



According to the World Health Organisation 4.2 million people die every year from exposure to outdoor air pollution, and a further 3.8 million die from indoor pollution - 91% of the world's population lives in places where air quality exceeds WHO guideline limits.

Clearly, concerted international action is necessary to reduce the emissions of harmful pollutants and to lower exposure levels. This would not be possible without accurate, reliable monitoring, and AQE 2018 (the Air Quality & Emissions event) was created to underpin that requirement, and is the latest in a series of events that began in 2003.

AQE 2018 (www.AQEShow.com) will take place in Telford (UK) on 21st and 22nd November, and is comprised of Conferences, Seminars, Workshops and an International Exhibition. In combination, these will provide visitors with the latest information on testing, analysis and monitoring of industrial emissions, ambient air quality and workplace exposure; including regulations, methods, standards and technologies.

Registration for AQE 2018 is now open and all pre-registered visitors will benefit from free parking, lunch and refreshments, as well as free entry to WWEM 2018, the co-located water, wastewater and environmental monitoring event. Visiting without pre-registration will cost £20/day.

The AQE 2018 Conferences are CPD certified and combine with the workshops to provide visitors with an opportunity to tailor their visit in order to access the most relevant information whilst also leaving time to browse the exhibitions.

Day 1: Wednesday 21st November

The **STA (Source Testing Association) Conference** will focus heavily on the Medium Combustion Plant Directive (MCPD), which will come into force on 20th December 2018. The MCPD applies to generators and plants between 1 and 50 MW (net rated thermal input) and an impact assessment has estimated that between 30,000 and 35,000 of these plants are currently operating in the UK alone. The estimated number of MCPs in the EU is around 143,000.

From 20th December 2018 new UK plants will need to be registered or have obtained a permit and comply with emission limit values (ELVs) for sulphur dioxide, oxides of nitrogen (NO_x) and dust. The ELVs to be applied are dependent on plant, fuel type and size. Existing plants (i.e. those which were in operation before 20th December 2018) must be registered or have obtained a permit. They must comply with the requirements from 2024 or 2029, depending mostly on size, with the aim of full implementation by 2030.

Covering all perspectives in the power generation sector, the MCPD Conference will include speakers from the Environment Agency, Uniper, Viridor and the Combustion Engineers Association.

The **Environmental Industries Commission (EIC) seminar** on 21st November will focus on solutions for the management and delivery of Clean Air Zones. Dan Williams from Johnson Matthey will set the scene by describing the work of the EIC Air Quality Working Group, and this will be followed by an update on feasibility studies, CAZ cost/benefit analysis and technology solutions from Guy Hitchcock, Knowledge Leader to CAZ for Ricardo Energy & Environment. Jim Mills from Air Monitors will then describe the measurement and reporting of air quality in CAZs.



Following a presentation on Euro 6 Regulations and enforcement, Mark Cooper, representing HJS Emission Technology, will describe the retrofit of heavy duty diesel vehicles. With a focus on taxis and light vans, Holly Jago from Calor Gas/Autogas will then explain the role of LPG, and Gerard Chaustow of Try EV will discuss issues relating to electric vehicles and charging points. Following a similar theme, Alan Barnard of Green Urban Solutions will describe emissions reduction through retrofit on construction equipment. In the final presentation before lunch Mo Saqib from Dearman will report on the benefits of innovative technology in transport refrigeration units.

In the afternoon, Mark Penny from Energy Solutions will describe the advantages of temporary hybrid power generation on construction sites, and William Tebbit from Green Biofuels will present a synopsis of alternative fuels including test results from real world testing. For more information visit www.aqeshow.com.

The EIC is a unique trade body bringing together organisations whose innovation, technology and services help deliver a better environment. Multinationals, technology start ups, consultancies and universities can all be found within the membership, which gives the EIC a powerful voice with Government and regulators. Through a programme of organised events and its specialist working groups and briefings, the EIC provides its members with closer contact with Government and greater insight into the impact of new and prospective regulations.

Day 2: Thursday 22nd November

Ambient air quality will be the focus of the IAPSC Conference (Investigation of Air Pollution Standing Committee) on the second day. The main themes of this conference will be: sensor-based air quality monitoring techniques; engaging the public with air quality; and green infrastructure and its potential role in LAQM. This conference is administered by Ricardo Energy & Environment, and booking can be made via www.IAPSC.org.uk.

