

# Response to the Scottish Government's Consultation on implementation of the Medium Combustion Plant Directive in Scotland

9 March 2017

## About Energy UK

Energy UK is the trade association for the GB energy industry with a membership of over 90 suppliers, generators, and stakeholders with a business interest in the production and supply of electricity and gas for domestic and business consumers. Our membership encompasses the truly diverse nature of the UK's energy industry – from established FTSE 100 companies right through to new, growing suppliers and generators, which now make up over half of our membership.

Our members turn renewable energy sources as well as nuclear, gas and coal into electricity for over 26 million homes and every business in Britain. Over 619,000 people in every corner of the country rely on the sector for their jobs with many of our members providing long-term employment as well as quality apprenticeships and training for those starting their careers. The energy industry adds £83bn to the British economy, equivalent to 5% of GDP, and pays over £6bn in tax annually to HMT.

We share the Scottish and UK Government's concern that, without additional controls on generators, there could be potential for a large build-out of unregulated diesel generators with the potential to compromise compliance with short term NO<sub>2</sub> air quality standards and delivery of the UK 2020 NO<sub>x</sub> emission ceiling set under the Gothenburg Protocol and revised National Emission Ceilings Directive. We consider it to be extremely important that the regulatory approach in Scotland mirrors the approach applied in the rest of the UK.

We support using the transposition of the Medium Combustion Plant Directive (MCPD) as an opportunity for the Scottish Government to legislate in this area. We appreciate the opportunity to respond to the Scottish Government's proposals in the consultation document. Our responses to individual consultation questions are set out below.

## Consultation questions

***Q1. Do you have any views on whether the flexibility for cold weather should be applied in Scotland? It would be helpful if you could provide a justification for these views, whether for or against.***

We have no specific examples to offer where the flexibility for cold weather would be required. Any implementation of this flexibility must be accompanied by a clear quantitative definition of what constitutes 'exceptionally cold weather' to provide certainty for operators of such heating plant that extending operation beyond 500 hours would not be in breach of their permit conditions.

***Q2. Do you agree that the remaining flexibilities should be applied?***

We have no objection to the proposed approach set out in Table 1 for flexibilities (2) to (9), which directly transpose the requirements of the MCPD. However, we consider that a blanket application of the 500 hour exemption for existing plant (Flexibility (1) in Table 1) may not sufficiently protect air quality, in line with concerns noted in the introduction to the Scottish Government's consultation, particularly given recent incentives to run existing plant, which may have very high NO<sub>x</sub> emissions, commercially. We consider that the existing plant 500 hour flexibility should therefore be applied partially in line with the

500 hour flexibility proposal for new plant (Flexibility (8) in Table 1), and that both existing and new plant should be subject to the additional generator controls discussed in the response to Questions 12 and 13.

For plant to which the 500 hour flexibility is applied in full, we do not consider that there are significant practical problems in applying the 'rolling average' element and it is important that the rolling averages are included in the Scottish transposition of the derogations that include these.

To impose a strict pro-rata limit of 500 hours per annum in each individual year of the derogation, for example, would not allow any flexibility to respond to conditions with a demand for above average output from these plants. This restriction would go significantly beyond the requirements of the MCPD, which included a rolling average in order to provide flexibility. We recommend that the detailed implementation of the rolling average is left for the Regulator to determine, taking account of this need for flexibility under the rolling average. It is not necessary to specify detailed implementation of the rolling average in the MCPD Regulations.

Any restriction beyond the 3-year and 5-year rolling average timescales should be based on an evaluation of the environmental impacts of plant likely to be operating within this derogation and should take into account the need for regulatory simplicity, given the significant number of plants potentially affected.

In the event that such an evaluation of the potential air quality impacts demonstrates a need for additional restrictions on the operation of the 3-year and 5-year rolling averages, this could be addressed through guidance from the Regulator following transposition rather than in the regulations themselves.

In relation to Flexibility (6) in Table 1, we note that unabated biomass plants may have significant PM and NO<sub>x</sub> emissions and this needs to be considered as part of the permitting process. In order to take advantage of this derogation, an air quality assessment should be produced and the Regulator should set permit conditions accordingly to ensure that air quality is protected.

