

[REDACTED] (GROW)

---

**From:** [REDACTED] <[REDACTED]@acea.be>  
**Sent:** 31 July 2015 22:35  
**To:** GROW-C4@ec.europa.eu4; [REDACTED] (GROW)  
**Cc:** [REDACTED] (GROW); [REDACTED] Nikolaus (GROW); COZIGOU Gwenole (GROW); [REDACTED]; [REDACTED] (JRC-ISPRA)  
**Subject:** ACEA reply to DG GROW request for RDE information  
**Attachments:** 150731 RDE information reply to [REDACTED].pdf; (1) 150415 to [REDACTED] & [REDACTED] on RDE dynamic BCs P1.pdf; (2) 150420 to [REDACTED] & [REDACTED] on RDE general issues P3.pdf; (3) 150723 EN Euro 6 cost update done in 2010.pdf; (4) 150717 Memorandum emission limits (2).pdf

To see attached.

best regards,

[REDACTED]  
[REDACTED]  
**European Automobile Manufacturers' Association – ACEA**

Avenue des Nerviens 85 | B-1040 Brussels | [www.acea.be](http://www.acea.be)

T [REDACTED] | M [REDACTED] | F [REDACTED] | [REDACTED]@acea.be

[REDACTED] C4, DG GROW

cc:

Mr Gwenole Cozigou, Director C, DG GROW

[REDACTED] C4, DG GROW

[REDACTED] Unit C4, DG GROW

[REDACTED], JRC

31 July 2015

**Subject: Reply to DG GROW on request for RDE information**

Dear [REDACTED],

Thank you for the request for information concerning RDE by the end of July 2015.

As you know, ACEA experts have been working hard on RDE in order to help ensure that when it is completed, the RDE regulation will be effective but also proportional to the key environmental issue at hand, which is the NO<sub>2</sub> concentration levels in several of the EU member states and in certain areas of those member states. We all recognise that a robust and proportional RDE regulation is needed to give confidence to policy makers that new Euro 6 diesel vehicles are contributing positively to help reduce NO<sub>2</sub> concentration levels over time.

So far, the member states have agreed a package of measures at TCMV on 19 May that must still be complemented by additional elements, such as:

- Various amendments to correct errors and/or clarify the text that was adopted on 19 May.
- The inclusion of dynamic boundary conditions and road gradient (see attached (1) to your predecessor on 15 April 2015).
- The dates when RDE will apply in two mandatory steps (see attached (2) to your predecessor on 20 April 2015).
- Which vehicles will be within the scope of RDE step 1 and which vehicles will be included in RDE step 2.
- The diesel NO<sub>x</sub> "conformity factors" that will apply for the two RDE steps.
- Reporting of RDE information (see comments in ANNEX).

- Other issues for RDE step 2 such as particle measurement using PEMS and respective conformity factors.

The Commission foresees that all this work will extend well into 2016.

Considering that the work program is already very late concerning RDE step 1, ACEA strongly recommends that no other issues than those mentioned in the above list of bullet points should be addressed in RDE step 1. ACEA has stated this many times but RDE step 1 from September 2017 (new types) and September 2019 (all types) remains our strong aim - but time is now running fast to complete a robust, proportional and stable RDE regulation. We still face a risk that those dates would need to be pushed back.

Coming now to the request for RDE information, which is effectively a full RDE impact assessment. Please do not forget that ACEA requested this several times during the CARS2020 discussions.

#### **General Statement:**

ACEA is not in a position to provide some of the information requested since collecting this type of information from or sharing it between our members would infringe EU competition law, in particular the guidelines on the applicability of Article 101 TFEU to horizontal cooperation agreements.

These guidelines clearly specify that the exchange of information between competitors may restrict competition, in particular when this information is strategic, individualised and not public.

For this reason, we consider that we cannot provide any information relating to costs, product release dates or sales (all of which are considered strategic in the guidelines), in particular when we are asked to provide these in a highly individualised manner, i.e. for specific vehicle models.

In the past, ACEA has provided data to Commission impact assessments, when given sufficient time to react, and this data has normally been expressed for a broad grouping of vehicles (e.g. 1-4 – 2 litre engines). Any costs have been expressed as minimum, maximum and average costs for that grouping of vehicles.

#### ***1(a) Hardware configurations of Euro 6 "mainstream" vehicles:***

ACEA will provide that general information on hardware solutions to the Commission. We have already shared such information with officials of DG GROW & DG ENV at a meeting on 9 July.

However, in relation to point 1 of your request for RDE information, ACEA would like to repeat

once again that the strict achievement of the Euro 6 emission limits under any driving conditions is a massive challenge and, at the present state of development, one that may be impossible to achieve and poses the automotive industry with very severe risks if diesel vehicles were to diminish in market share. This is why we must have a sensible approach to the setting of robust RDE boundary conditions and conformity factors applicable in two mandatory RDE steps that will address driving under moderate and extended driving conditions. This requires still quite some technical and political discussions, but we welcome the progress that was apparent in the COM RDE LDV telecom on 28 July.

***1(b) Short-term improvement of NO<sub>x</sub> performance:***

See section “Recommended comprehensive approach” below.

***1(c) Short-term improvements linked to specific models and expected sales figures per model:***

See section “General Statement” above and section “Recommended comprehensive approach” below.

***1(d) Existing NO<sub>x</sub> performance under normal conditions of use:***

ACEA is considering how to provide information to the excel template distributed by JRC to the RDE stakeholders. However, providing data on the basis of still unknown conditions of “normal use” – since the RDE regulation is not yet complete – appears premature and risks a mixed bag of data being used as the basis for taking some quite important decisions.

See section “Recommended comprehensive approach” below.

***1(e) If model specific information is not possible, sales weighted model numbers per hardware configuration:***

See section “General Statement” above.

***2(a) Type of technical improvement per hardware configuration per model:***

See answer to question 1(a). See also section “General Statement” above.

***2(b) Quantitative NO<sub>x</sub> reductions under normal conditions of use from such technical improvements per model:***

See section “Recommended comprehensive approach” below.

***3(a) Costs of short-term technical improvements per model:***

See section "General Statement" above.

In 2010 a short review of the Commission's Euro 6 impact assessment was made by an independent expert to provide a more robust calculation of Euro 6 costs that could be used as a basis for any national financial incentives program - see attached (3). That review is attached and it addresses (based on 2010 costs) some of the mistaken assumptions of the 2005 study that was the basis of the Commission's Euro 5 (and subsequent Euro 6) impact assessment.

Certainly, in respect of the comment in the paragraph under point (1) of your request for information, the costs used by the Commission back in 2005 as an assumption for Euro 6 massively under-estimate the costs for SCR systems and it has been shown that SCR was not necessary to meet the Euro 6 emission limits. ACEA therefore advises that the 2010 costs of the attached review be used as a basis for determining technology costs in respect of what is now coming for RDE in the Euro 6c timescale.

***3(b) Costs of terminating sales of models before end of planned production cycle:***

This question would have to address the costs associated with the loss of return on investment if an engine was to cease production earlier than planned, if vehicles that were fitted with that engine had to cease production earlier than planned or had to undergo radical design changes to accommodate another engine (if possible) plus the social and other costs associated with the closure of engine production lines.

ACEA is not in a position to provide this information but ACEA is very extremely concerned that the Commission would suggest that diesel vehicles already meeting the Euro 6 legislation and introduced as part of a manufacturer's strategy to meet their CO<sub>2</sub> fleet average target (driven by EU policy on climate change) would now be classified as 'illegal'.

