed, to ensure full cost recovery. Defra held a consultation on a proposed increase to the LA environmental permitting fees and charges between 15 March 2017 and 13 April 2017, to enable cost-recovery. Defra has been reviewing the consultation responses and will respond in due course.

In addition, the following decisions have been taken as a result of the consultation:

1. The Environment Agency will be appointed as the regulator in England. Consultation Option B, where the EA and NRW would be the regulators, provides greater clarity on roles, consistency in implementation and regulator fees, and greater flexibility for regulating mobile plants and multiple sites with a single operator.

For the higher risk plants, where the impact on local air quality must be assessed to determine permit conditions, Local Authorities will be consulted.

EA will consult on fees and charges as part of the Environment Agency strategic review of charges – this process will start soon.

The Welsh government is further considering the matter of regulatory responsibility in relation to plant in Wales. Scotland and NI will create their own regulatory regime.

2. There is no need to amend the Sulphur Content of Liquid Fuels Regulations, or the Environmental Protection Act 1990, because there is no risk of duplicating requirements. Under the Clean Air Act stack height will continue to be enforced by Local Authorities when considering planning applications.

Permits for MCPs and diesel generators will include a requirement to ensure no persistent dark smoke emissions, which will enable regulators to direct the operator of a plant to rectify a problem that is resulting in high particulate emissions.

3. The exemption in MCPD from Annex II ELVs for existing plants which do not operate more than 500 hours per year as a rolling average over 5 years, and for new plants which do not operate more than 500 hours per year as a rolling average over 3 years will be applied, subject to the restrictions to be imposed in relation to generators.

Defra will also apply the extension to 1000 exempted hours for plants in connected islands where there is an interruption of the power supply, and will retain the ability to allow an extension of exempted hours in exceptionally cold weather. However, to enable effective enforcement, plants which exceed 500 hours of operation in any given year will be required to notify the regulator. In addition, a dust ELV will still apply if plants are firing solid fuels, are required by the Directive.

4. The MCPD is being supplemented by additional legislation to control the emissions from diesel generators, particularly those that are used for short term grid support (emergency generators are excluded) and a significant part of the consultation and subsequent discussions have been focussed in this area.

The definition of 'emergency' has not been made, but diesels used for less than 50 hours per annum will be excluded from the additional diesel legislation (they are still MCPs and must be registered as such).

For the full text of the consultation responses please see the published document on the [CEA web site](#).

Implementation Summary

MCPs and generators will be subject to permitting under the Environmental Permitting Regulations in England and Wales. This legislation will be amended.

EA will be the regulator in England; where local authorities (LA) are currently the regulator, the role will be transferred from the permitting deadline as relevant. EA will recover costs through fees for permitting, permit variations and subsistence charges. EA is developing the approach for compliance checks, monitoring standards and fee structure.

For plant already covered by a permit, a variation will be issued to ensure compliance with MCPD and generator controls. Permits will prohibit persistent emission of dark smoke.

The permit you receive as an Operator will replicate the operating envelope you declare on your application, so it is essential to allow as much flexibility in operation as you think will be necessary since any variation to operating regimes will require a permit variation (at a cost).

All data will be input into an EA portal and will be available on a Public Register.

MCPs are not subject to BAT (Best Available Techniques assessment) – the Directive proposes a standard that you demonstrate you have met. The LA will deal with the effects of cumulative plant emissions in areas of potentially poor air quality or actual Air Quality Management Areas.

MCP Timetable

End July 2017	Draft SI will be published. Technical standards notification of extension to cover diesels (to European Commission). The EC have 3 months to comment.
Mid October 2017	Legal instrument and Impact Assessments to be laid in Parliament
December 2017	Stakeholder review of final legislation
Mid December 2017	Legislation made and comes into force
Spring 2018	Informal review of EA Guidance at stakeholder meeting
20/12/2018	New MCPs must be permitted, emissions tested within four months and comply with Emission Limit Values (ELVs)
01/01/2024	Existing MCPs above 5MW must be registered and test emissions within four months of registration
01/01/2025	Existing MCPs above 5MW must comply with ELVs
01/01/2029	Existing MCPs 5MW and below must be registered and test emissions within four months of registration
01/01/2030	Existing MCPs 5MW and below must comply with ELVs

NOTE = other dates apply to diesel generators where they are used as 'grid support'.

