EUROPEAN COMMISSION
DIRECTORATE-GENERAL
CLIMATE ACTION
Directorate C - Mainstreaming Adaptation and Low Carbon Technology
CLIMA.C.2 - Transport and Ozone

Brussels, 06.12.2011

SUMMARY OF THE MEETING BY THE COMMISSION

Stakeholder meeting on CO_2 from light duty vehicles (Centre Borschette, Brussels, 06.12.2011)

Chairman: Philip Owen, DG Climate Action
Participants: list of participants in the annex

The aim of this meeting was to present to stakeholders the work carried out so far by contractors (TNO consortium)[1] which will underpin the reviews of the modalities of achieving the 2020 targets set in Regulation 443/2009/EC (CO_2/cars) and Regulation (EU) 510/2011 (CO_2/vans). In addition, the Commission also presented its intentions for considering these emissions beyond 2020.

1. Introduction

The European Commission, DG Climate Action opened the meeting and outlined the context of the discussion highlighting the EU's objective of 80-95% GHG reduction by 2050 and the ongoing Commission initiatives such as *'Roadmap for the competitive low carbon economy in 2050'* and the *'Transport White Paper'*. The role of transport decarbonisation in meeting the EU 2050 targets, as well as co-benefits of increased energy security and competitiveness of the EU automotive industry were highlighted.

2. Presentation of car analysis

The contractor presented the main findings of the study 'Support for the revision of Regulation 443/2009 on CO_2 from cars'. Data on vehicle fleets, technologies, costs and projections of the likely cost and technological means of achieving the 2020 targets had been gathered. The study analysed the cost impacts and distribution of effort between manufacturers depending on the choice of modalities i.e. the utility parameter (mostly mass and footprint), different shapes and slopes of the limit value curve, and some other flexibilities (e.g. super credits, banking and borrowing).

[1] Consortium composed of TNO, Ricardo, IHS Global Insight, CE Delft, Okopol, AEA Technology, Transport and Mobility Leuven; analysis carried out under Framework Contract on Vehicle Emissions - No ENV.C.3./FRA/2009/0043

Stakeholders were invited to ask questions and make comments.

Summary of discussion

- Costs

Stakeholders asked for clarification regarding the differences between the alternative cost curves included in the report, notably the differences between the curves based on input from ACEA and those based on US EPA analysis. The environmental groups (T&E, Greenpeace, ECF) praised an approach of looking at alternative cost curves in particular using data from other parts of the world, and also taking account of additional progress in average CO_2 emissions in 2002-09 not explained by the technological improvements.

The issue of unexplained progress was discussed. The contractor explained that the progress not due to technologies on the cost curve was believed to have arisen using other technologies, powertrain optimisation and utilisation of flexibilities in the test procedure. A significant part of the reductions were not from the technology cost curve and it was likely that each scenario had elements of truth. While US data was key, EU industry data could not be ignored. ECF argued that the scenarios including this unexplained progress had to be the central assumptions for the Commission's further analysis.

ESCA stated that in the period before the CO_2/cars legislation, manufacturers did not have so much incentive to reduce CO_2 emissions and this sudden improvement of average emissions is probably linked to careful engine tuning, cheap technological improvements and exploiting test-cycle flexibilities, and these would have been essentially cost free.

An extensive discussion took place regarding the extent to which the costs of meeting emissions targets are passed through to consumers via vehicle prices. The contractor explained that the relationship between these factors is not straightforward, especially since the prices of vehicles have not increased despite substantial improvement in car fuel efficiency seen in the last decade. Even though these reductions required investment by manufacturers, the efficiency gains in other aspects of vehicle production could have outweighed these costs. A further Commission study[2] on this subject was mentioned.

- Utility parameter

Several participants (SMMT, LowCVP, ESCA) enquired about the impacts of changing the utility parameter from reference mass to footprint and the additional cost of this shift. The consultant explained the methodology underlying the analysis and highlighted the conclusion that the additional average cost of changing the parameter to footprint would be only €10 higher than maintaining mass, and that this effect is due to the usage of the same cost curve for both parameters. If a separate cost curve was constructed for footprint it would result in

[2] "*Effect of regulations and standards on vehicle prices*" available for download at: http://ec.europa.eu/clima/policies/transport/vehicles/cars/docs/report_effect_2011_en.pdf

lower cost of light weighting which is more effective for footprint. The result would therefore be a somewhat lower average cost for footprint (estimated at around €60 less than for mass).