Vehicle manufacturers have invested and developed diesel vehicles to comply with the Euro 6 Regulation as it is written and to continue the downward push on CO<sub>2</sub> emissions. What the Commission now suggests is that some of those investments and some of those diesel vehicles should be terminated in advance of their planned product lifecycle simply because EU policy has changed in respect of NO<sub>2</sub> concentration problems in certain parts of the EU.

Vehicles are designed to meet EU regulations which are "performance regulations" not design regulations. Their type-approval permits the market entry and sale of those vehicles across the EU without restriction. ACEA would suggest that the Commission could not impose a blanket elimination of diesel vehicles of a certain "unacceptable technology" when no one vehicle type is

to blame for NO<sub>2</sub> concentration levels being above EU limits.

In addition, how could a certain diesel vehicle technology package be banned if its main markets were member states or regions of member states that do not suffer NO<sub>2</sub> concentration problems, simply to address problems in member states where that vehicle may even have a low market share. This is especially the case across the EU where there remains a different social structure and price-limited capability for purchasing new diesel vehicles. It would be a mistake to encourage the expansion of the second-hand diesel market when one key strategy to help improve air quality and meet future CO<sub>2</sub> targets is to replace the older diesel fleet with clean Euro 6 diesel vehicles.

A robust and proportional RDE regulation will help make a difference but we should not throw the baby out with the bath water.

#### **Recommended comprehensive approach:**

At a meeting between ACEA experts and officials of DG GROW & DG ENV on 9 July, ACEA explained a procedure for analysing the various “Boundary Conditions” within the RDE regulation (already there from decision of TCMV on 19 May and to be adopted by TCMV in Q3 2015) and other elements of the RDE regulation that would have an effect on a vehicle’s capability to meet a certain level of emission over an RDE evaluation drive.

Starting from a baseline of the WLTP (test cycle and its procedures) being a conformity factor of “1”, the accuracy of the PEMS equipment, engineering safety margin, the effect of market fuel variations, the effect of vehicle weight, the effect of a vehicle’s resistance to motion, the effect of road gradient, the effect of auxiliary devices a car may be equipped with, the effect of driving dynamics and acceleration, the effect of altitude and ambient temperature, the effect of other possible changes to the RDE regulation can all be analysed with a lot of detail so that the contribution of each of these characteristics to a positive delta change in emissions can be assessed.

On that basis, conformity sub-factors for each of those characteristics can be developed to cover normal driving and extended driving. The same exercise can be done for both RDE step 1 and RDE step 2 with valid technical assumptions on the expected improvement in each characteristic between RDE step 1 and RDE step 2.

Using this bottom-up approach, we have explained to Commission officials how technically appropriate conformity factors can be determined for RDE step 1 and RDE step 2 for normal and extended driving.

We would strongly recommend this as the appropriate approach to developing conformity factors based on the actual characteristics of the RDE boundary conditions instead of taking test results from a few vehicles that have been adapted as one-off projects in order to simply show that low conformity factors are possible.

ACEA would therefore invite the Commission's experts at JRC and any other independent experts to look into the approach outlined above as being a robust approach to defining RDE conformity factors.

### **Summary:**

In conclusion, ACEA remains committed to the introduction of a robust and proportional RDE regulation over two mandatory RDE steps that would be preceded by a monitoring phase.

However, we urge the Commission to make progress as soon as possible to complete the RDE regulation with all additional boundary conditions, fixing the mandatory dates and fixing the conformity factors. We urge the Commission and the member states to not get distracted by additional issues that are not an environmental concern or which can be further evaluated for inclusion in RDE at a later date.

ACEA would like to take this opportunity to provide you with a recent update to the legal analysis we requested an independent legal firm to undertake – see attached (4). This analysis reviews the questions:

- *Did the co-legislators agree that the Euro 5/6 emission limits should be met over real driving conditions (i.e. any driving condition) and do the Regulation 715/2007 and amending Regulation(s) (in particular Regulation 459/2012) require this? Did the Commission proposal intend that the Euro 5 emission limits be met over real driving conditions (i.e. any driving condition)? Is there a clear legal link between compliance with the Euro 5/6 emission limits and the NEDC test cycle? Does other EU pollutant emissions legislation confirm the political relation between the present emission limits and test cycles and thereby limit how the Commission may act?*
- *Is the Commission entitled to set RDE performance (emission) limits (i.e. conformity factors that would be a multiplier of the legal emission limit) by the comitology procedure or should the co-decision procedure be followed?*
- *Do other language versions [of the Official Journal] lead to a different conclusion?*

ACEA hopes that this document would put into perspective what a RDE regulation can do within the present legal framework.



ACEA

European  
Automobile  
Manufacturers  
Association

**Attachments:**

- (1) Note to [REDACTED] of 15 April 2015 on needed additional boundary conditions for RDE.
- (2) Note to [REDACTED] of 20 April 2015 on RDE.
- (3) Review of Euro 6 technology costs.
- (4) Update to legal analysis of relationship between emission limits and test cycles and in relation to RDE.



**ANNEX:****Reporting of RDE information.**

The text agreed by TCMV on 19 May is not clear at all, many references are wrong and manufacturers have no idea what, where and when they have to report RDE information.

Manufacturers are concerned about adapting their software systems and possibly also their websites if that will be the way they must report information. This issue must be clarified soon.

According to the text agreed on 19 May, if manufacturers can't report they can't obtain type-approval for their vehicles, even during the monitoring phase if it was to start from 1 January 2016.

It will be the case that if manufacturer's IT systems do need to be prepared or changed, that will not happen overnight and monitoring would then have to be postponed to a suitable date in 2016.

15 April 2015

G3, DG Growth

cc:

G3, DG Growth

unit G3, DG Growth,

Dear ,

**Subject: Real Driving Emissions (RDE)**

ACEA has been requested to communicate to the Commission its views on "additional RDE boundary conditions" that were recently discussed in the RDE expert group, as follows:

**The proportion of stop periods during an RDE trip:**

ACEA recommends the following parameters be included now, as agreed:

Stop periods	Reflect method change, loophole not representative driving without standstill	Lower limit	Minimum Urban Stationary share (%)	5
	Avoid major traffic jam, not covered by normalisation tools	Upper limit	Maximum Urban Stationary share (%)	30
		Limit	Maximum time of each single stop (s)	120

**The minimum/maximum average speeds during urban driving:**

ACEA recommends the following parameters be included now, as agreed:

Speed	Reflect method change, missing justification 15km/h	Lower	Minimum Average speed urban (km/h) including stops	20** (15*)
	Reflect method change, ensure urban speed mix can be achieved	Upper	Maximum Average speed urban (km/h) including stops	40** (35*)

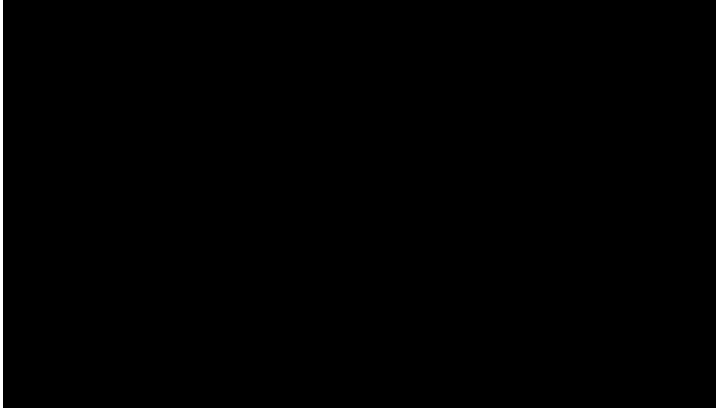
\* map based. \*\* vehicle speeds up to 60 km/h



European  
Automobile  
Manufacturers  
Association

ACEA remains at your disposal to answer any further questions you or your colleagues may have.

