



Joint Air Quality Unit

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**Uniper UK Limited response to Defra consultation on tackling nitrogen dioxide in our town and cities**

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Uniper is an experienced international energy company focused on power generation, energy trading, transportation, and storage, as well as a provider of specialist power engineering services. In the UK we own seven power stations comprising over 6GW of flexible installed capacity, as well as Holford gas storage site. As such Uniper is the fifth largest generator in the UK. Our employees, our experience and our assets make us a well-established business that makes an important, tangible contribution to Britain's security of supply and contributes to a cost-effective transition to a low carbon society.

**We are pleased to take part in the consultation process.**

In summary:

- all sources of NOx should be addressed consistently, commensurate with the impact at ground level;
- the proposals by Defra
- <sup>1</sup> to create a protected subset of generation capacity exempt from meeting environmental standards are in direct conflict with the aims of the air quality plan; and
- adequate protection through the planning process is needed such that constraints on which emissions impact are assessed are reflected in permits and monitored.

The consultation document recognises that industry, including the energy sector, does not make a significant contribution to roadside concentrations of NOx on either a national or urban scale. However, we are concerned through recent capacity auctions we have seen the proliferation of diesel engine arrays with NOx emission levels well above those of regulated coal, gas and biomass -fired power stations thereby threatening air quality.

It is therefore important that the transposition of the Medium Combustion Plant Directive (MCPD) and the additional generator proposals are taken forward in a manner which prevents further proliferation of unregulated diesel generation and sets appropriate limits and protects air quality.

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<sup>1</sup> Defra Consultation on reducing emissions from Medium Combustion Plants and Generators to improve air quality, page 16, Proposed Timelines and Transitional Measures to protect Energy Security and minimise cost to business.



We want to see smaller generators competing alongside other technologies on a level playing field to provide the energy services required for the UK. However, this must be on a consistent basis that takes the UK towards a cleaner, reliable low carbon energy supply.

**Question 1: How satisfied are you that the proposed measures set out in this consultation will address the problem of nitrogen dioxide as quickly as possible.**

One of the existing measures identified in Appendix H of the consultation to aid the UK achieving its targets for nitrogen dioxide is the transposition of the MCPD into UK law. DEFRA have recently consulted in the implementation of these regulations along with additional controls for generators. These proposals included an option that generators who have Capacity Market agreements for new capacity from 2014 and 2015 auctions and Short Term Operating Reserve contract or Firm Frequency Response contract predating 1 December 2016 will not be required to apply additional measures e.g. abatement to safeguard local air quality until the date the contract/agreement expires.

We strongly disagree with this proposal and the UK government needs to be mindful that this approach could lock in high emissions for ten to fifteen years thereby removing the opportunity to introduce measures to address overall NO<sub>x</sub> emissions as quickly as possible. Non-abated diesel reciprocating engine emissions, typical of those in the 2014/15 capacity market (based on information in planning applications<sup>1</sup>), are more than ten times higher than those from new open cycle GT plant and more than twenty times higher than those of new CCGT plant. Natural gas fired reciprocating engines are also substantially higher NO<sub>x</sub> emitters than GT plant.

The consultation sets out in section 7.3.3 the Government ambition to provide additional funding to accelerate the uptake of electric cars.

It is therefore important that the air quality challenges posed by diesel fueled power generation are addressed as urgently as transport, since moving to electric vehicles powered at peak times by diesel fired reciprocating engines would potentially undermine the UK Government's objectives on tackling poor air quality.

**Q7 How could the Government further support innovative technological solutions and localised measures to improve air quality?**

The consultation sets out a number of measures to restrict emissions from transport including retrofitting of pollution reducing technology such as selective catalysts reduction. We believe this is the right area of focus but believe restricting this to diesel fuelled vehicles is only part of the solution.

Government should ensure that diesel fuelled generation plays its part in improving air quality and should be working with industry to support the development of effective abatement technology for NO<sub>x</sub> reduction to meet the MCPD. The NO<sub>x</sub> intensity of a reciprocating engine fuelled with diesel or biodiesel is greater per MWh of electricity generated than a coal fired power station with Selective Catalytic Reduction (SCR) technology.



**Question 8: Do you have any other comments on the draft UK air quality plan for tackling nitrogen dioxide**

We believe there needs to be additional measures put in place for the following areas, to ensure air quality impacts are minimised. There should be a suitable assessment of air quality impacts through the planning process and in some cases for small scale generation this has not taken place. Our review of recent planning applications<sup>1</sup>, has shown there are usually no constraints on running even when the operator has assessed impacts based on limited operating hours. There are no requirements to monitor operating hours or emissions. It is essential therefore, as a minimum, to see strict assessment of environmental impacts and mitigating measures through the current planning process and retrospective action taken when this has been neglected.

All mobile plant participating in commercial power generation activities must be subject to the same minimum environmental standards as stationary medium combustion plants. This includes the regimes for demonstrating emissions compliance through periodic testing and being subject to the same competent authority compliance auditing procedures.

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<sup>1</sup> Taken from planning applications submitted to local authorities submitted in 2015 and held on local authority websites

# NOx intensity by Technology Type and Fuel