LowCVP expressed regret that a similar analysis based on alternative cost curves from the US EPA analysis was not carried out in view of their much lower weight reduction costs. The consultant explained that further work was needed to ensure the appropriateness of the US analysis for the characteristics of the EU fleet. A discussion regarding differences in expected costs of light weight technologies in the EU and US followed, with an indication of a wide range of different approaches underlying the EU and US cost assumptions.

- Limit value curve

The representative from ESCA questioned whether the linear curve was a proper function, especially for vehicles at the extremes which are usually produced in low volumes and have a negligible impact on total CO_2. The contractor explained that overall for the purpose of defining limit functions there is no convincing alternative, for example non-linear curve or other function, and that for this reason small-volume manufacturers have a separate provision under the current scheme.

- Co-benefits

T&E and Greenpeace asked the Commission to take a proper account in the impact assessment of the benefits resulting from greater fuel efficiency of vehicles such as fuel savings to consumers, impact of lower demand for oil imports on prices of oil, shift of oil expenditure to other sectors of the EU economy and increases in employment in R&D and manufacturing.

- Other interventions

The ICCT explained that the US legislation sets a target of 50% reduction by 2025 which is supported by 13 manufacturers. This target when translated to the EU fleet characteristics means an equivalent of 70-80 g/km. ICCT also explained that in January it will have new information on technology cost, which seems likely to show lower costs than the TNO analysis.

Better Place stated that in their view battery cost assumptions used were too high making electrified powertrains appear less attractive than they already are.

ACEA noted that the study covers the issues well. It highlighted that this microeconomic analysis should be put in the macroeconomic context of the EU economic situation and uncertainties as to how the market will look in 2020. ACEA expressed preference for a stable regulatory scheme and expressed concerns if a shift from mass to footprint was favoured arguing that the correlation between CO_2 and mass is better than with footprint. Footprint may be similar for vehicles with different design thus it does not necessarily reflect the utility of the vehicle as claimed. ACEA stated that the majority of countries in the world (including China, Japan, South Korea) base their CO_2 or fuel economy standards on mass. It also outlined its main concerns regarding CO_2 monitoring. Finally, ACEA argued that

manufacturers should have flexibility as to how they reach the long-term target and therefore intermediate targets are not desirable.

3. Presentation of van analysis

The contractor presented the interim results of the equivalent analysis carried out for light commercial vehicles (vans). The feasibility of the 2020 target for vans needs to be confirmed and according to the updated analysis the target can be met at an additional average cost of €550. This is lower than assumed in the 2008 report, partly due to a shorter distance to the target (the fleet average emissions of 203g CO_2/km in 2007 dropped to 181g CO_2/km in 2010). In addition, the consultants have analysed the possibility of using the alternative utility parameters of footprint and payload.

Stakeholders were invited to ask questions and make comments.

Summary of discussion

- The 2020 target

In view of the 22g/km drop in average emissions from 2007 to 2010, T&E expressed concern as to the discrepancy between the reduction effort expected from cars and vans and lack of sufficient incentives to use reduction technologies that will be used in cars. The contractor explained that the answer lies partly in the lower quality of 2007 data and partly in a possible overestimation of the baseline.

The environmental groups claimed that a more stringent 2020 target may be necessary.

- Utility parameter

The European Aluminium Association highlighted that the utility parameter should primarily be correlated with utility rather than CO_2 and called for technological neutrality in regulatory design. They argued that using mass as the parameter disadvantages lightweighting. T&E argued that it was important to move away from mass since this could reduce compliance costs and it was difficult to see why manufacturers oppose it.

The ICCT confirmed that the 2010 average in LCV market was 180g/km according to their database, and suggested that in order to overcome the difficulties of using footprint as a utility parameter for vans the fleet could be split into 3 sub-segments. The consultant highlighted possible perverse incentives for gaming due to separate limits per category within the same legislation.