Yours faithfully,



20 April 2015

[REDACTED] G3, DG Growth

cc:

[REDACTED] G3, DG Growth

[REDACTED] unit G3, DG Growth,

Dear [REDACTED],

**Subject: Real Driving Emissions (RDE)**

In addition to the two letters on the needed RDE boundary conditions sent to you last week, ACEA would like to also address some more general RDE issues to your attention.

You know the ACEA views on RDE very well, I trust, but I will repeat that the current Commission proposal tabled at TCMV on 24 March 2015 remains incomplete.

In this respect, ACEA remains highly concerned. According to DG Growth's note to TCMV dated 3 March 2015, a complete RDE Regulation that would at least address diesel NOx, contain maybe all RDE boundary conditions, the 2-step date structure (to address what is technically feasible in the short-term and what is technically feasible with proper industry lead-time) and conformity factors, "tentatively" should be adopted by September 2015. This would mean publication in the Official Journal no earlier than sometime in Q1 2016. This would then be the point where industry has certainty on which to work.

However, with that DG Growth timeframe, industry will no longer be in a position to achieve September 2017 (new types) for the first step of RDE with mandatory NOx conformity factors after the monitoring phase. This is very disappointing for industry since we had always recognised the importance of the September 2017 date to start the mandatory implementation of RDE.

**ACEA position on RDE:**

It remains the ACEA position that **at the latest in June 2015**, the Commission should come forward with a proposal for a positive vote in TCMV that:

1. Contains all RDE boundary conditions – contained in the current Commission proposal pending a number of necessary changes plus the inclusion of the additional boundary conditions recently discussed in the expert group and addressed in the two letters sent to you

last week.

2. Contains the 2-step date structure for the mandatory element of the RDE regulation. This means:
  - a) An initial monitoring phase that would start at a suitable date after the complete RDE package would be published in the Official Journal.
  - b) The first mandatory RDE step that ACEA still believes can commence from September 2017 (new types) and September 2019 (all types) if a proposal containing the ACEA recommendations noted here in points 1-3 is voted in TCMV at the latest in June 2015.

If the Commission would deliver the recommendations noted here in points 1-3 only by September 2015 (maybe for a vote in TCMV in September), the first mandatory RDE step dates must then be September 2018 (new types) and September 2020 (all types).
  - c) According to the principles agreed in the CARS2020 process, the second mandatory RDE step should commence no earlier than 5 years after the complete RDE package would be published in the Official Journal <sup>(1)</sup>.
3. The RDE diesel NOx conformity factors, at least for the first RDE step from September 2017/September 2019 [September 2018/September 2020 – see point (b) above].

Other no less important issues such as the RDE diesel NOx conformity factors for the second RDE step, extension of RDE to cover the PEMS measurement of particle emissions of vehicles equipped with gasoline direct injection engines and the application of RDE to light-commercial vehicles and hybrid technologies may be proposed later in 2015 by the Commission. However, for these vehicles, RDE would apply no earlier than from the second mandatory RDE step.

I would also draw your attention to some other points on RDE, as follows:

#### **Current Commission RDE proposal, section 3.1.3 of Annex I:**

This section requires vehicle manufacturers to make an RDE test technical report available within 30 days on a publicly accessible website that has a vehicle search function and without imposing any costs on those wanting to access such information.

However, this section also requests a technical authority to make the same RDE test technical

---

<sup>1</sup> As noted above, this is assumed to mean publication in the Official Journal no earlier than sometime in Q1 2016 → so the second RDE step should be no earlier than January 2021 (new types) and January 2022 (all types).

report available to those wanting access to such information, but permits the authority to impose a reasonable and proportionate fee.

This section imposes obligations that are legally similar to those for RMI, as laid down in Regulations 715/2007 and 692/2008 (as amended). For RMI, manufacturers are permitted to apply reasonable and proportionate fees to cover the cost of developing and introducing the systems needed to make the information available and manufacturers are given proper time to make the information available.

ACEA simply requests that section 3.1.3 of Annex I is revised in line with the principles established for RMI under Regulations 715/2007 and 692/2008.

#### **Commission roadmap for addressing all necessary elements of a complete RDE Regulation:**

As noted above, ACEA requests the Commission to come forward with a complete RDE proposal for positive vote in TCMV at the **latest in June 2015**. In its note to TCMV of 3 March 2015, the Commission foresees further RDE packages being adopted at tentative dates through 2015 and into 2016.

ACEA requests the Commission now lay down a definite (not tentative) roadmap for the completion of the RDE Regulation that fully takes into account the agreed principle of CARS 2020 for industrial lead-time.

ACEA repeats its concerns with the piecemeal approach to the preparation and adoption of this complex and far-reaching RDE legislation that has been adopted by DG Growth.

#### **Summary:**

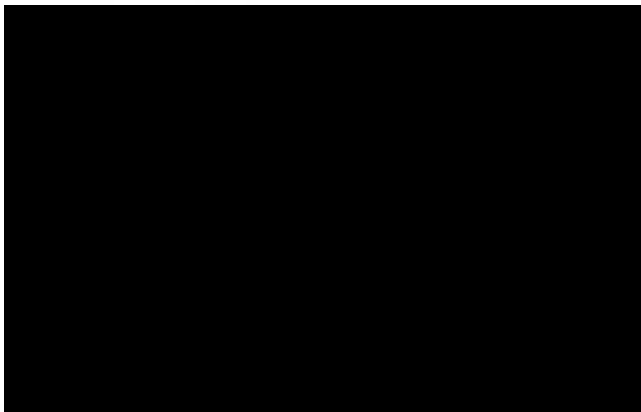
ACEA urges the Commission to come forward with a complete RDE proposal for a positive vote in TCMV **at the latest in June 2015**, as outlined above in points 1-3 and including the four necessary boundary conditions:

- The proportion of idling during an RDE trip,
- The minimum/maximum average speeds during urban driving,
- Driving style ( $v \times a_{pos}$ ), and,
- Road gradient.

If a proposal for the fifth needed RDE boundary condition (*shift behaviour*) is delivered in time this boundary condition must also be included.

ACEA remains at your disposal to answer any further questions you or your colleagues may have.

Yours faithfully,



## Impact Assessment of the European Commission on the cost of Euro 6

### An update written in 2010

In 2005, an Impact Assessment<sup>(1)</sup> to evaluate the technical measures and associated costs of meeting the Euro 5 emission limits for cars was carried out on behalf of the European Commission DG Environment. This Impact Assessment was based on a TNO/Ricardo/LAT study from 2005<sup>(2)</sup>.

In this "Euro 5 panel study" there were six possible Euro 5 scenarios evaluated for each diesel, direct injection petrol and port-injection petrol technologies. The scenarios included ones that were comparable to the limits envisaged for the 2014 Euro 6 stage. For diesel, scenario 1 (PM = 2.5mg/km and NOx = 75mg/km) is very similar to the limits initially agreed for the Euro 6 legislation (i.e. PM = 5mg/km and NOx = 80mg/km). Scenario 4 (PM = 8.5mg/km and NOx = 150 mg/km) is close to the Euro 5 limits.

The information from the panel study from 2005<sup>(2)</sup> can, in principle, be used to set up a cost estimate for the additional costs of Euro 6 diesel technology relative to Euro 5. Under the assumptions described below they could then be used as a basis for tax exemptions for Euro 6 diesel vehicles in the run up to 2014.

