

JRC TECHNICAL REPORTS

Revision of the EU Green Public Procurement Criteria for Transport

*Technical report and criteria proposal
(2nd draft)*

*Annex: Table of comments from the
stakeholders on the 1st draft of
Technical report and criteria proposal*

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TABLE OF COMMENTS FROM THE STAKEHOLDERS

Category 1 Purchase, lease or rental of cars, LCVs and L-category vehicles

Annex table 1: GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Alternative fuels	It is suggested to give award points to companies switching to more sustainable fuels. For example, the car rental company Goldcar offers LPG vehicles for rent in Spain, Italy and Portugal. Such initiatives should be rewarded as they allow for significant environmental benefits, but are generally not accounted for when done in the aftermarket.	Comment not accepted: the EU GPP criteria shall be based on environmental performance of the vehicle. A technology neutral approach has been applied where possible, keeping a balance with a feasible verification based on common metrics and test methods used by manufacturers and known by consumers.
Alternative fuels	We recommend to add in this section the reference to the definition of alternative fuels according to the Directive on the Deployment of Alternative Fuels Infrastructure (2014/94/EU). In this Directive, EU co-legislators have clearly defined alternative fuels as being electricity, hydrogen, biofuels, synthetic and paraffinic fuels, natural gas and LPG, and have emphasised on their benefits in terms of energy security and environmental protection. This comment is also valid for the other product categories.	Comment not accepted: see above.

Selected information subject to the comment	Comment description	Assessment by JRC
Alternative fuels at comprehensive level	<p>The comprehensive criterion aims to stimulate the purchase or lease of BEVs, PHEVs and REEVs, rather than having a separate criterion for 'alternative fuels'. Do you agree with this approach?</p> <p>No, this approach is not technology neutral. We recommend an approach which favour all alternative fuels equally, in a non-discriminatory way.</p> <p>This comment is also valid for the other product categories.</p>	Comment not accepted: see above
Alternative fuels at comprehensive level	including CNG & LNG vehicles as well	Comment not accepted: see above

Selected information subject to the comment	Comment description	Assessment by JRC
Consultation questions	<p>- Should the CO2 values in the core criteria distinguish petrol and diesel cars?</p> <p>No, also in the Dutch tax-system (for car-taxes) the difference between petrol and diesel will disappear. - Should the vehicle sizes be better defined? Should the thresholds be based proportional to the mass, as for the CO2 targets?</p> <p>A more general system of thresholds (i.e. based proportional to the mass) will better fit the current situation in purchasing cars.</p> <p>The tendency is to introduce more different categories for buying cars.</p> <p>- The comprehensive criterion aims to stimulate the purchase or lease of BEVs, Do you agree with this approach? Yes, in the Dutch case it is very important to stimulate BEV's. If a BEV is not feasible (technically or due to lack of range) it is important to stimulate CNG (based on biomass).</p> <p>- Do stakeholders see any ways to incorporate WTW emissions in relation to the required verification of the use of alternative fuels without increasing administrative costs unacceptably? As stated before we prefer the first option.</p>	Comment partially accepted: the mass-based approach is only proposed (as an option for discussion) for N1 class III vehicles due to the broad variety of vehicles within that classification. For the rest of vehicles, the different segments have been better defined, but thresholds are proposed to simplify the evaluation process
NG vehicles	<p>Should the CO2 values in the core criteria distinguish petrol and diesel cars?</p> <p>- Should the vehicle sizes be better defined? Should the thresholds be based proportional to the mass, as for the CO2 targets?</p> <p>- Are the values proposed under the core criterion sufficiently ambitious?</p> <p>- The comprehensive criterion aims to stimulate the</p>	<p>Comment not accepted:</p> <ol style="list-style-type: none"> 1) Most cars and vans are dual-fuel vehicles, and hence the filling with natural gas is not ensured. 2) It is not so clear that a system of credits could promote additional biomethane capacity. According to the data about number of NG vehicles and biomethane available for transport, the number of NG vehicles does