***Q3. Do you agree the MCPD should be applied to non-propulsion compression ignition engines with a thermal input over 1MW mounted on non-road mobile machinery which are not subject to placing on the market standards under the Non-Road Mobile Machinery Directive?***

We consider that Non-Road Mobile Machinery (NRMM) not subject to Non-Road Mobile Machinery Directive (NRMMD) 2019 emission standards should be subject to MCPD requirements to ensure that no MCP is allowed to operate without regulation. We have no evidence of any practical difficulties with applying the MCPD to such plant.

Existing NRMM generator engines >560kW are not subject to emission limits under either the revised or previous NRMM legislation and are hence currently unregulated. We support the consultation contention that existing mobile plant should be subject to the requirements of the MCPD and as such, to ensure a level playing field and to prevent any loopholes allowing mobile plant to compete with stationary plant from an advantageous position, they should be subject to the same requirements as stationary plant, including any additional proposals to control emissions from generators. We do not see any reason for excluding mobile plant from the same regulatory requirements as stationary plants, either from a practical or air quality perspective. The MCPD standards should therefore be applied regardless of any uncertainty regarding the precise scope of the NRMMD in relation to existing plant within this size range.

***Q4. Do you agree that SEPA should be designated the competent authority for MCPD?***

We support the designation of SEPA as the competent authority for MCPD. We consider that SEPA are likely to be a more effective permitting body than, for instance, local authorities in terms of protecting

air quality and working with operators in an informed and pragmatic manner, based on their specific experience of environmental permitting.

It is particularly important for operators of Part A1 installations that their sites are regulated in a consistent and predictable manner by a single regulatory authority. Regulation of different plants by different Regulators within a single installation is likely to result in duplication of work and the need to manage interfaces between Regulators. This would be inefficient and inconsistent with the principles of “Better Regulation”.

***Q5. Do you agree with the proposed approach to permitting and registration?***

We support the general approach proposed, including the updating of existing permits for Medium Combustion Plants (MCPs) that are already controlled as Part B processes or which are present on Industrial Emissions Directive (IED) regulated sites on the basis that this should simplify the permitting approach and ensure that existing permit conditions are retained as appropriate, in keeping with the ‘no backsliding’ principle.

The proposed approach of applying standard requirements for lower risk plant under a ‘registration’ scheme appears reasonable; however, it is important that the risk categorisation is robust and that individual applications under the registration regime are scrutinised to determine that they are applying under the correct authorisation route. Based on the assumption that SEPA would regulate both the permitting and registration scheme, it may be more effective to simply badge both approaches as a permitting scheme, with standard permits allowed for lower risk plant. This would also avoid any negative perceptions of the registration scheme being less effective from an environmental protection perspective.

Given concerns regarding the potential further proliferation of high emission generator plant under the Capacity Market, we propose that all generator plant should be subject to the full permitting regime.

We note that there will be a need for significant regulatory guidance and clear compliance protocols given that a large number of medium combustion plant operators may be new to environmental regulation and that there are potential cross-overs between the MCPD, IED and the NRMMD.

***Q6. Do you agree with the approach proposed for dealing with plants already subject to emission controls?***

We see it as extremely important that regulatory clarity is provided on the regulation of MCPs on IED sites as these are essentially subject to double regulation under Chapter II of the IED and the MCPD. In particular, it should be clarified that (i) the MCPD sets the minimum compliance requirement and (ii) the MCPD sets the appropriate compliance requirements for units not covered by the corresponding Best Available Techniques Reference document (BREF) (e.g. under the Large Combustion Plant (LCP) BREF, stand-alone units of <50MWth and units <15MWth which are part of an LCP).

We support the principle of no back-sliding in relation to existing permit conditions for plant in the MCP size range (e.g. Part B plant MCPs on IED regulated sites) where the operational characteristics of the plant remain unchanged. Where changes to the operation of such plant are made which require a permit variation, this should provide a trigger for the appropriateness of the existing permit conditions to be considered in full.

***Q7. Do you agree with the suggested approach for compliance checks?***

We agree that a compliance regime relying on site visits would be costly and disproportionate and support the proposal that these should only be carried out in cases of complaints, lack of cooperation from operators or where sites are complex and require a visit to determine applicable provisions.