**Table 1:** Summary of the relevant data from the 2005 study and the costs derived for Euro 5 and Euro 6:

	Limit (mg/km)	Class	PM technology	Engine measures	deNOx technology	Cost	Cost increase for Euro 6 (2005)
Scenario 4 = approx. Euro 5	PM = 5 NOx = 150	< 1.4 litre	Open DPF	MEIM <sup>(5)</sup>	-	€274	
		1.4-2.0 litre	Closed DPF	MEIM <sup>(5)</sup>	-	€475	
		> 2.0 litre medium	Closed DPF	MEIM <sup>(5)</sup>	-	€629	
		> 2.0 litre large	Closed DPF	MEIM <sup>(5)</sup>	Lean deNOx control (SCR)	€1796	
Scenario 1 = approx. Euro 6	PM = 2.5 NOx = 75	< 1.4 litre	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€758	€485
		1.4-2.0 litre	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€920	€445
		> 2.0 litre medium	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€1210	€581
		> 2.0 litre large	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€1936	€140

A closer analysis of the costs and assumptions for extrapolation of costs in relation to the former Euro 4 technology used by the European Commission in 2005 shows that there were some important changes in period between the study (2005) and the time of this analysis of this paper in 2010:

- The price of precious metals for the catalyst coating (e.g. platinum & palladium) increased by 150% and 20% respectively compared to the 30% assumed by the European Commission, and which was based on a 2004 estimate by AECC<sup>(3)</sup>.
- In the calculations made in the study from 2005, only the cost for the engine (SEIM<sup>(4)</sup>, MEIM<sup>(5)</sup>) was taken into account and not the cost of vehicle integration – which is especially critical for

<sup>(1)</sup> Commission staff working document "Annex to the Proposal for a regulation of the European Parliament and of the Council on type approval of motor vehicles with respect to emissions and on access to vehicle repair information, amending Directive 72/306/EEC and Directive .././EC", Impact Assessment, COM(2005) 683 final.

<sup>(2)</sup> "Euro 5 technologies and costs for light-duty vehicles", TNO report 05.OR.VM.032.1/NG, 20.10.2005.

<sup>(3)</sup> AECC: Association for Emissions Control by Catalyst.

<sup>(4)</sup> "SEIM" = severe engine internal measures.

<sup>(5)</sup> "MEIM" = medium engine internal measures.



SCR systems (e.g. urea tank, pipes and heating). This means that the costs used in the report for SCR systems are generally lower than for LNT, also as a result of the precious metal required for LNT is higher (about €200 higher for meeting the more stringent limits). According to current knowledge, it is expected that complete SCR and LNT systems will lead to comparable costs.

- In the study from 2005, SCR technology was already assumed as the standard to meet Euro 5 for the class of vehicles with engines > 2 litre. The Euro 5 limits (scenario 4) can be met across all vehicle classes without using SCR / LNT technology.
- All calculations of the European Commission are based on a useful life of 100,000km. However, the legislation requires a useful life of 160,000km.
- In the Commission's impact assessment, a cost discount for high volume production of SCR/LNT systems was introduced. A high-volume production for cars and thus of Euro 6 diesel vehicles cannot be assumed today. The applied discount of 30% thus could not be applicable in the early 'incentive' phase for Euro 6.

Based on the present findings the following can be said:

- For the comparison to the baseline (Euro 5) only the "minimum" were chosen scenarios (i.e. minimal technical effort to achieve Euro 5, e.g. with unit injectors without piezo or with moderate EGR rate).
- For engines > 2.0 litre, a discount for the deNOx technology in Euro 5 and thus an increased cost for Euro 6: €832<sup>(6)</sup>.
- For the class < 1.4 litre, the "semi-open" particle filter must be replaced by the closed DPF: €357<sup>(7)</sup>.

Steps of revised cost calculation taken from Table 1 is shown below.

**Table 2:** Cost after correction of the basic technology:

	Limit (mg/km)	Class	PM technology	Engine measures	deNOx technology	Cost	Cost increase for Euro 6 (2005)
Scenario 4b = approx. Euro 5	PM = 5 NOx = 180	< 1.4 litre	Closed DPF	MEIM <sup>(5)</sup>	-	€359	
		1.4-2.0 litre	Closed DPF	MEIM <sup>(5)</sup>	-	€475	
		> 2.0 litre medium	Closed DPF	MEIM <sup>(5)</sup>	-	€629	
		> 2.0 litre large	Closed DPF	MEIM <sup>(5)</sup>	-	€832	
Scenario 1 b= approx. Euro 6	PM = 2.5 NOx = 30	< 1.4 litre	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€758	€399
		1.4-2.0 litre	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€920	€445
		> 2.0 litre medium	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€1210	€581
		> 2.0 litre large	Closed DPF	SEIM <sup>(4)</sup>	Lean deNOx control (SCR)	€1936	€1104

Furthermore, the costs of the impact assessment would have to be adapted to the current state of the deNOx technology. The following corrections should be made:

- The price of precious metals in catalysts must be increased by at least 50%. When a precious metal price component of approximately 30% of the overall catalyst costs this would result in an additional cost proportion as shown in Table 3.

<sup>(6)</sup> Calculation: Level "MEIN 1.4-2.0 litre" and "> 2.0 litre medium" extrapolated from "large > 2.0 litre"; Consequently  $1.32 \times 629 = 832$ .

<sup>(7)</sup> Calculation: Level "MEIN 1.4-2.0 litre" and "> 2.0 litre medium" closed particulate filter extrapolated to "< 1.4 litre"; Consequently  $0.75 \times 475 = 357$ .

- The unrecognized costs for SCR-vehicle integration (urea tank, pipes and heater) amount to €250.
- To ensure a durability of more than 160,000 km, the first series vehicles with deNOx technology would be calibrated to around 30mg/km NOx. This represents currently a considerable overhead. Thus, the prediction by AECC already in 2005 of an improved catalyst coating efficiency of 30% does not come into play and so the cost reduction (i.e. €114 - €290) cannot be applied.

**Table 3:** Additional consequences of the update 2010 compared to 2005:

Total costs for Euro 6 (in 2010)				
Basis	SCR catalyst			
New	Precious metal price	Small series	AdBlue tank	Total
€399	€114	€68	€250	€831
€445	€138	€83	€250	€916
€581	€181	€109	€250	€1121
€1104	€290	€174	€250	€1818

### Conclusions:

- Based on the findings from the use of technology in volume production Euro 5 vehicles and for initial small series of Euro 6 vehicles, some of the assumptions in the impact assessment of the European Commission need to be updated.
- The real costs for Euro 6 diesel cars during the start-up phase of this technology (i.e. before the official application date in 2014) are significantly higher than from a non-updated calculation of impact assessments – this has been apparent since 2005. It results in additional costs for Euro 6 (compared to Euro 5) between €831 and €1818.

## Memorandum

To:	[REDACTED]	ACEA
	[REDACTED]	
From:	[REDACTED]	Van Bael & Bellis
Date:	28 July 2015	

### Legal Analysis of Euro 5/6 emissions Regulation – Real Driving Emissions

This memorandum is prepared in response to your questions in relation to the legal framework for type-approval of light-duty vehicles with regard to their emissions. These questions relate both to the interpretation of the existing legal framework and to the procedural background of any future modification.

This Memorandum will first analyse the applicable legal framework and will then provide responses to the questions raised by ACEA.

#### 1. METHODOLOGY

In carrying out our assessment the following legislation was analysed:

- Directive (EC) No 2007/46<sup>1</sup> (the “Framework Directive” or “FD”);
- Regulation (EC) No 715/2007<sup>2</sup> (the “Basic Regulation” or “BR”);

---

<sup>1</sup> Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, OJ L 263, 9.10.2007, p. 1.

- Regulation (EC) No 692/2008<sup>3</sup> (the “Implementing Regulation” or “IR”);
- UNECE Regulation No 83<sup>4</sup>;
- Commission Regulation (EU) No 459/2012<sup>5</sup>;
- Directive 98/69/EC<sup>6</sup>; and
- Regulation 595/2009/EC<sup>7</sup>.

