



Association for Emissions Control by Catalyst AISBL

## **CARS 21**

Competitive Automotive Regulatory System for the 21st century

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### **AECC RESPONSE TO THE CARS21 PUBLIC CONSULTATION**

**AECC\*** is pleased to provide input to the Commission stakeholder consultation on the Competitiveness of the European car industry. This is an excellent opportunity to provide views on the most appropriate regulatory framework which is conducive to the long-term competitiveness of the European automotive sector.

AECC believes that the automotive industry is not only a key player in sustaining long term **growth and jobs** in the European Union, but is also critical to improving **air quality** and minimizing related **health effects** to the benefit of European society as a whole.

#### **COMPETITIVENESS**

**Innovation and leadership** in core technological and scientific competencies must be key drivers for European competitiveness. Europe is already a world leader in crucial eco-technologies and can utilise and build upon this base to enhance markets and hence the competitiveness not only of those industries developing and producing eco-technologies, but also those utilising and applying them, such as the motor industry. AECC Members invest strongly to develop, test and produce emission control technologies for their customers, the vehicle and engine manufacturers. Members' products are sold worldwide, as are the products of the European motor industry.

The type of technology that is developed and applied is determined by the emission performance requirements that are set in the emission legislation. **Strong but realistic** emissions legislation therefore drives the technology forward through a process of continuous innovation and development. To achieve this, the emission control industry utilises above-average proportions of R&D expenditure and highly-educated staff.

The process of researching, designing, developing and bringing to production a new motor vehicle meeting community requirements on emissions, fuel economy and safety as well as durability, consumer acceptance and financial viability is **complex** and requires a longer-term visibility of legislative targets. It affects not only the motor industry itself, but the whole chain of its supply base. In several areas, not least emission control, it is lower-tier suppliers such as the AECC members who are the key providers of high level technology and who are responsible for the research and development of the technologies needed to meet future requirements.

The policy framework in this sector must therefore ensure that both **clear targets** and detail requirements are available well in advance of implementation, but must also provide a view of the targets to follow at the stage beyond this shorter-term horizon. This will ensure that technology directions can be properly developed and implemented. It will also provide the necessary impetus for continuous and continuing development to ensure the timely availability of improved technologies, whilst avoiding costly changes of direction. It will ensure that those industries supplying key technologies to the motor manufacturers will be able to plan both future research

and future investments in research and production facilities with some degree of certainty as to the market requirements, for which legislative requirements are a key driver.

Nevertheless, it must be recognised that **knowledge** on air quality and health effects in particular is an area of evolution, and the longer-term view must not be permitted to over-ride the implementation of specific actions to respond rapidly to concerns arising from new knowledge.

The option of **fiscal or legislative incentives** for the early implementation of future requirements remains a powerful element in driving forward technologies as well as ensuring more rapid movement towards future targets. It needs to be maintained for the future European policy framework. Such an approach can assist in, for instance, speeding improvements in air quality ahead of legislative requirements, and could provide a route for early response to new concerns. Similarly the option of incentives of programmes to bring older vehicles up to newer standards can both spread the development cost of technologies and aid in meeting overall European targets such as air quality.

## ENVIRONMENT

The comments above are applicable generally, but are also specifically valid for emissions and environmental issues.

The European motor industry's competence in emissions control is critical to its ability to sell in world markets. In many markets, such as the US and Japan, expertise in emissions control is already a pre-requisite to market entry. For the near future, **clean diesels** will be able to meet demanding regional emission standards. In others, for example China, where legislators are responding to increasing vehicle use and deteriorating air quality, then the experience of the European companies in the application of emission control technologies (and specifically of their application to meet European Directives) gives those manufacturers a 'head start' over others who have first to learn the capabilities of the technologies and then the skills of their application.

Consumer demand for environmental 'credentials' on motor vehicles is not always highly visible. However, events such as the recent **public pressure** in Germany for fitment of Particulate Filters to diesel cars demonstrate the strength which market forces can have in moving forward the application of eco-technologies.

As a result of the combination of legislative targets and this public pressure, the European motor industry now has the opportunity to become the dominant world player in clean diesel cars, enabling other markets to benefit from the environmental, fuel efficiency and performance benefits of the European manufacturers' products and taking advantage of a 'first mover' position.

## ROAD SAFETY

Whilst Road Safety is a field in which AECC is neither active nor competent to comment directly, AECC wants to recognise the success of initiatives such as **EuroNCAP** (European New Car Assessment Programme) in moving the market forward via public pressure in the area of safety. Regrettably, there is so far little evidence across all Member States that the same pressures can be as effectively brought to bear on environmental issues. Air Quality and emissions effects are often non-visible and difficult to relate to the public's perception of individual vehicles or incidents.

The two main driving forces therefore remain demanding **emission legislation and incentives** -or disincentives- schemes. In both options, which can effectively be used in combination, the longer-term view discussed above is essential.

Nevertheless the experience of the Euro-NCAP success can be utilised. It clearly shows the benefits of **building societal awareness and responsibility and of “educating” consumers**, leading to systems which can influence consumer behaviour and build a strong platform for sustainable development whilst ensuring competitive, world-class products.