AQMAs

One clearly overriding factor in these discussions is the scope and importance of Air Quality Management Areas. The Directive (Art 6:9) allows the Regulator to impose stricter controls on emissions for AQMA and it is likely with current public pressure and interest that this will be done. There will be issues of single plants in AQMA being closely checked for stack height and proximity to sensitive receptors, and possible problems if sites in those areas expand or need temporary plant, or are co-located with other MCPs.

Most cities in the UK have some streets and areas that are AQMAs, the vast majority for NOx levels. Detailed maps and pollution restrictions are available for each declared area. Anyone with an MCP in locations such as Glasgow, Liverpool, Manchester, Sheffield, Wakefield, Stoke-on-Trent, Lincoln, Birmingham, Coventry, Rugby, Stratford, Bristol, Cheltenham, Oxford, Yeovil, Reading, Maidstone and most of Greater London will have an AQMA, as well as smaller areas in many other towns and cities.

The data is at <https://uk-air.defra.gov.uk/aqma/maps>.

ELVs for an MCP may be tighter than those in Annex II if it is located in an AQ Zone and it can be demonstrated that reducing the emissions will make a meaningful improvement to Air Quality.

Local Authorities are responsible for AQMAs which will be part of an AQ Zone. When the Plan for the Area is reviewed it must assess the case for applying stricter emission limits for MCPs if this delivers a noticeable improvement to air quality. If as a result of an air quality plan the EA is directed to apply stricter emission limits, they will carry this out in consultation with the LA and plant operators.

Even though the LAs are not going to be responsible for the direct implementation of MCPD, they will be a statutory consultee and be told about every application, so it may be expected that some sites with 'unusual' fuels or possibly 'dirty' plants could be subjected to tighter controls. AQMAs are subject to review, and are concise boundaries, so you are either 'in' or 'out' until the boundary changes.

EA Guidance

NOTE – this is a short form of the document discussed at the stakeholder working group and further detail (especially for diesel generator rules) is available on request to the CEA.

It is the responsibility of the EA to draft and distribute suitable and sufficient guidance for Operators of MCPs to enable them to follow the application process and comply with the requirements of the Directive. This guidance will not be subject to formal consultation, but the MCP Stakeholder group will be involved in the final drafts and the EA are very keen to get Industry input in order to make the guidance comprehensive and accurate.

A number of issues remain to be resolved, and comments are welcomed:

Bespoke & simple permits for MCPs

Aside part B plants, the key difference between simple and bespoke permits is the monitoring standard and frequency required.

Low risk MCPs will have less onerous monitoring standards – guidance has still to be developed, but simple sites should result in reasonably automatic permit issue through the EA web based portal. Early permitting of new installations is expected to start next Spring/Summer.

Bespoke permits will need to be 'determined' for part B and the higher risk MCPs as defined by fuel, size and location. EA are likely to require monitoring to MCerts standards at high risk sites and it is possible that it may be appropriate to require a greater monitoring frequency than required in the Directive where local AQ is a concern.

Consultation with LAs

It is intended that that LA's will be notified automatically by the MCPD portal about plant in their area. When and how is open to discussion and will likely depend on the type of application. For the majority of MPCs where ELVs are fixed and they are not located in an AQMA, the LA can be notified on permit issue.

For MCPs that are located in an AQMA – they will be notified at the Duly Made stage and asked if the AQMA Plan has any provisions for tighter ELVs – these can be taken into account when determining the permit. Permit issue will be notified to the LA.

For Generators subject to bespoke permits which must submit an air quality assessment LAs will also be consulted after the application is Duly Made – this is primarily to verify that the local background AQ used in the application is correct, that all the relevant sensitive receptors have been identified and if there are any other ‘in combination AQ’ issues that need to be taken into account. For other generators, the LA will be notified on permit issue

Multi MCPs on a site and multi sites single operator permits will be developed.

Permit transfer – as per existing EPR arrangements.

Permit variations – as per existing EPR arrangements.

