

## **Version 1.5 Protocol for IED Annex V 500 Limited Hours Derogation December 2015**

### **1 INTRODUCTION**

This paper describes a protocol for the application of the limited hours derogation (500 hours per annum) in Part 1(2) of Annex V of the Industrial Emissions Directive (IED). This protocol applies in England and Wales.

### **2 WHAT IS THE 500 LIMITED HOURS DEROGATION?**

Annex V of IED provides derogation from NO<sub>x</sub> and CO emission limit values for gas- turbine plants as follows:

Liquid fuels (Point 5):

*“Gas turbines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.”*

Gas fuels (Point 6):

*“Gas turbines and gas engines for emergency use that operate less than 500 operating hours per year are not covered by the emission limit values set out in this point. The operator of such plants shall record the used operating hours.”*

These derogations are equally applicable to existing and new plant.

The Environment Agency has stated that any operation below 500 hours per year constitutes “emergency use” in accordance with this derogation and that ELVs will therefore not be applied to such plant.

### **3 REQUIREMENTS FOR THE 500 LIMITED HOURS DEROGATION**

#### **3.1 General Arrangements**

Plants covered by this limited hours derogation must be subject to BAT and this derogation will not be used to justify poor environmental performance.

A plant seeking to operate solely under this derogation must have been nominated as such in the response to the current Regulation 60 notice by 31/3/2015 or by subsequent variation application. Such a plant also has the opportunity to return to other viable compliance routes and hence emergency plant that wish to change their compliance route and operate above 500 hours per year will be required to submit an application for a variation to the Environmental Permit.

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Gas turbine plants which operate for less than 500 operating hours in a year within the derogation will be considered to operate within the emergency use category, specified in the IED, for that calendar year and accordingly the plants will not be subject to ELVs.

CCGTs operating under the ELV compliance route can also operate in OCGT mode for up to 500 hours per calendar year without the application of emission limit values. This is to facilitate fast response operation which would otherwise meet the criteria of emergency operation. This flexibility is to enable fast start up to supply power at short notice and during periods of high electricity demand, but is not to cover periods of operation with poor environmental performance or where conditions are required to comply with environmental quality standards (as articulated in Article 18 of IED).

Note: Dedicated OCGT operations and CCGTs operating in OCGT mode that seek to operate for in excess of 500 hours per year will require compliance with the relevant ELVs and must be subject to the application of BAT.

### **3.2 Emissions Monitoring**

The IED [Annex V Part 3 (2)a] allows the competent authority not to require continuous measurement for combustion plants with a life span of less than 10,000 operational hours. The total period of operation for plants associated with <500h per annum operation is expected to be less than 10,000h and therefore the derogation from the requirement for continuous measurement would be applicable.

Operation of CEMS units will not be required and instead, the operator shall record and report operating hours as described in Section 3.3 below.

Although continuous measurement will not be required, given that ELV compliance is not required, then periodic measurement [Annex V Part 3 (3)] is also not required. However, reporting by calculation will be required, as a minimum, for all plant types. Further details are provided in the Electricity Supply Industry – IED Compliance Protocol for Utility Boilers and Gas Turbines. In the case of a plant entering the <500h per annum mode of operation after 1 January 2016, the cumulative total 500h operation from the date of first entry into this mode shall be considered to satisfy the 10,000h monitoring derogation.

In the case of plant that are already fitted with CEMS which permanently enter the <500h per annum mode of operation there would be no requirement to monitor and report continuously since the burden of maintaining the CEMS in working order and in a Quality Assured condition would be too onerous. However, if the plant mode of operation is subsequently changed then the Operator must comply with the required monitoring arrangements associated with the new mode of operation, e.g., continuous monitoring for plant greater than 100 MW thermal input that are subject to an ELV.

CCGTs operating in OCGT mode for less than 500 hours per year shall exclude the outputs from the CEMS units (during these periods) from the demonstration of compliance with ELV requirements.

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### **3.3 Operating Hours**

Article 72 of the IED requires that all combustion plants subject to Chapter III of the IED report the number of operating hours on an annual basis and, if applicable, the hours associated with operating under a 1,500h derogation. For compliance purposes therefore, in the UK, this will include the reporting of the cumulative annual hours for plant; with a Limited Lifetime derogation, the five year rolling average for plant in the 1,500h derogation (which can be entered in-year) and those with a 10,000h monitoring derogation which includes those operating <500h per annum as detailed in this protocol. Further details are provided in the Electricity Supply Industry – IED Compliance Protocol for Utility Boilers and Gas Turbines.

With regard to plant operating under the <500h per annum derogation, no hours may be carried forward from one calendar year to the next. .

Note that, in the case of a plant initially in 1500h operation at the start of a year which then enters a <500h operating mode, the annual emergency operating hours are then given by the difference between these reported annual operating hours and the annual 1500h derogated hours. That is, the different compliance modes accrue hours separately. However, the 500h period of emergency operation is pro-rated to reflect the remaining available operating time in that year, e.g., entering this derogation on 1 July (half way through the year) results in a 50% reduction from 500h to 250h operating hours.

For plant that subsequently re-enter a 1500h derogation, from 500h operation, then the 5-year running average is started afresh but the 500h is again pro-rated to reflect the departure date from the emergency operating mode.

It should be noted that this pro-rating of the 500h period does not apply to a CCGT that is temporarily operating in OCGT mode. In this case, the 500h relates to open cycle operation which can be undertaken without restriction throughout the year as described in Section 3.1 above.