Rating systems for environmental issues such as ECOTEST from ADAC in Germany may, with appropriate support, form a valuable adjunct to the legislative process.

## BETTER REGULATION

Vehicle emissions control technologies have repeatedly been demonstrated to be **highly cost-effective** as well as being technically effective in reducing air pollution and hence human health impacts.

Further, data shows that over time, the **economies of scale** and the process of **continuous development** ensure that the technologies continue to reduce in cost and hence become even more cost-effective. Cost-effectiveness studies therefore need to take account of this continued development, together with the tendency highlighted in some recent reports for the costs to be over-estimated in such studies.

Emissions regulations already depend upon a Type Approval system for the base control mechanism, so as to minimise the testing and administrative burden on the vehicle manufacturers. This includes sensible allowance for extension of approval to related variants or ‘families’. The true objective of emissions legislation is, of course, to **reduce real-world in-service emissions** and hence **provide improved air quality and public health**. To this end emissions legislation needs to clearly relate to the actual operational use of the vehicle fleet, including driving patterns, vehicle life and system durability.

As discussed under ‘Competitiveness’, legislation provides the trigger for developments, and both the motor industry and its suppliers need **adequate lead times** to conduct the necessary development and especially to put in place facilities for volume production. Suppliers will be reluctant to expend large sums on building facilities to produce new products (or increased volumes of existing or refined products) if it is uncertain whether that technology will be required. Similarly the motor manufacturers will be reluctant to incorporate that technology if it is not clear when or if it will be needed and it is uncertain whether it will be available. Working together, these issues can be resolved provided that there is clarity in the timing and performance expectations on legislative requirements.

The legislative process through the United Nations Economic Commission for Europe (UN/ECE and its WP.29 and GRPE expert groups) in Geneva, has been suggested as an appropriate route for **harmonised future regulations** affecting the motor industry’s global operation. This route should indeed provide a valuable means to minimising the industry’s costs through harmonisation of test procedures, providing that the process can be developed to ensure that outcomes are produced in a realistic timeframe. However, the process of harmonisation of requirements (as opposed to test regimes) such as emissions limits needs to be carefully considered. Specific regions of the world or individual nations may well have differing views on the relative importance of issues depending on national conditions (e.g. current air quality), market mix, fuel qualities, driving conditions etc. Whilst the process of harmonisation should be encouraged it should not inhibit the setting of requirements to meet specific European conditions.

Both EU Directives and UN Regulations on topics such as vehicle emissions contain considerable detail on the test procedures and requirements. Such detail might be viewed as over-regulation, but has to be seen in the context of the **complexity of modern vehicle design and technology**, especially electronic control technology. The objective is not simply to ensure that vehicles meet specific limits under specific operating conditions. That is necessary to ensure that there is a ‘level



playing field' for all producers and that the test procedure used in the homologation laboratory and hence the test results achieved can be reproduced by others either at the time or later in the vehicle life.

Beyond this, though, it must be appreciated that the true objective is to **ensure control of emissions and improve air quality in real-world use**. In a complex system it would be possible to concentrate entirely on providing a solution which meets limits on a specific test cycle. Safeguards are therefore included in current regulations and needed in future legislations to, as far as possible, ensure that meeting specific emission limits does not accidentally thwart the overall objective of real world conditions of use and healthy air. Modern legislation should therefore ensure for vehicles to meet specific emission limits under all operating conditions and be implemented in a responsible manner.

**In conclusion, the regulatory process for the motor industry should provide a view of requirements over a timeframe that is compatible with the vehicle system development timeframe and allows planned development of the appropriate technologies.**

**In doing so, it needs to recognise that key technologies are provided by first, second and third-tier suppliers, and that the regulatory framework needs to provide a structure that will allow clarity in longer-term research and investment decisions for all of them as well as the vehicle manufacturers.**

**The future regulatory structure could allow the use of alternative tools to reach overall targets, whilst it should ensure that regulatory simplicity does not result in deviations from the true objectives such as improving air quality and minimising related health effects.**

*\*AECC is an international association of European companies engaged in the development, production and testing of catalyst and filter based technologies for vehicle emissions control. This includes the development, testing and manufacture of autocatalysts, ceramic and metallic substrates and speciality materials incorporated into the catalytic converter and filter and catalyst based technologies to control diesel engine emissions (especially particulates and nitrogen oxides). Members' technology is incorporated in the exhaust emission control systems on all new cars and an increasing number of commercial vehicles, buses and motorcycles in Europe.*

*AECC's members are: Argillon GmbH, Germany; Corning GmbH, Germany; Delphi Automotive Systems SA, Luxembourg; Emitec Gesellschaft für Emissionstechnologie mbH, Germany; Engelhard Technologies GmbH, Germany; Ibiden Deutschland GmbH, Germany; Johnson Matthey PLC, United Kingdom; NGK Europe GmbH, Germany; Rhodia Electronics & Catalysis, France and Umicore AG & Co. KG, Germany.*

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