We agree that checking of compliance should be done remotely and that spot checking of monitoring result compliance would represent a proportionate approach. There is no clear agreement among Energy UK's Members regarding whether the reporting of monitoring results should be mandatory or whether records should be retained by the operator and submitted for spot checks when requested by the Regulator.

Some consider that mandatory reporting would have multiple benefits allowing some level of automated checking, be a more effective deterrent to non-compliance, support the compilation of UK emission inventory reporting under the Gothenburg Protocol and National Emission Ceilings Directive, and support the collation of emissions data for input to the MCPD reporting requirements under Article 11, 12, 6(10).

Others consider it would be very onerous and disproportionately costly to have mandatory reporting of monitoring results for all MCPs, and the Regulators' ability to process the data in the early stages could be called into question.

If mandatory reporting were to be introduced, operators would want the Regulator to provide an on-line portal that is genuinely straightforward to access and use. There are already automated data processes employed by UK Regulators that could be used for reporting e.g. for EU Emissions Trading System reporting.

It might be prudent for the Scottish Government to schedule a review of the arrangements after the first three years, once there is some experience of the new regime, to assess whether the process is providing sufficient feedback on emissions.

Compliance assessment by means of emissions reporting could avoid the need for a costly, impractical and burdensome plant inspection regime, noting that, in many cases, MCP installations are unmanned, so any site inspection by a Regulator would have to be pre-arranged with the operator.

***Q8. Do you agree that reporting on non-compliances with Emission Limit Values should be restricted only to those listed?***

We consider that the approach set out is reasonable and proportionate.

It would be helpful if the Scottish Government could explain more fully the reasoning for taking MCPs out of coverage of Section 41A of the Clean Air Act 1993.

***Q9. Do you agree with the proposed approach for monitoring?***

Energy UK agrees with the Scottish Government's approach to monitoring as set out in the consultation text on page 8. We agree that the use of 500 or 1500 hours (depending on size) as the interval for CO monitoring for plant which operates for less than 500 hours per year is proportionate, and that a backstop of at least once every 5 years is also reasonable.

We would like to highlight that Table 2 does not entirely reflect the proposals for monitoring set out in the consultation text. In particular, we would like to point out that:

- the frequency of 'every 5 years' for 1-20MWth plant operating < 500 hours per annum does not meet the minimum requirements of Article 2 of Annex III of the MCPD;
- the frequency of 'Annually' for 20-50MWth plant operating < 500 hours per annum offers no additional flexibility (as allowed under Article 2 of Annex III) relative to plant operating 500 hours or more per annum;
- there is no entry for gas oil fuelled plant operating for more than 500 hours (the only liquid fuels described are 'other liquid fuels'); and

- we assume that the footnote to the table should state that the Scottish Government is considering biennial and triennial frequencies, rather than the stated biannual and triennial frequencies for CO monitoring of plant operating for less than 500 hour plant using gaseous and liquid fuels.

We would welcome the opportunity to comment on any further detailed proposals for monitoring.

***Q10. Do you agree that the Clean Air Act provisions on dark smoke and chimney heights should be retained for plant affected by both proposals?***

This approach seems appropriate.

**Q11. Do you agree with the assumptions made/ evidence provided in the policy analysis and associated impact assessment e.g. number of plants, operating hours, emissions?**

We have no specific comments to make.

**Q12. Do you consider that the proposed approach for dealing with high NO<sub>x</sub> generators in England and Wales would be appropriate for Scotland? It would be helpful if you could provide a justification for any views offered.**

We consider it to be extremely important that the regulatory approach in Scotland mirrors the approach applied in the rest of the UK. We believe that without immediate UK wide action, the number of diesel generators will continue to grow. Whilst the impact to date has been limited in Scotland, this situation could rapidly change if generator plant in Scotland are subject to less stringent environmental regulation than those in England and Wales, in particular if high emission medium combustion plant have the full 500 hour derogation from ELV compliance available.

National emission ceilings are set at UK level, hence it is important that action to restrict emissions from high emission plants in England and Wales is not offset by increased proliferation of such plant in Scotland.

