

One-Day Seminar

## Emissions from Reciprocating Engines and their Abatement

18<sup>th</sup> September 2018

IGEM Kegworth

Gas engines are expected to play an important role in supporting the variability of renewables, along with storage systems, hybrid plants and DSM.

This situation is likely to continue for some time as coal is finally phased out in the UK and the growth of renewables continues. This will occur at a time when demand for charging EVs is planned to steadily increase.

Diesel engines using liquid fuel will also remain vitally important – particularly in transport, whilst alternative fuels and EVs become more widespread.

Unabated emissions, especially in conurbations, are no longer acceptable in many parts of the World.

The use of gas fuels – natural gas and biogases of various origins – is emphasised in National Grid's Future Energy Scenarios 2017 where gas is seen as a continuing important fuel until at least 2050.

It is anticipated that emission regulations will be further tightened in future. For diesels, these are mainly focussed on NO<sub>x</sub> and PM but with generators needed to start and load quickly, requirements to achieve emission levels in short times can be challenging.

For gas engines, the issue of methane slip is currently unregulated – at least in the UK – this is likely to change in the not too distant future. Exhaust treatment could be necessary to oxidise any unburned HCs.

The seminar is intended to:

- Forecast where exhaust emission regulations in UK/Europe are likely to go in the short term – say 2025.
- Establish what abatement technologies are available (or being developed) to achieve the anticipated ELVs. Evidence of how well existing techniques work in practice is especially valuable
- Establish the cost implications of abatement and thus the likely impact on market prospects for generators

Speakers from the Environment Agency, Ricardo, OEMs, Johnson Matthey and a lubricating oil company are planned for the day's programme