



Honourable Members of the European Parliament,
Ladies, and Gentlemen, good afternoon

Firstly, let me thank the organizers in the Parliament's EMIS committee for offering me the opportunity to share the expertise of the European emissions control industry with regards to the use of emission control technologies in the exhaust system to reduce harmful combustion pollutants from European vehicles. In this context AECC recently contributed to the ENVI committee hearing on Real-Driving Emissions held on 23 February in this Parliament.

Allow me to introduce AECC, the Association for Emissions Control by Catalyst. We are an international, non-profit, scientific association of European companies engaged in the research, development, production and testing of catalyst and filter-based technologies that can be used for the control of harmful emissions from mobile sources.

AECC member companies supply Emissions Control Technologies (ECTs) to the automotive industry. AECC members develop, produce, and sell to their customers the emission controls that are fitted by respectively Tier 1 canning suppliers and OEMs in the exhaust systems and subsequently to the vehicles. AECC exclusively represents the interests of its member companies in the European emission control industry. AECC's focus and expertise therefore relates solely to the functioning and performances of the catalytic aftertreatment components of the integrated emission controls systems.

My name is Dirk Bosteels. I am the Executive Director and spokesperson of the Association. I joined AECC 16 years ago first as Technical Manager and since April 2002 I have been at the helm of the Association. With me is Ms Cécile Favre, AECC's Technology and Communications Manager, who has been with AECC for more than 8 years now.

AECC is a small but focused industry association representing the AECC members in legislative working groups and informing our members on upcoming legislative processes. AECC is a stakeholder in the European Commission's working groups on emissions from mobile sources and is also accredited to the UNECE World Forum on harmonization of vehicle technical regulations.



AECC's experience goes back to the on-set of vehicle emissions regulation. As a good example not to be forgotten, AECC members are marketing Diesel Particulate Filters (DPFs) that have enabled vehicle manufacturers to efficiently control ultrafine particles emissions from diesel vehicles exhaust since they were first introduced in the year 2000 and then became necessary to meet the Euro 5 standard in 2009.

Stemming from this experience, AECC members have now developed a new technology to control ultrafine combustion particles from gasoline direct injection engines: the Gasoline Particulate Filter (GPF). These GPFs offer a durable solution to control GDI particles emissions in all driving conditions, even in highly dynamic real-world driving.

Last year, AECC evaluated the performance of the first commercially-available passenger car that is equipped with a GPF and confirmed that the GPF-technology offers one of the most effective route for controlling Particle Number emissions from gasoline direct injection cars under a wide range of driving conditions. AECC recently launched a new test programme that will evaluate the Real Driving Emissions performance of a gasoline direct injection vehicle without and with a GPF, under a variety of driving conditions. Results of this programme will be disseminated soon in order to help the EU decision makers decide on the 3rd RDE package.

With regards to the control of the emissions of Nitrogen Oxides (NOx) from Diesel engines -which is the main topic of today's hearing-, it has to be understood that this can only be realised in an integrated approach where advanced engines, clean fuels, sensors and aftertreatment emission control technologies are combined.

AECC members develop, produce, and sell diesel key emissions control technologies for the reduction of the engine-out NOx emissions, such as Selective Catalytic Reduction (SCR) and Lean NOx Traps (LNT). Both SCR and LNT technologies are being introduced by vehicle manufacturers in aftertreatment systems in diesel vehicles to reduce NOx emissions from Euro 6 onwards. They are combined by vehicle manufacturers with engine measures such as advanced combustion modes and Exhaust Gas Recirculation (EGR) to further limit upstream engine-out NOx emissions.



AECC has been contributing to the Commission's working group on Real-Driving Emissions of light-duty vehicles (RDE-LDV) since its creation in January 2011. AECC has supplied real-world emissions data to the Commission Services and other stakeholders involved. In the last two years AECC ran two test programmes on single vehicles equipped with SCR where on-road emissions were measured with Portable Emissions Measurement System (PEMS) instruments, according to the agreed RDE procedure. In both projects NOx Conformity Factors (CFs) of below 1.5 were obtained, thus already demonstrating today, on a couple of vehicles, the set second Conformity Factor that will apply to new vehicles from January 2020/21.

In an early stage of the discussion of the anticipated RDE legislation in the RDE-LDV group and the TCMV, key-results of the AECC Diesel NOx RDE projects were presented in face-to-face meetings with EU Commission services, EU Member States officials, other industry groupings and NGOs but also in public presentations at conferences and in technical papers. Before RDE was considered and Portable Emissions Measurement Systems (PEMS) systems were available for light-duty vehicle application, AECC consistently reported vehicle emissions on the regulated test cycle (NEDC), the candidate new cycle (WLTC) as well as on a more transient test cycle, commonly known as the Artemis cycle (CADC).

One year ago, on 29 April 2015, AECC organised its own AECC Technical Seminar on NOx RDE here in Brussels to which all relevant stakeholders, including EU Parliament Members, were invited to attend and to discuss the topic of NOx RDE. AECC presented on that occasion on-road emissions improvement achieved with emissions control system recalibration of an SCR diesel demonstrator vehicle and the possibility to achieve NOx CF below 1.5. All materials of this AECC RDE seminar are published on the AECC web site www.aecc.eu.

The industry that AECC represents foresees further development of catalytic components as well as combinations of them in high performing systems for diesel NOx abatement under real-driving conditions while maintaining the inherent low CO₂ emissions and fuel consumption of diesel engines. Considering that historically new best-available technology has been substantially optimised as application experience has increased, we are confident that we will achieve this goal.



AECC welcomes the adoption and recent official publication of the RDE legislative packages 1 & 2 and is committed to continue contributing to the development of the remaining RDE legislative requirements, the RDE legislative packages 3 & 4 that are to be agreed in 2016-2017. AECC will continue its involvement in the evaluation of real-world emissions from cars measured with on-board PEMS instruments.

The planned RDE packages 3 & 4 will include important elements that are currently missing from the RDE legislative procedure, such as the assessment of real-world PN emissions from Diesels and GDIs, the assessment of RDE cold-start emissions and the in-service conformity and market surveillance testing provisions that will ensure the whole RDE legislation closes the gap between laboratory emissions measurements and real-world emissions.

To conclude, AECC remains engaged to continue contributing to the development of sound legislation -and in particular the RDE legislative requirements- that will help improving European air quality. AECC is committed to work with all European Institutions and all relevant stakeholders in this important matter.

I thank you for your attention and I look forward to your questions. I will try to address your questions and comments to the best of AECC's knowledge on the application and emissions performance of the catalytic aftertreatment components integrated in the vehicle's emissions control system.

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