The following preparatory acts leading to the adoption of the BR were also taken into consideration:

- the European Commission’s proposal for the BR<sup>8</sup>;
- the Impact Assessment of 21 December 2005 annexed to the Commission’s proposal for the BR<sup>9</sup> (the “Euro 5 Impact Assessment”);

---

<sup>2</sup> Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information, OJ L 171, 29.6.2007, p. 1.

<sup>3</sup> Commission Regulation (EC) No 692/2008 of 18 July 2008 implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information, OJ L 199, 28.7.2008, p. 1.

<sup>4</sup> Regulation No 83 of the Economic Commission for Europe of the United Nations (UNECE), Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirements, OJ L 119/1, 6.5.2008, p. 1.

<sup>5</sup> Commission Regulation (EU) No 459/2012 of 29 May 2012 amending Regulation (EC) No 715/2007 of the European Parliament and of the Council and Commission Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 6), O.J. L 142/16, 1.6.2012, p 16.

<sup>6</sup> Directive 98/69/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC, OJ L 350, 28.12.1998, p. 58–68.

<sup>7</sup> Regulation 595/2009/EC of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information and amending Regulation (EC) No 715/2007 and Directive 2007/46/EC and repealing Directives 80/1269/EEC, 2005/55/EC and 2005/78/EC, OJ L 188, 18.7.2009, p. 1–13.

<sup>8</sup> Proposal for a Regulation of the European Parliament and the Council on type approval of motor vehicles with respect to emissions and on access to vehicle repair information, amending Directive 72/306/EEC and Directive .././EC presented by the Commission, COM(2005) 683 final.

- the second Impact Assessment of 20 September 2006 carried out in view of the adoption of Euro 6 emission limits<sup>10</sup> (the “Euro 6 Impact Assessment”);
- the European Parliament Committee Draft Report of 5 May 2006<sup>11</sup>;
- the Commission Communication on the application and future development of Community legislation concerning vehicle emissions from light-duty vehicles and access to repair and maintenance information (Euro 5 and 6)<sup>12</sup> (“the Commission Communication”);
- the European Commission’s proposal of 31 January 2014 for a Regulation amending the BR<sup>13</sup> (“the 2014 Commission Proposal”); and
- the Impact Assessment of 31 January 2014 accompanying the Commission’s proposal for amending the BR<sup>14</sup> (“the 2014 Impact Assessment”).

The assessment was carried out on the basis of the English version of these texts and was confirmed by a reading of the German, French, Spanish, Italian and Dutch versions, where available.

## **2. EXISTING LEGAL FRAMEWORK**

In order to obtain type-approval under the BR, manufacturers are required to comply with the emission limits set out in Annex I to the BR (the “Euro 5/6 emission limits”).

---

<sup>9</sup> Commission Staff Working Document Annexed to the Proposal for a Regulation of the European Parliament and the Council on type approval of motor vehicles with respect to emissions and on access to vehicle repair information, amending Directive 72/306/EEC and Directive .././EC, Impact Assessment, COM(2005) 683 final.

<sup>10</sup> Commission Staff Working Document, Impact Assessment for Euro 6 emission limits for light duty vehicles.

<sup>11</sup> Draft Report on the proposal for a regulation of the European Parliament and of the Council on type approval of motor vehicles with respect to emissions and on access to vehicle repair information, amending Directive 72/306/EEC and Directive .././EC, 2005/0282(COD).

<sup>12</sup> Commission Communication on the application and future development of Community legislation concerning vehicle emissions from light-duty vehicles and access to repair and maintenance information (Euro 5 and 6), O.J. C 182, 19.7.2008, p. 17.

<sup>13</sup> Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EC) No 715/2007 and (EC) No 595/2009 as regards the reduction of pollutant emissions from road vehicles presented by the Commission, COM(2014) 28 final.

<sup>14</sup> Commission Staff Working Paper Impact Assessment Accompanying the document Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EC) No 715/2007 and (EC) No 595/2009 as regards the reduction of pollutant emissions from road vehicles.

Article 5(1) of the BR specifies that manufacturers need to ensure compliance with the Euro 5/6 Regulation “*in normal use*”<sup>15</sup> of the vehicle. While the language of this provision could support the interpretation that the Euro 5/6 emission limits have been meant since their inception to apply to real driving conditions, such an interpretation would not be in line with the history of the relevant legislative framework.<sup>16</sup>

In fact, it should be emphasised that, at the time of the adoption of the BR, the testing procedure for measuring emissions was clearly meant to be a laboratory test, based on the New European Drive Cycle (the “NEDC”). This is confirmed by:

- Recital 15 of the BR, which states that “*[the] Commission should keep under review the need to revise the New European Drive Cycle as the test procedure that provides the basis of EC type approval emissions regulations*”;
- Recital 14 of the BR, according to which the measurement of certain emissions covered by Annex I to the BR (*i.e.*, mass and number of particulate emissions) should be carried out “*in the laboratory*”;
- Recital 17 of the BR, which refers to a “*standardised method of measuring [...] carbon dioxide emissions*” (also covered by Annex I to the BR);
- The preparatory works of the BR, which reveal that the BR was drafted on the basis of the understanding that compliance with Euro 5/6 emission limits would be verified in a standard artificial testing environment. In this respect, it is to be noted that - in response to stakeholders’ comments relating to the discrepancy between laboratory test results and actual emissions on the road - section 14 of Annex I to the Euro 5 Impact Assessment explains that it was “*not considered appropriate at the stage of the Euro 5 proposal to introduce substantive changes to test*

---

<sup>15</sup> German: “unter normalen Betriebsbedingungen”; Dutch: “onder normale gebruiksomstandigheden”; French: “en utilisation normale”; Italian: “nell’uso normale”. These expressions refer all to a vehicle being used under normal circumstances. The Spanish version reads “funcionando normalmente”. This is ambiguous, as in addition to “used under normal circumstances” it can also mean “operating normally” in the sense of “without defects”. However, the ambiguity of the Spanish version is outweighed by the consistent meaning of the relevant terms in the other languages.

<sup>16</sup> This reading is confirmed by the fact that section 5.1.1 of Directive 98/69/EC, the predecessor of the BR, already included an obligation for manufacturers to ensure the effective limitation of tailpipe and evaporative emissions “*under normal conditions of use*”. As the test deployed under Directive 98/69/EC was clearly a laboratory test, the reference to “*normal conditions of use*” should not be taken as an indication that emissions levels should be measured under real driving conditions.

*procedures*” (i.e., the NEDC) and that “*this issue should be considered in the future*”; and

- Paragraph 10 of the Commission Communication, which states that “*the emissions and fuel consumption of light duty vehicles are measured using a standardised test procedure, based on the so-called New European Driving Cycle (NEDC)*”.

The analysis of the IR adopted by the Commission, which implements the BR by detailing the applicable testing procedures, confirms the view that at the time of the adoption of the BR, the testing procedure for measuring emissions was clearly meant to be a laboratory test (i.e., the NEDC). In order to set the testing procedure to be used for the purpose of assessing compliance with Euro 5/6 emission limits, the IR refers to the testing procedures laid down in UNECE Regulation No 83 (as a matter of fact, just a limited number of specific deviations from the UNECE Regulation No 83 are listed in the IR). According to Regulation No 83, the Type I test referred to in Annex III of the IR and the Type 6 test referred to in Annex VIII of the IR are carried out by placing the vehicle “*on a chassis dynamometer equipped with a means of load and inertia simulation*”<sup>17</sup>. Therefore, the picture that emerges from the IR read in conjunction with UNECE Regulation No 83 points clearly to a testing procedure for type-approval which is carried out in the laboratory.