On the morning of Day 2, the Renewable Energy Association Conference is titled: Understanding emission risks from Organics Recycling activities. With the recent release of the Best Available Techniques for the waste sector now live in the hands of the regulator, there has never been a better time to learn about issues relating to emissions from biowaste; such as odour thresholds and perception, or the science behind composting and process optimisation. This half-day conference is free to attend for REA Members and £50 for others.

A programme of free technical workshops will run throughout both days, offering visitors the opportunity to learn more about the latest methods and technologies on show. The workshop presenters include experts from some of the instrument manufacturers in addition to organisations such as NPL and TÜV. A wide variety of themes will be addressed covering both industrial emissions and ambient air quality. For example, speakers will address topics such as real-time particulate characterisation, air quality monitoring using mesh networks, and novel technology behind a new national monitoring capability. Other speakers will discuss the identification of pollution hot-spots from vehicles in urban environments, as well as future trends in ambient air quality monitoring and the role of standardisation.

The industrial emissions presentations will include an analysis of historical measurements of CO, NO_x, TOC and SO₂ in UK and German proficiency tests in stack simulators, as well as the accuracy of NO₂ emissions measurements and the effect of PM size distribution on CEMS response.

AQE 2018 International Exhibition

Many of the exhibitors will be launching new products and services, and some of these are outlined below. However, the only way to see them all is to be there.

Celebrating their 70th birthday, DURAG will introduce AP2E - manufacturers of infrared gas analysers for CEMS and Process Monitoring. DURAG claims that the combination of OFCEAS (Optical Feedback Cavity Enhanced Absorption Spectroscopy) and Low Pressure Sampling provides an analytical technique that surpasses all others.

The stars of the show for Air Monitors will be AQMesh pods and FIDAS particulate monitors, both of which have featured prominently in recent major project awards. FIDAS is being rapidly adopted by national networks, and as a small, battery-powered, web-enabled air quality monitor, AQMesh is lowering the cost of monitoring in multiple locations.

Enviro Technology's 'Smogmobile' will be streaming live data at the show, and will contain an

ultraportable greenhouse gas analyser (UGGA) and the T500U CAPS NO₂ analyser for the direct measurement of NO₂.

With over 600 systems operating in the UK, ANV will demonstrate a multi-parameter system for monitoring noise, vibration, dust and weather - all on one website. Ashtead Technology's stand will feature a wide range of gas and particulate monitoring instruments including an MCERTS approved Testo emissions analyser and the new QUEST monitors for measuring toxic gases, heat stress and particulates in the workplace.

In addition to particulate sensors, the Alphasense stand will also feature a full range of gas sensors, providing instrument developers and manufacturers with the opportunity to choose the best sensor for their market. Alphasense staff will explain why every sensor is supplied with a unique calibration.

DRM Technic will unveil Bühler Technologies' brand new, highly innovative ranges of low voltage and portable gas analysis products, and Pollution Analytical Equipment will launch the new Polaris FID Smart Edition portable TOC analyser for stack emissions.

The National Physical Laboratory (NPL) will be highlighting a number of its services and research programmes including the use of low cost sensors in ambient monitoring, and studies on the performance of stack emissions reference methods.

There will also be the chance to see the GasHawk Personal Gas Detector, which Trolex claim will reduce typical personal gas detection fleet ownership costs by 80%.

LC Services, the UK supplier of Entech instruments, will announce the release of the world's first multi-capillary column trapping system for the precise concentration of vapour phased volatile chemicals without the need for liquid nitrogen or electronic cooling. The company believes this is a game changer for all environmental laboratories and one of the biggest technological leaps in the TO-15 market for VOC analysis by GC/MS.

A Gala Dinner for both AQE and WWEM will take place on the evening of 21st November. The winners of various competitions will be announced at this event, and the guest speaker will be Mr Brian Blessed.

With so much to see and do at AQE 2018, visitors are being urged to plan for two days at the event. "Last year, many of the AQE visitors were unable to find sufficient time to see the entire Exhibition and to attend some of the specialist Workshops," comments AQE organiser, Marcus Pattison. "For

example, the IAPSC Conference will run throughout the second day, but the EIC seminar on Clean Air Zones runs on the first day, and to complicate matters further, many visitors are also likely to want to browse the WWEM Exhibition – clearly forward planning is essential!"

Registration is now open at www.AQEshow.com.



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