MCPs in Part A installations

MCPs which are subject to emission controls under Chapters III and IV of IED are exempt from the MCPD. However, those that are part of an existing Part A installation as a DAA or primary activity and not covered by Chapters III or IV must have their permits varied to include MCPD conditions as a minimum by the appropriate due date. (see below)

EA will serve a Reg. 60 notice for information on the operator before the due date in order to vary the permit. A permit variation fee will be charged. Note MCPD requirements will be a minimum for MCPs in Part A installations i.e. site specific BAT may be tighter and existing conditions will be maintained unless the operator can demonstrate they are not appropriate.

Part A's and MCPs

There are a number of existing Part A EPR installations with MCPs, probably as Directly Associated Activities – they may or may not currently have to comply with ELVs. It is also likely that that existing Part A installations may in the future install new MCPs.

Existing permit ELVs will apply until the appropriate MCPD date at which point the MCPD ELVs will apply. As BAT applies to these installations MCP ELVs will be the minimum standard and BAT may be tighter. If existing ELVs are tighter than the MCPD then they will remain in place unless the operator can demonstrate BAT for the installation has changed i.e. a change from base load to peaking for the MCP.

New MCP will meet the MCPD requirements as a minimum as above – BAT may be tighter.

The EA will serve a Reg. 61 Notice for Information prior to the ELV compliance date requiring the necessary application information from the operator and charge the appropriate variation fee on permit issue.

The operator may apply to vary their permit early.

Some CEA Members will have, or know of, sites where combustion installations are currently permitted and this part will apply to them.

MCPs which are Part B's under EPR.

The EA will be the regulator in England for all 1.1B (20-50MW boilers and <3MW waste) & 5.1B MCP (non-haz waste 50kg – 1 tonne/hr) – new from 1 January 2019 and existing from 1 Jan 2024 (5-50MWth) and 1 Jan 2029 (1-5 MWth).

Operators will be required to make an application for a permit from the EA prior to those dates with the appropriate fee.

The EA will issue a Reg 61 Notice for Information to existing Part B operators requesting the relevant information to make the variation determination. It is expected that variation fees may approach EA fees for issuing a new part B permit, considering the amount of work involved.

The existing BAT guidance for these Part Bs (PG Notes?) will be reviewed to ensure MCPD requirements are set as a minimum, and will be applied for determining permit conditions. Existing permit conditions which are tighter than MCPD will be retained unless the operator can demonstrate that site specific BAT has changed. The relevant LA will be consulted on any new permit conditions.

Some CEA Members will have, or know of, sites where combustion installations are currently permitted and this part will apply to them.

Mobile plant - permitting & deployment

Owners of MP in scope of the MCPD must apply for the permit with all the standard details, except that the location of the plant is not required.

The permit holder must notify of a MP deployment in advance (how much?) - a fee is paid for each deployment.

For an emergency deployment – retrospective notification must be within 24 hours of deployment – box to be ticked.

The notification of deployment must include the following details – location and expected duration of deployment, Local Authority (LA) and any designated AQMA that apply.

The LA will be notified of a deployment and intended duration – expect to provide an online tool to submit electronic notification.

Should EA require notification of completion of deployment? Total hours operated?

No deployment may last more than 1 year – repeat deployments to the same location are not permitted (is this going too far?)

Should the ELV exemption for < 500 hrs pa operation be applied to mobile plants? Is it relevant? How can it be enforced?

Restrictions on deployment in AQMAs– since AQMAs have higher background concentrations of pollutants, to minimise the risk to air quality an option is to allow deployment only for plants which meet the MCPD ELVs for new plants – are there concerns about this approach?

Multi MP deployments – should we look to control these? How can we do it?
Compliance – as for other MCP.

Some guidance exists for mobile crushing and screening plant and this may be a useful reference.

It seems that these draft 'rules' have been compiled with generators in mind, not boilers. EA will need to think again about the deployment of mobile boilers since many of the above statements are likely to cause difficulties. Comments urgently needed please.

Who should hold the permit for an MCP mobile boiler?

If a mobile boiler is used to replace a failed gas fired boiler and a gas supply is not available, can the mobile boiler fired on oil meet the MCP ELVs. If it cannot, is it right that it cannot be used? Even if it can but the LA decide that the lower limits of an AQMA will apply, how is the customer supposed to get their steam? The Directive allows for a 10 day derogation in the case of the normal fuel not being available and the replacement fuel usually needing abatement, but this is clearly not long enough.

