



## -----ENEMALTA DPS IPPC APPLICATION - FORM C-----

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0466 – Enemalta DPS IPPC Application

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***Enemalta plc.  
Ing. Fredrick Azzopardi,  
Central Administration Offices,  
Church Wharf,  
Marsa.***

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8<sup>th</sup> June 2016

Mr. Michael Sant  
Environmental Permitting and Industry Unit  
ERA  
Hexagon House  
Marsa

Dear Mr. Sant,

Reference is being made to the IPPC permits IP 0003/B for MPS and IP 0002/E for DPS whereby one of the obligations that Enemalta has is to calculate the emissions for the pollutants sulphur dioxide, oxides of nitrogen and particulates being emitted from the stacks.

In 2015 with the introduction of the interconnector and the shutting down of the Marsa Plant operation, the operating hours of the open cycle gas turbines (OCGTs) both at Marsa (Stack 'M5) as well as at Delimara (Stacks D2 and D3) have been reduced drastically given that these gas turbines are the last plant to be put into service due to their high cost of operation.

Enemalta would like to put forward the following facts for your consideration:

- (1) With the changing scenario at Enemalta, the OCGTs are intended to be used only in Emergency situations. In view of this the OCGTs will be in operation mainly for short tests to ensure that the plant would be available in case of an emergency, or in case of national emergencies following problems either with the interconnector or the FSU. In fact as from 2015 the hours of operation for the OCGTs have reduced drastically, those for Marsa totalled just 38.7 hours whilst those for Delimara were 41 hours and 208 hours for GT1 and GT2 respectively.

This means that given the above mode of operation, most of the operating time of the OCGTs would fall within the start up and shut down periods. Since emissions are monitored by the Continuous Emission Monitoring System (CEMS) during stable operation and start up and shut down periods are not considered, the system will not be able to collect enough data for its calculations and hence will not function correctly.

- (2) Since the installation of the CEMS on the stacks at Marsa and Delimara, we have been experiencing frequent damages on the equipment mainly on stack M5 (OCGT MPS) due to the high temperatures that the equipment is exposed to in this stack.

Repair costs are very high and it is getting to be economically not feasible to repair the system.

**Note:** The Delimara OCGTs (DPS 2 and DPS 3) do not have a continuous emission monitoring system installed due to the short stack height which makes the operation of the CEMS unreliable. The emissions for D2 and D3 were calculated by multiplying emission factors for SO<sub>x</sub>, NO<sub>x</sub> and dust with the fuel burnt in each month by the respective OCGT.

In view of the above problems, Enemalta, would like to ask ERA, if possible to be waived off from submitting emission data for the three OCGTs as long as these are operated for emergency purposes.

If this is not possible then to be allowed to use the calculation method to calculate the emissions from stacks M5 at Marsa and D2 and D3 at Delimara instead of the measurement method.

In this case the method being proposed is to consider the **worst case scenario** for the calculation of the emission factor for each pollutant as follows:

#### **SO<sub>x</sub>**

This will be calculated as in the past using the emission factor calculated from the sulphur content of the fuel and the fuel burnt by the OCGT during each month. Sulphur content to be taken as 0.1% for gasoil.

#### **NO<sub>x</sub>**

The Emission factor for NO<sub>x</sub> will be taken to be the worst case scenario emission factor calculated from the NO<sub>x</sub> emissions in tonnes reported for NEC during the years 2012, 2013, and 2014 and the electricity generated in MWh for each respective OCGT. The highest emission factor in tonnes/MWh resulting from the calculation for any of the OCGTs for any year 2012, 2013 or 2014 will be the chosen emission factor for NO<sub>x</sub>. The NO<sub>x</sub> emissions will be calculated using this worst case scenario emission factor multiplied by the power generated per month for the respective OCGT.

#### **Dust**

Emission factor for Dust will be calculated using the same method as above for NO<sub>x</sub> however using dust emissions in tonnes for the calculation.

Due to the resultant anomalous readings on the CEMS for stack M5 during 2015 and if the proposed calculation method will be accepted by ERA, Enemalta would like to ask permission to start using this method for the calculation of emissions from the OCGT stacks (MPS and DPS) as of 2015.

Enemalta would like to clarify that the request, either to be waived off completely from submitting emission data for the OCGTs or if this is not possible to adopt the calculation method for the calculation of emissions as explained above, will only be valid **whilst** the OCGTs are used for emergency situations. In case that Enemalta plc changes its policy on the operating conditions for the OCGTs and will start using the Gas Turbines as base load, then ERA will be informed accordingly and the provisions prior to the introduction of the interconnector will be reinstated.

Whilst hoping to have a positive answer we thank you for considering our request.

Yours Sincerely,



Ing Carmen Abela

SPE

Regulatory Affairs

cc Mr Anthony Aquilina

Ms Nathalie Ellul

Mr Mark Scerri