We support the principle of additional emission regulation for certain categories of MCP generator plant. There are a range of views amongst our Members on how the proposed approach could be modified and these are set out under broad area headings below, reflecting the section headings in the consultation document where practical.

## **EMISSIONS FROM GENERATORS**

### ***Definition of “generators”***

We recognise the need to ensure that large generator arrays are regulated proportionately. We consider that the existing approach to the regulation of Part A processes, based on site-specific assessment of impacts, and Part B processes using site-specific assessment supported by generic guidance on appropriate emissions levels, has generally worked well.

The permit approach for MCPD implementation should be used to support better regulation of plant which were previously outside the environmental permitting regime.

We would like to emphasise the importance of excluding Chapter III Industrial Emission Directive (IED) plant from the definition of a generator for the purposes of this Regulation. As this plant is already regulated by the IED and subject to BAT requirements, it would be inappropriate for this Regulation to set potentially overlapping requirements.

For MCP generation plant on IED regulated sites and subject only to Chapter II of the IED, we consider that, for consistency and to avoid conferring a competitive advantage, these plants should be subject to the same standard requirements as generator MCPs not located on IED sites.

The most straightforward way to implement the same requirements is to provide guidance, to Regulators of IED sites, that this category (of MCP generation plant on IED regulated sites and subject only to Chapter II of the IED) should be subject to the combination of:

- the applicable limits specified under the MCPD for that size and technology, and
- the emission controls for generators, where applicable.

For MCP plants that are not generators and are subject to Chapter II of the IED only, the guidance should apply the applicable limits specified under the MCPD.

We see it as reasonable that the aggregation rule is applied for the definition of a single generator in reference to the proposed regulation of generators, including aggregation of sub-1MWth units, as (i) from an air quality perspective, the impacts from arrays are on an aggregated basis and (ii) the risk mitigation approach set out is based on AQMAU modelling which aggregates generator units. However, the precise meaning of at the 'same site' and 'for the same purpose' needs defining, to provide regulatory clarity.

In addition, either the definition or guidance should specify that a generator that qualifies as an MCP in its own right (i.e. is >1MWth itself, applying the aggregation rules in the MCPD) should be regulated as a single plant, rather than included in any grouping. This could be achieved by amending the definition as follows:

"The term generator applies to:

- any single stationary electricity generating plant with a thermal input of between 1 and 50MWth or;
- any single stationary electricity generating plant within a group of stationary electricity generating plant located at the same site and providing electricity for the same purpose where the aggregated thermal input of that group of plants is between 1 and 50MWth.

For sites where the aggregated thermal rating of the generators is 5MWth or greater, the standard requirements for Tranche A generators will apply from 2025."

We are concerned that the terms "mobile plant" and "stationary plant" are not clearly defined in the consultation document. This gap in definition could allow a supposedly mobile plant to remain in one place for a significant amount of time whilst generating electricity to supply the grid while avoiding regulation under the Emission Controls for Generators, by being classified as a 'mobile' plant. We are concerned that this potential loophole could result in some operators using 'mobile' generators solely to bypass the Emission Controls for Generators, rather than because the plant genuinely needs to be mobile. There are a number of complexities associated with the definition of mobile plant and the range of scenarios in which they may be operating. We consider that it would be more practical to deal with this through separate guidance drawn up by the Regulator with input from operators and we would be happy to provide input. Two important issues which should be addressed by such guidance are:

- It should be ensured that mobile generation plant with commercial contracts to provide capacity or electricity should not be subject to less stringent emission standards than the equivalent permanent plant,
- There should be a clear demarcation of who has responsibility for compliance with the MCPD or NRMMD in relation to mobile plant (e.g. distribution of responsibilities for the mobile plant owner and the site operator for hired plant brought onto industrial sites temporarily).

In relation to the second point above, a possible solution is to follow the well-established process for mobile plant used to treat waste. The hirer of the plant would hold the permit and would be responsible for compliance with it. When the plant is deployed to an area, a deployment form is completed which sets out the location where the plant will be used and the duration of its use there. This form is then

submitted to the local area Regulator who would apply any additional local restrictions that may be required for air quality, noise, etc.