Selected information subject to the comment	Comment description	Assessment by JRC
	<p>purchase or lease of BEVs, PHEVs and REEVs, rather than having a separate criterion for 'alternative fuels'. Do you agree with this approach?</p> <p>- Do stakeholders see any ways to incorporate WTW emissions in relation to the required verification of the use of alternative fuels without increasing administrative costs unacceptably?</p> <p>No Yes, yes</p> <p>No No, it's discrimination towards e-mobility, if other alternative fuels are able to reach the set criteria they should be considered as well such as CNG, LNG and H2 Alternative fuels should benefit from favourable taxation.CO2 credits in vehicle homologation for renewable gas (cost-neutral incentive to OEMs):acknowledgement of bio CNG bio LNG vehicles, biomethane and e-gas (power to gas) are not taken into account. Example Switzerland, 10% biomethane in the gas mix results in -10% CO2 emissions per car in addition to tailpipe. Also, Audi e-gas fuel card provides synthetic methane/carbon neutral fuel to the customer = customer can decide for a fuel, and level playing field with electric vehicles.</p>	<p>not seem to influence the ratio biomethane/fossil natural gas at national level. In 2013, Sweden with 27 995 Nm³/h of biomethane capacity had less than 1% of NG vehicles, while Italy with a capacity below 1 000, doubled this share of NG vehicles (EBA Biogas report 2014 and FC Gas Intelligence - Europe's Natural Gas and Bio-methane Vehicle Market, 2014). This might be due to the fact that biomethane is also demanded for water and space heating.</p> <p>3) The benefits of biogas, with and without upgrading, are acknowledged, however, any increase in the demand of natural gas should be evaluated cautiously, factoring in whether the potential capacity of biogas would be able to absorb that additional demand, or on the contrary, that demand would lead to an increase of fossil natural gas consumption.</p>

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NG vehicles	<p>In 2017, small CNG vehicles have 85 WTW CO₂ g/km, excluding the renewable gas used. The share of renewable gas per region/country, should be taken into account. As example, Sweden has a 75% of biomethane into the grid, also used in transport, if this is considered, in this case a small CNG car in Sweden would emit 21 CO₂g/km.</p> <p>An option, could be to provide CO₂ credits in vehicle homologation for renewable gas (cost-neutral incentive to OEMs): acknowledgement of bio CNG bio LNG vehicles, biomethane and e-gas (power to gas) are not taken into account. Example Switzerland, 10% biomethane in the gas mix results in -10% CO₂ emissions per car in addition to tailpipe. Also, Audi e-gas fuel card provides synthetic methane/carbon neutral fuel to the customer = customer can decide for a fuel, and level playing field with electric vehicles.</p>	Comment not accepted: see above
Options proposed	We prefer option 1. Option 2 is too complicated. The purchasing department and tenderers will have to do many calculations and much research in order to make a good tender document and offer, fitting in their situation.	Comment accepted
Options proposed	Option 2 should not be taken into consideration as the OEMs responsibility is purely for tail pipe emissions	Comment accepted
Options proposed	The type approval CO ₂ value should be measured at the tailpipe (tank-to-wheel). Option 1 in chapter 3.2.1.2 of the JRC's 1st draft technical report and criteria proposal from October 2016 should therefore be preferred.	Comment accepted

Selected information subject to the comment	Comment description	Assessment by JRC
Options proposed	<p>We support an approach looking at WTW GHG EMISSIONS values for each fuel type, based on well-recognised references such as the JEC report. WTW encompasses the origin of the fuel (renewable or not) as well as all emissions at energy production stage. We support option 2.</p> <p>This comment is also valid for the other product categories.</p>	<p>Comment not accepted: Option 1 is preferred by public procurers since it is much easier to implement in a call for tender: it is based on based on common metrics and test methods used by manufacturers and known by consumers. This is also in line with overall CO₂ legislation in the EU for vehicles. The choice of WTW factors might entail some issues, since in most situations is not possible to know the pathway of the fuels consumed.</p>