Aggregation (Art.4)

Aggregation only applies to new MCPs. The MCPD Aggregation rules are -

- a) A MCP has a total rated thermal input $\geq 1\text{MWth}$ and $< 50\text{MWth}$.
- b) Where waste gases from two or more separate MCP discharge through a common stack, the combination formed by the plants are considered as a single MCP.
- c) The size of the MCP is calculated by adding the capacities of the plant discharging through the common stack disregarding any units $< 1\text{MWth}$.

Note: a "common stack" is frequently referred to as a common structure or windshield and may contain one or more flues.

The directive also allows the EA to aggregate new combustion plants if, taking into account technical and economic factors, it determines that the plants could be discharging through a common stack.

Aggregation of discharge points improves dispersion of exhaust gases and should therefore be the favoured option when designing combustion plant configuration. Operators should not separate discharge points to avoid aggregation thresholds. The EA may consider that there is no technical reason why the discharges could not be aggregated, taking into account parameters such as distance, flow and backpressure.

No decision yet on when an existing MCP becomes a new MCP. Is this after any change, or at a monetary threshold, or only when the changes make a difference to the emissions? To be discussed.

Also unclear as to the aggregation of larger sites where IED says the minimum plant size for aggregation to LCP is 15MW but a new MCP site could have 6 x 10MW units (a mixture of boilers, CHP and diesels perhaps) and this is then >50MW so is it an LCP?

Operating hours Art.3(22)

'operating hours' means the time, expressed in hours, during which the combustion plant is operating and discharging emissions to the air, excluding start-up and shut down periods.

For the purposes of calculating operating hours a MCP with multiple flues is considered to start running when the first unit to operate passes the Start-up threshold and stops running when the last operational unit falls below the shutdown threshold.

Operating hours are calculated to the nearest minute and a record shall be maintain of total cumulative operating hours for the year beginning 00.00h 1 January to two decimal places.

The UK has defined rules for determining SU/SD for IED purposes and EA can use these as a reference point (Ref JEP guide). These rules define a Minimum Start-Up Load (MSUL), for stable generation, and a Minimum Shut-down Load (MSDL), for stable generation, below which the combustion unit cannot safely and reliably deliver its output to the grid or useful heat or electricity to an industrial or commercial site.

The operator must identify, for each MCP, SU and SD thresholds as a fixed percentage of rated output or as a discrete criteria – the latter may be the physical state of the plant such as a steam valve open which indicates stable operation has been achieved. As for IED, operation of heat-generating plants which are heating up an accumulator or reservoir are to be considered as operating hours rather than start-up periods. In most cases for boilers start up will be easily defined typically as when the boiler is ready to deliver steam at the correct pressure to the range, and shut down is the reverse. For gas turbines it is 70% output.

The operator shall maintain records for each MCP demonstrating what SU and SD is.

There is some doubt about bringing boilers on line for banking – if the boiler has not quite reached start up and because of intermittent burner operation it is emitting more NOx (for example) than is allowed, is banking to below SUSD outside scope or subject to emissions limits?

Public Register Art.5(5)

The PR will be electronic and available to the public on the internet. The exact format and content of the PR has still to be defined as it is integral to the MCPD IT system which will be part of EPR Permitting & Licencing under Defra's Digital Transformation.

As a minimum it must include all the information provided by the operator in the Permit Application listed in MCPD Annex I and any changes to the MCP notified under Art.9 i.e. variations to the permit.

As part of the location details the relevant Local Authority will be identified and whether the site is within an Air Quality Management Area.

EA are applying the general EPR requirements for PR as set out in Part 5 of EPR. This will include any details of enforcement activities, compliance monitoring and inspection. The PR may be subject to exclusions due to National Security or Commercial in Confidence.

Less than 500 hours pa Art.6.3 & 8 Exemption

MCPs may be exempt from ELVs if they operate up to 500 hours per year, as a rolling average over a 5 year period for existing plant and over a 3 year period for new plant.