***Emission limits and thresholds and the five minute abatement limit***

The NO<sub>x</sub> ELV standard of 190 mg/Nm<sup>3</sup> sets a suitable minimum compliance requirement consistent with the MCPD requirements for new plant. This level can be achieved by new unabated gas plant and abated diesel plant. The limit would offer some flexibility for new gas turbines or gas engines firing natural gas, if operating 500 hours or less per year.

We support the principle that the emission level should be delivered promptly within the period of operation, particularly given that some generator plant may be operating for relatively short durations. We consider that this principle should be consistently applied (i.e. it should not be specific to plant using secondary abatement).

We consider that the 5 minute requirement sets a target for diesel plant which would be very challenging - possibly achievable through bespoke solutions involving metal catalyst substrates and pre-heating. However, it is not clear that the 5 minute figure has been robustly determined. This requirement could effectively set a maximum limit on the size and type of plant that can be operated. Such an important control needs to be set on the basis of sufficient data and other information. Further discussion with generator and abatement equipment manufacturers should be undertaken to determine the appropriate timing. Given the complexity and uncertainty over this issue, we recommend that the specific value of the time limit to abate effectively is addressed in guidance, rather than specified as a single fixed value in the regulations.

It is important that compliance with the standard requirements is not seen as negating the need to assess the impacts on local air quality, particularly for larger plant and generator arrays. We therefore propose that demonstration of air quality compliance should be a mandatory part of the standard requirement for generator plant, allowing the regulator to set site-specific permit conditions to safeguard air quality where appropriate.

***Timelines and transitional measures to protect energy security and minimise costs to business***

The requirement to apply the standard regulations from 2025 and 2030, in line with the MCPD requirements seems reasonable – noting that this will effectively bring forward the compliance date for some sub 5MWth plant from 2030 to 2025 due to aggregation under the generator definition. The regulations should also ensure consistency with the requirement to hold a permit from one year prior to the emission compliance date.

There is no clear agreement among Energy UK's Members regarding transitional arrangements for existing MCP generators with 2014/15 Capacity Market contracts. Operators who have such plant are supportive of the proposals in the consultation document and consider that a failure to introduce transitional arrangements could force them to terminate Capacity Market contracts, thereby putting security of electricity supply at risk.

Other operators take the view that the standard requirements should be applied to existing plant from 2025 and 2030 without exception and regardless of the existence of a binding contract.

***Proposed regulation of generators with Capacity Market Agreements for new capacity from 2014/ 2015 auctions in the same way as generators that are already operating***

Operators who entered into these Capacity Market Agreements did so on the basis of the information on future regulation that was available to them at that time. Details of the UK-specific regulation of MCP generators were not available at the time of these auctions. The majority of Energy UK's Members consider that generators with 2014/15 Capacity Market Agreements should be regulated on the basis of whether they are classified as 'existing' or 'new' plant under the MCPD. Plant which are put into operation before 20 December 2018 should have the standard requirements applied from 2025 or 2030

as applicable, whilst plant which are put into operation after this date, should comply with the standard requirements from the start of operation.

A minority of Energy UK's Members consider that a pre-existing supply contract should not exempt operators from compliance with environmental legislation and to do so would set a worrying precedent. In their view, such generators should be subject to Defra's proposals from January 2019 in the same way as other planned projects.

### ***Applying limits to generators <1MWth***

In relation to whether sub 1MWth sites should face the same regulation as sites >1MWth, we do not consider that this is justified from an air quality perspective and could potentially create a significant regulatory burden by drawing in a large number of additional plant. If this does become a problem in the future, for instance if there is increased proliferation of sub 1MWth sites encouraged by aggregator companies, this could be addressed through regulation of third party aggregator activities.

If the Scottish Government is still concerned that there may be an impact on air quality due to the proliferation of <1MWth MCPs, then it should carry out a feasibility study to understand the effect that limits would have upon air quality and on the operators of these small generators prior to regulating this plant.