The above conclusion is not modified by the 2012 amendments to the BR, introduced by Regulation No 459/2012. The latter Regulation also makes reference to “real driving conditions”. However, this reference cannot be construed as a conclusive indication that the emission limits in Annex I of the BR apply under real driving conditions, for the following reasons:

- The references are contained in two recitals (i.e., recitals 7 and 9) and in one footnote (i.e., footnote 3) to Annex I of Regulation 495/2012, while no such considerations are contained in the operative part of the Regulation.
- Recital 9 of Regulation 459/2012 clearly states that measurement procedures accounting for real driving conditions should be “*developed*” and “*implemented*” by the Commission in the future. This implies, *a contrario*, that Real Driving Emissions (“**RDE**”) tests are not currently in place. Moreover, the scope of Recital 9 is limited, as it only relates to positive ignition vehicles (as opposed to diesel vehicles). Accordingly, no

---

<sup>17</sup> UNECE Regulation No 83, point 5.3.1.2.

general conclusions on the testing procedure for Euro 6 compliance can be drawn from this recital.

- A similar argument can be made with regard to Footnote 3 in Annex I of Regulation 459/2012. This footnote reads, in relevant part: “*a type approval test method ensuring the effective limitation of the number of particles emitted by vehicles under real driving conditions shall be implemented*”. Similar to the reasoning for Recital 9 of Regulation 495/2012, an *a contrario* argument on the basis of Footnote 3 of Annex I leads to the conclusion that no RDE testing procedure exists so far. Moreover, Footnote 3 also has a limited scope, as it does not cover the entire table of Annex I, but one column relating to the number of particles.
- Finally, Recital 7 relates to pollution control devices in the sense of Article 3(11) of the BR, rather than to the testing procedures for measuring the Euro 6 compliance of a vehicle. Recital 7 merely states that engine measures must “*ensure that [...] emission levels in real driving conditions are not worsened*”. It does not even refer to the testing procedures, which are the crux of verifying compliance with the Euro 6 emission limits. Therefore, Recital 7 of Regulation 459/2012 would not support in any way the conclusion that the emission limits in Annex I of the BR should be complied with under real life driving conditions.

It emerges from the above that at the time of adoption of the BR, the Euro 5/6 emission limits were meant to be measured in a standard testing environment based on the NEDC and that any change relating to the testing procedure can be introduced only by modifying the implementing legislation.

### 3. FUTURE LEGAL FRAMEWORK

The BR entrusts the Commission with the competence to modify the testing procedures laid down in the IR and specifies the procedure which the Commission must follow to this end.

Section 3.1 below will describe the procedure laid down in Article 14(3) of the BR to modify the testing procedure. Section 3.2 will discuss possible limits that may apply to the Commission’s power to modify the testing procedure.



### 3.1 The procedure to change the testing procedure laid down by Article 14(3) BR

#### 3.1.1 Changing the testing procedure under the current Article 14(3) BR

The IR (setting out the laboratory testing procedure which is currently applicable to assess compliance with Euro 5/6 emission limits) was adopted by the Commission following the entry into force of the BR, on the basis of the delegation of powers contained in Articles 4(4), 5(3) and 8 of the BR. However, the BR also entrusts the Commission with the power of reviewing the testing procedure provided by the IR.

The Commission's competence to modify the testing procedure results from the first part of Article 14(3) of the BR. This provision reads:

*“The Commission shall keep under review the procedures, tests and requirements referred to in Article 5(3) as well as the test cycles used to measure emissions. If the review finds that these are no longer adequate or no longer reflect<sup>18</sup> real world emissions, they shall be adapted so as to adequately reflect the emissions generated by real driving on the road.”*

Thus, Article 14(3) of the BR authorizes the Commission to change the testing procedure and indicates that the revised procedure should “reflect” real world emissions. Accordingly, in amending the testing procedure the Commission must ensure that the testing procedure should produce results which are similar to real world emissions.

Article 14(3) of the BR leaves to the Commission free to decide how to achieve this objective, *i.e.*, by amending the laboratory test as to better reflect real driving conditions or by adopting an entirely new RDE test on the road. Therefore, the RDE is only one of the possible tests that the Commission may adopt for this purpose, as results from Recital 15 of the BR, which states that the Commission may either “update” or “replace” the NEDC in order to “ensure that real world emissions correspond<sup>19</sup> to those measured at type approval.”

The procedure which the Commission must follow in order to change the testing procedure is laid out in the second part of Article 14(3) of the BR, which reads:

---

<sup>18</sup> German: “entsprechen”; Dutch: “weerspiegelen”; French: “réflètent”; Italian: “riflettono”; Spanish: “reflejar”. These words have all the same meaning as the English word.

<sup>19</sup> German: “entsprechen”; Dutch: “overeenstemmen”; French: “correspondent”; Italian: “corrispondano”; Spanish: “corresponder”. These words have all the same meaning as the English word.

*“The necessary measures, which are designed to amend non-essential elements of this Regulation, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 15(3).”*

Article 15(3) of the BR in turn refers to Articles 5a(1) to (4) and 7 of Decision 1999/468/EC. The regulatory procedure with scrutiny set out by Article 5a of Decision 1999/468/EC is a relatively constraining procedure for the Commission. The Commission needs to submit a proposal to a committee composed of Member States and Commission representatives. The European Parliament and the Council have a veto right on the proposed measure should the Committee adopt a positive opinion on the proposal. If the Committee fails to issue a positive opinion on the proposed measure, the Council can intervene to block the proposal, or it can adopt the measure itself unless the Parliament opposes it. The Parliament or Council may exercise its veto power only if the proposed measure exceeds the Commission's implementing powers, is not compatible with the aim or content of the legal act or violates the principles of subsidiarity and proportionality.

### 3.1.2 Changing the testing procedure under Article 14(3) BR, as possibly amended in accordance with the 2014 Commission Proposal

The 2014 Commission Proposal purports to amend Article 14(3) of the BR as follows:

*“The Commission shall keep under review the procedures, tests and requirements referred to in Article 5(3) as well as the test cycles used to measure emissions. If the review finds that those procedures, tests, requirements and test cycles are no longer adequate or no longer reflect real world emissions, the Commission shall act in accordance with Article 5(3) in order to adapt them so as to adequately reflect the emissions generated by real driving on the road.”*

The 2014 Commission Proposal also provides for an amendment to Article 5(3) BR. If amended accordingly, Article 5(3) BR would no longer refer to the regulatory procedure with scrutiny as described above. Instead, reference would be made to a new Article 14a which would be added to the BR. The latter Article lays down the procedure to be followed by the Commission for adopting delegated acts, which is the term used in Article 290 TFEU. Paragraphs 4 and 5 of the proposed Article 14a read:

*“As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.*

*A delegated act adopted pursuant to the second subparagraph of Article 2(2), Article 5(3), Article 8 and Article 14(1) to (5) shall enter into force only if no*

*objection has been expressed either by the European Parliament or the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.”*

While this procedure contains some differences compared to the one laid out in Article 5a of Decision 1999/468/EC, it does not modify the powers enjoyed by the European Parliament and the Council which also under the proposed amendment retain their veto power.

### **3.2 Possible limits applicable to the Commission’s implementing powers**

As seen above, the BR empowers the Commission to adopt new RDE testing legislation on the basis of the procedure laid down by Article 14(3) of the BR. The arguments developed below may, however, provide elements in support of the position that the Commission’s powers in this respect are limited, in light of the intrinsic interconnection between emission limits and the testing procedure applied to determine the compliance with those limits.