The 5 year rolling average period starts on the day the permit is issued. A year refers to a 12 month period of operation not a calendar year. Once the five years have been established, the average is calculated on a rolling annual basis thereafter (i.e. a 12 month period's contribution falls off as another 12 month period's contribution is added).

As an example, an existing plant benefiting from the exemption may run for more than 500 hours in a year but must not exceed the upper threshold of 2500 hours over any five year period.

While this exemption is justified because many plants operate infrequently and so the cost of abatement to comply with Annex II ELVs is greater than the benefits from their reduction in emissions, EA are concerned that this exemption will be requested for a very large number of plants and be subject to abuse. For this reason, EA intend to require notification from operators who exceed 500h of operation on any year, which will need to provide an explanation for why 500h were exceeded. We also propose a similar approach to that applied under Chapter III of IED, where a maximum annual limit was introduced (i.e., a maximum of 750h in any single year), which provides a fair approach for operators which request the exemption because they intend to decommission the plant over the rolling average period.

Is the possibility of abuse and 'under reporting' very great?

Is the proposal to amend the wording to add an annual limit of 750 hours appropriate?

Significant degradation of local Air Quality Art.8(3)

In the event that a MCP is causing a significant degradation of local air quality the operation shall be suspended by way of a suspension notice. The notice will specify the requirements to be met to allow continued operation. Significant degradation of AQ can be long or short term and the reference point will be the AQ standards and the Daily Air Quality Index (see: <https://uk-air.defra.gov.uk/air-pollution/daq>) high band.

Reporting / notification

How much / frequency – what, self-verification. Reporting of operating hours for generators where the permit sets an annual limit will be important for enforcement, is this a concern?

Compliance – to be developed

Monitoring – to be developed

Annex 1

Information Required in MCP Permit Application See annex 1 of MCPD

1. (Annex 1.8) Name of site & address, operator & address, location, Local Authority. To follow standard P&L Customer Relation Management package where appropriate. We should require the operator to tell us if they are in an AQMA – this can be done via at <https://uk-air.defra.gov.uk/aqma/maps>, and the post code.

2. Sector / NACE code for site or MCP (Annex 1.5)

3. Multi MCPs or single MCP on site, Stationary or mobile – yes/no

The following information is required for each MCP:

4. Rated Thermal Input MW (nett). Is RGN2 guidance sufficient or do we need more?

5. Combustion Technology (Annex 1.2), engine, turbine, dual fuel, boiler, CHP – others?

6. Fuel (annex 1.3) Solid biomass, other solid fuel + what, Gas oil, liquid fuel other than gas oil + what, natural gas, gaseous fuel other than natural gas + what
For dual fuel what and proportion of each – we need some short guidance on how much detail we want here.

7. Is the MCP new (post 20/12/2018) or existing? Y/N

Start date of operation / commissioning for existing plant (Annex 1.4) – proof of age / start date is required, perhaps manufacture and serial number – we want to avoid stationary MCPs being moved around without traceability and this will be necessary for mobile plant – some guidance will be required.

8. Expected annual operating hours and average load of MCPs (Annex 1.6)

We could include bands i.e. < 500 hrs specify emergency back up or generator, <1500 hrs peaking, < 4000 hrs mid merit and > 4000 hrs base load. However, numbers would be better than bands as they are better for estimating emissions when required to report data to the Commission. Guidance on how to estimate load will be required + its best practice to maximise load.

9. 500 hrs pa ELV exemption for existing (6.3) and new (6.8) – Y/N

Include definition of backup plant which can be exempt and Generators which cannot. Important that operators of generators apply for 500h exemption under the MCPD even if they will then still be subject to generator controls

10. Aggregation for new MCP – we require details on the configuration of new aggregated stacks – see above guidance. Further questions – do we provide each MCP with a unique number as for LCP – will it help?

Do we require stack location / site diagram and should we require the stack height – possible future modelling and or verification against the Clean Air Act? Is this gold plating and only necessary for generators?

11. Where the MCP has secondary abatement (7.4) the applicant will provide details on what abatement, the abated pollutant and how the effectiveness is continuously monitored. Is guidance necessary?

12. Operators will detail any installed CEMs and to what standards they are calibrated, (Annex iii, part 1 para 6). Operators will detail manual sampling ports and if they meet any standards.