Daimler highlighted that payload is one of the most important purchasing criteria thus there is still a benefit of making the vehicles lighter in case of a mass-based parameter. In addition, it stated that manufacturers have been improving fuel efficiency for years leading to the drop in average emissions. VDA also stated that the argument against mass giving a lower incentive for lightweighting is theoretical. The contractor disagreed with this statement claiming that some manufacturers have stopped development in this area while in the longer term

lightweighting will be an increasingly important reduction technology. If mass is retained as a utility parameter some of this potential will be lost.

- Other issues

The representative from the Department for Transport (UK) asked to what extent the cross-over between cars and vans was taken into account in the cost curves. The consultant explained the cross-over cars/vans exists and the resulting cost reductions of wide-scale application of certain technologies in both categories. The cost curves include these learning effects where possible but whenever reduction technologies have a different potential in vans it is taken into account.

ACEA stated that they do not see any major change in cost estimates from the previous analysis. They also mentioned the problems with CO_2 data for vans, especially for multi-stage vehicles.

4. Post-2020 issues

The Commission presented its intentions for work on the post-2020 perspective for light duty vehicles. The presentation listed the concerns associated with this timeframe, i.e. the uncertainty as to the costs of technologies and the optimal reduction potential, as well as the conflict between these and industry's need for planning certainty. The presentation outlined the main points for upcoming analysis that will look at possible alternative regulatory metrics to the current approach of tailpipe emissions, and their impact on the attractiveness of different technologies. Finally, the Commission explained that a certain indication of a possible post-2020 reduction level is necessary in order to provide the industry with planning certainty as had been the case with the 2020 target. Such indication of a potential future level of ambition could be included in a Commission communication accompanying the proposals.

Summary of discussion

LowCVP highlighted that a technology neutral approach would mean that the entire life cycle analysis would be needed and mentioned a study on this topic available on their website. Metrics alternative to the tailpipe approach would give a lot more opportunities for manufacturers to decide how to reduce their emissions.

T&E supported discussion on this topic and added that in addition to a change of metric two other issues needed to be taken into account: change of test-cycle and revision of the Labelling Directive. The appropriate order for these actions should be established. It also questioned why trading schemes were included as no stakeholder was requesting these. Greenpeace support setting intermediate targets in line with a 95% decarbonisation objective. They stated that the car sector is able to achieve zero emissions and that it may be necessary to accelerate reductions beyond 2020.

ACEA said that agreement was needed on where to go, but there was no industry position on this topic yet. ACEA called for a new integrated approach post-2020 whereby all actors involved would contribute towards the emission reductions. Finally, ACEA expressed

preference for setting a long-term perspective first and allowing for the flexibility as to the ways of achieving these targets.

ECF highlighted the role the transport sector has to play in decarbonisation, and highlighted that road transport can deliver a big share of these reductions. ECF urged the Commission to set an ambitious pathway, especially in view of expected wider penetration of electric vehicles.

VDA raised the issue of uncertainty in the long-term perspective and questioned the possibility of defining an optimal reduction target without knowing what is possible. The Commission explained that the thought had been for a Communication accompanying the proposals to contain indicative targets or ranges with a further step of detailed analysis a few years later. It was highlighted that US legislation defines a target for 2025 already now.

UK argued that a vision for emission reductions is needed and pointed out that some of the embedded and lifecycle emissions are regulated even if not within the vehicle Regulations.

ESCA supported the view that further work on well-to-wheel reductions is needed and would also like to see a technology-neutral scheme, also from the point of view of emissions covering other GHGs not just CO_2. ESCA stated that trading would introduce uncertainty.

5. Other issues

Mileage weighting – in view of the potential improvement in cost effectiveness, is it worth considering taking account of vehicle lifetime mileage in the regulatory scheme?