The intrinsic interconnection between Euro 5/6 emission limits and the testing procedure applied to determine the compliance with these limits is mentioned in several official and non-official documents, which acknowledge the influence of the test used on the emission levels measured (see, e.g., Section 14 of Annex I to the Euro 5 Impact Assessment, in which the Commission explains that the discrepancy between the NEDC test results and actual emissions on the road “*should be considered in the future*”).

If it were to be confirmed that the discrepancy between emission levels measured on the basis of the NEDC and emission levels measured on the basis of the RDE is wide and that the selected test significantly pre-determines the result of the tests, the conclusion would be that changing the testing procedure from a NEDC-based procedure into a RDE-based procedure would *de facto* produce the same consequence as imposing lower emission limits. In other words, by adopting a RDE test procedure the Commission might obtain the effect of *de facto* amending the Euro 5/6 emission limits set out in Annex I of the BR. It should therefore be assessed whether or not the Commission is entitled to do so. This problem could potentially be overcome if the Commission were to adopt conformity factors so as to mitigate the impact of the change in testing procedure

### 3.2.1 The Commission's power to amend the BR in non-delegated matters is limited

The Euro 5/6 emission limits are laid down in Annex I to the BR. The BR, including its Annexes, was originally adopted by means of the ordinary legislative procedure set out in Article 294 TFEU. Regulations which are adopted pursuant to Article 294 TFEU can only be modified by means of the same procedure, unless a specific delegation is made to the Commission.

Article 14 of the BR, entitled “*Redefinition of specifications*”,<sup>20</sup> lays down the only way the Commission is empowered, without following the ordinary legislative procedure, to amend the Euro 5/6 emission limits laid down in Annex I to the BR. Article 14(2) of the BR (and Recital 25 of the BR) states that the Commission can amend Annex I to the BR by recalibrating the particulate mass based limit values set out therein as well as by introducing particle number based limit values. In the past, Annex I to the BR has been amended by means of Commission Regulations on the basis of this delegation.

The fact that the competence to amend Annex I to the BR was delegated to the Commission only with regard to the matters mentioned in Article 14(2) suggests that the co-legislators held that other amendments, including those relating to the Euro 5/6 emission limits, should not generally be left to the discretion of the Commission.

This reasoning is confirmed by the proposed amendment to Article 14(5) BR included in the 2014 Commission Proposal. Currently, Article 14(5) BR states that, in order to tighten the emission limits for carbon monoxide and hydrocarbon tailpipe emissions measured after a cold start, the Commission “*shall present, as appropriate, a proposal to the European Parliament and to the Council*”. The 2014 Commission Proposal explicitly empowers the Commission to adopt delegated acts to set out limits for tailpipe emissions at cold temperatures for Euro 6-compliant vehicles. Accordingly, whereas these emission limits can currently only be changed by means of a legislative act adopted in accordance with Article 294 TFEU, it will be possible (if the 2014 Commission Proposal is enacted) for the Commission to do so on its own, by means of a delegated act. Because the current Article 14(5) BR unambiguously refers to the ordinary legislative procedure, it is clearly necessary for the Commission to formally change the BR before it can change the tailpipe emission limits at cold temperatures alone. The same reasoning also applies to the emission limits in Annex

---

<sup>20</sup> Interestingly, the German version reads “Neufestsetzung der Grenzwerte”, which literally means “adjustment/review/revision of the limits”.

I BR, even though the BR in this case currently does not explicitly refer to the ordinary legislative procedure.

Thus, in case the adoption of a RDE-based testing procedure would amount to a *de facto* amendment of the Euro 5/6 emission limits, it could be argued that such a new testing procedure should be introduced following the ordinary legislative procedure rather than the regulatory procedure with scrutiny, in spite of the language of the first part of Article 14(3) of the BR.

In this respect, it should also be borne in mind that the second part of Article 14(3) of the BR limits the application of the regulatory procedure with scrutiny to measures designed to amend non-essential elements<sup>21</sup> of the BR. Therefore it could be argued that to adopt a new testing procedure, which has consequences of such significance as to be deemed equivalent to changing the emission limits laid down in Annex I to the BR, would bring amendments to essential elements of the BR.

Provided that the above assumption (*i.e.*, that the new testing procedure would have consequences of such significance as to be deemed equivalent to a substantial change of the emission limits) would be technically defensible, it could be argued that the Commission cannot rely upon the procedure spelled out in Article 14(3) of the BR to make the changes to the testing procedure and that it should rather follow the ordinary legislative procedure set out by Article 294 TFEU.

The above conclusion is confirmed by a comparison of Article 14 of the BR with Article 12 of Regulation 595/2009/EC. Like the BR, Regulation 595/2009/EC is a separate regulation in the context of the EU type-approval procedure under the FD.<sup>22</sup> Accordingly, both regulations operate within the same logic of institutional competence allocation.

Similar to the BR, Regulation 595/2009/EC contains emission limits for positive ignition and compression ignition vehicles and specifies procedures for the “*redefinition of specifications*”. These procedures are laid down in Article 12 of Regulation 595/2009/EC. In particular, Article 12(2) of Regulation 595/2009/EC provides that

---

<sup>21</sup> German: “zur Änderung nicht wesentlicher Bestimmungen”; Dutch: “tot wijziging van niet essentiële elementen”; French: “modifier des éléments non essentiels”; Italian: “modificare elementi non essenziali del presente regolamento”; Spanish: “modificar elementos no esenciales”. These sentences have all the same meaning as the English sentence.

<sup>22</sup> Recital 2 of Regulation 595/2009/EC.

*“The Commission shall establish correlation factors between the European transient cycle (ETC) and the European steady state cycle (ESC) as described in Directive 2005/55/EC, and the worldwide harmonised transient driving cycle (WHTC) and the worldwide harmonised steady state driving cycle (WHSC) and shall adapt the limit values to that effect. Those measures, designed to amend non-essential elements of this Regulation, inter alia, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 13(2).”*

This provision demonstrates that the co-legislators, when adopting Regulation 595/2009/EC, had the intention of maintaining a constant level of permitted emissions, regardless of the test cycle employed to measure compliance with this level. To this effect, Regulation 595/2009/EC foresees the adoption of correlation factors between the various tests and enables the Commission to amend the emission limits in function of the test employed. While the emission limit value as such is thus considered to be a “non-essential element” of Regulation 595/2009/EC, the underlying emission quantity is to remain unchanged. The underlying emission quantity, whose value can differ according to the measurement method that is being used, can only be modified by way of an act adopted on the basis of the ordinary legislative procedure. In the absence of such alteration, the Commission is even obliged, under Regulation 595/2009/EC, to ensure that the test cycle employed for the measurement of compliance with the emission limit, does not alter the underlying emission quantity that is emitted.

Thus, Article 12(2) of Regulation 595/2009/EC confirms that the logic of the individual regulations adopted in the context of the EU type-approval procedure under the FD is to lay down emission limits which correspond to a certain real emission quantity. This quantity cannot be altered by the Commission by way of a delegated act.

Moreover, the fact that under Regulation 595/2009/EC the amendment of the emission limits in order to maintain a constant real emission quantity, regardless of the test deployed, is considered to be non-essential indirectly confirms the view (discussed in section 2 of the present Memorandum) that there is a relationship between emission limits and test cycle in the individual regulations adopted within the framework of the FD.

### **3.2.2 The need to comply with the fundamental principles of legal certainty and legitimate expectations**

In adopting a new RDE testing procedure the correlation between the emission limits and the testing procedures used to measure such emissions should also be carefully assessed in the light of the general principles of legal certainty and protection of legitimate expectations. In this respect, the following should be noted.