### ***Exemption for legitimate testing***

We recognise the need for testing and an upper limit of 50 hours appears appropriate for testing purposes without the requirement for a permit. However, the winter peak is a period of time when weather conditions can combine with emissions to impact air quality adversely. The Scottish Government needs to ensure that testing in this period does not compromise air quality. Applying monthly limits to testing hours could be one way to mitigate that risk.

The Scottish Government should also produce clear guidance on what constitutes valid testing for back-up plant.

### ***Particulate Emissions***

Primary particulate emissions from diesel engines (primarily in a transport context) have repeatedly been implicated as a major toxicity factor in ambient particulate both in toxicological and epidemiological studies; hence it is important that these emissions are adequately regulated.

As set out in the section 'Emission limits and thresholds and the five minute abatement limit', making an air quality assessment a mandatory element of the standard requirement for operators should address any PM risks.

### ***Exemptions from emission controls***

The proposed exemptions appear reasonable and proportionate.

As a point of clarification, the proposed wording in the box on page 12-13 of the consultation document 'From 1 January 2019 and subject to the requirements of the MCPD in relation to plant that are MCPs, all generators will require a permit to operate, except...', could be misinterpreted if the 'subject to the requirements of the MCPD' element is not fully understood. All new MCPs will require a permit to operate from 20 Dec 2018 and existing MCPs from 1 Jan 2024 (>5-<50MWth) or 2029 (1-5MWth), regardless of whether they fall into an 'exempt' category. In particular, it should be clarified that 'Back-up generators (generators operating to supply power during an on-site emergency e.g. a power cut) which are operated for the purpose of testing for no more than 50 hours per year' are not exempted from the MCPD requirement to hold a permit under the Article 2(4) exemption of testing activities from the MCPD scope. These plant require a permit by virtue of any 'non-testing' emergency back-up running. Similarly generators on nuclear sites will need to comply with the minimum MCPD

requirements and have these included within their site permit (e.g. minimum emission testing and reporting).

We agree that generators providing power at nuclear sites should be exempt on the basis that these sites are licenced under a separate regulatory regime which ensures that these back-up generators are only used for supplying power to the site and cannot be used to generate power for export off-site. The operation of diesel engines on nuclear power station sites is subject to regulatory controls through the nuclear site licence requirements set by the nuclear regulator (the Office of Nuclear Regulation).

To ensure that the exemption for nuclear sites is targeted only at those generators that should qualify on grounds of nuclear safety, we propose an alternative wording for the nuclear site exemption in the regulations. Our proposal is that the permit exemption (b) wording in the box on page 12-13 of the consultation document is replaced by the following text:

*b) Generators operating with a defined nuclear safety role within arrangements approved by the Office for Nuclear Regulation under a Nuclear Site Licence.*

This would be in place of the currently proposed wording of:

*b) Generators operating on a site that is the subject of a nuclear site licence <sup>7</sup>*

and footnote 7:

<sup>7</sup> *A nuclear site licence issued by the Office for Nuclear Regulation*

This replacement wording would restrict the exemption for generators within a nuclear site to only those with a safety role and regulated under the Nuclear Site Licence.

Finally, if similar controls are to be introduced in Scotland, it is vital that generators which provide an island supply are exempt from the proposals. The unique nature of island supply was discussed at length during the MCPD negotiations in Europe resulting in a number of derogations for island supply in the text of the MCPD, which the Scottish Government is proposing to transpose in full (as is Defra in England and Wales). This approach must be mirrored in the implementation of emission controls for generators and an exemption included for island generation in order to ensure continued security of electricity supply.

### **Monitoring**

The proposal for permitted generators that rely on secondary abatement is somewhat confusing and we assume it is 'subject to the minimum MCPD requirements' as set out in Table 2 of the consultation document.

We consider that any plant which has ELVs imposed as a permit condition must be able to demonstrate compliance with those ELVs and the MCPD Annex III timescales represent the appropriate approach – including for generators where compliance has effectively been brought forward and regardless of whether abatement has been adopted or not.

### **Q13. If you do not consider the proposed approach to be appropriate, do you have an alternative proposal or do you consider that no such controls are required in Scotland?**

As noted in our answer to Question 12, we support the principle of additional emission regulation for MCP generator plant and have outlined our views on how the proposed approach could be modified.

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