The participants were unenthusiastic about this option and referred to difficulties of obtaining mileage profiles for different categories of vehicles and EU Member States, and the need for a robust monitoring of mileage. T&E highlighted a trade-off between complexity and effectiveness, the danger of loopholes and the need to ensure the environmental integrity of such a scheme. LowCVP raised concern over potential market distortion and a lower reduction pressure on larger vehicles. VDA mentioned the complexity, lack of data and potential disadvantages to certain manufacturers based on their portfolio. Better Place had concerns over data, future changes in mileage and its belief that a shift from oil was the key objective.

Eco-innovations – is there a need to continue this flexibility?

VDA and CLEPA stated that there will always be off-cycle technologies and that it is important to provide incentives for such innovative technologies. T&E argued that a new test-cycle that requires all devices to be operated would remove the need for such flexibility. Greenpeace were critical and stated that the best incentive for innovative technologies are tough targets. UK supports the principle of eco-innovations but thought the process could be improved and costs reduced. SMMT said that eco-innovations help to keep the cost of compliance with the legislation down.

Super-credits – in view of the fact that they lead to an increase in overall CO_2 emissions, are these a desirable feature?

Better Place was in favour of keeping the super-credit scheme to advance market penetration of alternative powertrains and phase-out oil use in transport. T&E argued the main objective of the legislation is to save CO_2 emissions with oil reduction as a co-benefit. Greenpeace opposed super-credits and stated that EVs would already be cost effective according to the study and so tough targets would be enough to see more low emitting cars on the road.

Other comments

VDA asked the Commission to reopen the discussion on how to incentivise consumers to make use of the technologies appropriately (e.g. ecodriving).

T&E asked for the issue of speed limits to be considered in view of the evidence from Spain showing a 9% reduction in fuel use following slightly lower speed limits.

ICCT asked for consideration to be given to how consumers can be encouraged to buy efficient cars and the use of intelligent feebates and labelling.

6. Closing comments

The Chairman summarised the discussion, outlined the next steps and closed the meeting.

Annex

List of participants

Full name of organisation	Acronym
European Aluminium Association AISBL	EAA
European Hydrogen Association	EHA
Industry Grouping for a Fuel Cells and Hydrogen Joint Undertaking	NEW-IG
European Association for Battery, Hybrid and Fuel Cell Electric Vehicles	AVERE
Association for Emissions Control by Catalyst	AECC AISBL
European Car Manufacturers Association	ACEA
Conservation of Clean Air and Water in Europe	CONCAWE
Japan Automobile Manufacturers Association	JAMA Europe
HONDA (JAMA Europe)	
SUZUKI (JAMA Europe)	
ePure	
Association of European Small Volume Manufacturers	ESCA
McLaren (ESCA)	
LOTUS Cars (ESCA)	
ASTON MARTIN (ESCA)	
Burson-Marsteller (consultant to ESCA)	
PEUGEOT CITROEN	PSA
TOYOTA	
VOLKSWAGEN AG	VW
FIAT Delegation to Europe	
DENSO	
BOSCH	

European Association of Automotive Suppliers	CLEPA
Johnson Controls International	
HYUNDAI Motor Company	
Transport and Environment	T&E
European Climate Foundation	ECF
Greenpeace EU	
Greenpeace UK	
DAIMLER AG	
VOLKSWAGEN	VW
Organisme Technique Central	UTAC/OTC
RENAULT	
BETTER PLACE	
Ministry of Interior, HUNGARY	
Ministry for Ministry of Infrastructure and Transport, ITALY	
Environment and Nature Policy Section of the Permanent Representation of the NETHERLANDS to the EU	
Ministry of Infrastructure and the Environment of the NETHERLANDS; Directorate General of the Environment, section Climate and Air Quality	
Leaseurope	
Ministry of Economy, Trade and Business Environment; ROMANIA	
Ministry of Science, Industry And Technology, Automotive Industry Department; TURKEY	
Office for Low Emission Vehicles, UK	LEV
Department for Business, Innovation and Skills, UK	
Department for Transport, UK	DfT
The Society of Motor Manufacturers and Traders Limited	SMMT
Low Carbon Vehicle Partnership	LowCVP

The International Council on Clean Transportation	ICCT
Verband der Automobilindustrie	VDA
Ministry of Transport, BELGIUM	
Ministry of Environment, BELGIUM	