At the time of adoption of the BR, the Commission did not intend to introduce Euro 6 limits. The impact assessment for the Euro 5 emission limits states, in Section 5 of its Annex I:

*“A number of stakeholders considered it important to provide a longer term perspective as to how emission limits would develop in the future. [...] it is not considered appropriate to set longer term emissions standards at this point in time. [...]”*

However, it would appear that a concern for legal certainty eventually motivated the co-legislators to put in place Euro 6 emission limits already at the time of adoption of the BR even though they would only enter into force 7 years later, in September 2014. According to Recital 5 of the BR,

*“industry should be provided with clear information on future emission limit values. This is why this Regulation includes, in addition to Euro 5, the Euro 6 stage of emission limit values.”*

Recital 6 adds that *“setting such a step [...] at an early stage will provide long-term, Europe-wide planning security for vehicle manufacturers.”*

Lastly, the importance of legal certainty is also evident from Recital 22 of the BR, which addresses the transition from the Euro 4 emission limits (which were regulated by a set of Directives) to the Euro 5 emission limits. The transitional period mentioned in Recital 22 of the BR is implemented by means of Article 18(2) of the BR, which deferred the applicability of a large part of the BR until 3 January 2009, even though the BR entered into force on 2 July 2007.

If the Commission were to adopt a testing procedure allowing for the registration of actual emissions of vehicles, this could be said to interfere with the planning security aimed for by the BR. This is all the more so since the BR specifically expresses concern for the protection of the industry’s interest. Recital 7 to the BR reads:

*“In setting emissions standards it is important to take into account the implications for markets and manufacturers’ competitiveness, the direct and indirect costs imposed on business and the benefits that accrue in terms of stimulating innovation, improving air quality, reducing health costs and increasing life expectancy, as well as the implications for the overall impact on carbon dioxide emissions.”*



Under European Union law, an administrative measure is flawed if it infringes the principle of legitimate expectations founded on previous legislation. A person may only plead infringement of the principle of legitimate expectations if he has been given precise assurances by the administration.<sup>23</sup>

Moreover, the Court has also held that, in the absence of an overriding public interest, the Commission infringes a superior rule of law by failing to couple the repeal of a set of rules with transitional measures for the protection of the expectations which a trader might legitimately have derived from the Community rules.<sup>24</sup>

Recitals 5 to 7 and 22 of the BR would appear to preserve the protection of the legitimate expectations of the industry, thus entitling the industry to benefit from transitional measures ensuring a reasonable time to adapt to legislative changes.

However, it should be borne in mind that the European Court of Justice has held that “if a prudent and alert economic operator could have foreseen the adoption of a Community measure likely to affect his interests, he cannot plead [the principle of legitimate expectations] if the measure is adopted.”<sup>25</sup> Therefore, it would appear that if a future change in policy would be held to be foreseeable, a plea based on legal certainty would be unlikely to be successful.

### 3.3 Conclusion

According to Article 14(3) of the BR, the Commission is entitled to modify the NEDC-based testing procedure or to introduce a RDE-based testing procedure (provided that they “reflect” real world emissions). Therefore, the Commission is empowered to amend the testing procedure by means of the regulatory procedure with scrutiny provided for by Article 5a of Decision 1999/468/EC.

However, if such amendments would give rise to a testing procedure which would *de facto* produce a substantial modification of the Euro 5/6 emission limits, these amendments might be held to affect essential elements of the BR. As such, they would appear not to be covered by the scope of the revisions that may be made using the comitology procedure, which the second part of Article 14(3) limits to the modification of non-essential elements of the BR.

---

<sup>23</sup> Case C-506/03, *Germany v Commission*, not published in the ECR, at 58.

<sup>24</sup> Case 74/74, *CNTA v Commission* [1975] ECR 533, at 44.

<sup>25</sup> Case C-265/85, *Van den Bergh en Jurgens and Van Dijk Food Products Lopik v Commission* [1987] ECR 1155, at 44.



Moreover, any change of the testing procedure brought in by the Commission should be carefully evaluated in light of the fundamental principle of legitimate expectations.

In view of the foregoing, viable arguments point to the conclusion that the introduction of a RDE-based testing procedure would not be covered by the comitology procedure, provided that the above assumption (*i.e.*, that the new testing procedure would have consequences of such a significance to be deemed equivalent to a substantial change of the emission limits) would be considered to be well-founded.

#### 4. CONCLUSION AND RESPONSES TO THE QUESTIONS

Our analysis has concluded that an interpretation of the BR suggesting that the Euro 5/6 emission limits were meant from their inception to apply under real driving conditions would be incorrect. Viable arguments point to the conclusion that Annex I to the BR was drafted on the assumption that compliance with the emission limits would be verified on the basis of the NEDC.

This having been said, it should be borne in mind that a reading of the BR confirms that the Commission is competent to adopt a RDE-oriented testing procedure. When assessing the Commission's competence in light of the (restrictive) attitude taken by the co-legislators in connection with the Commission's powers to amend Annex I to the BR, it would however appear that the Commission would be empowered to only amend non-essential elements of the BR. Moreover, any changes in this respect should be carefully assessed in light of the fundamental principle of legitimate expectations.

On the basis of the foregoing, the following answers can be given to the questions raised.

*Did the co-legislators agree that the Euro 5/6 emission limits should be met over real driving conditions (i.e. any driving condition) and do the Regulation 715/2007 and amending Regulation(s) (in particular Regulation 459/2012) require this? Did the Commission proposal intend that the Euro 5 emission limits be met over real driving conditions (i.e. any driving condition)? Is there a clear legal link between compliance with the Euro 5/6 emission limits and the NEDC test cycle? Does other EU pollutant emissions legislation confirm the political relation between the present emission limits and test cycles and thereby limit how the Commission may act?*

Nothing seems to indicate that the co-legislators, at the time of adoption of the BR, agreed that the Euro 5/6 emission limits had to be met over real driving conditions. On the contrary, the analysis of the existing legislative framework and the relevant preparatory acts lead to the conclusion that it was understood from the outset that,

until the Commission would introduce a change in this respect, the permissible emission limits would be verified in light of a laboratory testing procedure based on the NEDC. The NEDC test cycle is thus connected to the existing legislative framework, although it does not constitute an intrinsic part of it. Until a new test cycle is adopted, the NEDC constitutes the basis for the verification of compliance with the Euro 5/6 emission limits. Moreover, other EU pollutant emissions legislation, such as Regulation 595/2009/EC, indirectly confirms the view that there is a relationship between emission limits and test cycle. It would thus result that the relevant legal framework cannot be modified by way of a delegated act but rather by an act adopted on the basis of the ordinary legislative procedure.

*Is the Commission entitled to set RDE performance (emission) limits (i.e. conformity factors that would be a multiplier of the legal emission limit) by the comitology procedure or should the co-decision procedure be followed?*

A reading of the language of the BR leads to the conclusion that the Commission can adopt any testing procedure and test cycle by means of the comitology procedure, as described in Section 3.1 of the present Memorandum. The procedure for amending the testing procedure laid down in the 2014 Commission Proposal retains the veto power that the European Parliament and the Council enjoy under the present comitology procedure.

However, provided that the adoption of a new testing procedure would lead to consequences of such significance as to be deemed equivalent to changing the emission limits laid down in Annex I to the BR, an interpretation relying upon the *ratio legis* of the BR and the limits to the delegation of powers enshrined in Article 14 of the BR, might provide arguments supporting the position that the comitology procedure would not be applicable to amendments to the testing procedure that would have the effect of reducing the emission limits.

*Do other language versions lead to a different conclusion?*

No. Our analysis of the other language versions did not reveal any element pointing to interpretations or conclusions differing from the above.