Selected information subject to the comment	Comment description	Assessment by JRC
Segments	<p>Instead of redefining segments, using an already definition would be advisable.</p> <p>Though there is not a final definition from the Commission about the sizes and segments of car classifications, there is already a segmentation used by the Commission in other documents:</p> <ul style="list-style-type: none"> A: mini cars B: small cars C: medium cars D: large cars E: executive cars F: luxury cars S: sport coupés M: multi purpose cars J: sport utility cars (including off-road vehicles) <p>The redefinition would be:</p> <ul style="list-style-type: none"> Segments A,B instead of small car Segment C for mid-size car Segments D - J for Large car. Though small coupés are likely small, they tend to have larger engines and, therefore, more CO2 g/km rates. 	<p>Comment accepted: this classification is used to better define the segments small, medium and large</p>
Test procedure	<p>The New European Driving Cycle (NEDC) procedures are going to be replaced by other criteria by 1st January 2019.</p>	<p>Comment accepted: the values proposed for 2019 onwards will be translated into WLTP values in the next</p>

Selected information subject to the comment	Comment description	Assessment by JRC
	The new GPP criteria should be developed against the new WLTP test cycles (Worldwide Harmonized Light-Duty Vehicles Test Procedure).	version of the TR.
Thresholds: comprehensive level	This section, and many parts of the report, do not respect the principle of technology neutrality. It is important to consider all solutions objectively on the basis of their environmental performance, allowing them to compete, and not to pick a winning technology such as electric vehicles in this report. This comment is also valid for the other product categories.	Comment not accepted: a technology neutral approach has been applied where possible, keeping a balance with a feasible verification based on common metrics and test methods used by manufacturers and known by consumers
Thresholds: be based proportional to the mass, as for the CO2 targets?	It's easier for public procurement and for final users use car length in order to define vehicles sizes than mass. Right now, frameworks agreements are already using length.	<p>Comment not accepted: the segments are defined using the classification below:</p> <ul style="list-style-type: none"> A: mini cars B: small cars C: medium cars D: large cars E: executive cars F: luxury cars S: sport coupés M: multi purpose cars J: sport utility cars (including off-road vehicles)
Thresholds: Comprehensive	The 50g/km threshold in the comprehensive criterion TS1 is too high because a lot of plug-in hybrid electric vehicles (PHEVs) could achieve this only on paper but would fail	Comment accepted

Selected information subject to the comment	Comment description	Assessment by JRC
	achieving these values on the road. Therefore, this criterion should be dropped.	
Thresholds: Core N1	The targets for vans described p.14 of the JRC technical report are overly generous because the values proposed are already reflected on the market In fact, more than half of the small N1 class I vans on sales can already perform 115 CO2 g/km; while about 25% of big N1 class III vans can currently achieve 155 CO2g/km. We therefore propose to replace the targets for small, mid-size, and large N1 class vehicles by more stringent values. The database we use for the current performance of vans can be accessed here: http://vanfueldata.dft.gov.uk/Default.aspx	Comment accepted
Thresholds: 'moving target',	This target will also be affected with the introduction of Real Driving Emissions (RDE) tests this year (2017). Analyses had shown that emissions of Euro 5 and 6 vehicles under realistic driving conditions substantially exceed results of the existing New European Driving Cycle (NEDC), in particular NOx from diesel vehicles. See attachment (Source ADAC)	Comment acknowledged: please check the air pollutant emissions criterion for details

Annex table 2: Air pollutant emissions

Selected information subject to the comment	Comment description	Assessment by JRC
The GPP criteria should clearly go beyond the mandatory limits which are applicable for all new vehicles	We support this approach. Generally, the sole reference to the Euro 6 norm does not accurately reflect the environmental performance of vehicles in terms of POLLUTANTS emissions. For example a Euro 6 LPG car will emit much less NO _x than a Euro 6 diesel vehicle. It is therefore important to look at the detailed results of emission tests. Compliance with Euro 6c is a step in the right direction, but the GPP criteria could even go beyond that. This comment is also valid for the other product categories.	Comment acknowledged
Zero emission capability	It is important, just like for GHG EMISSIONS, to look at zero emission capability in a WTW perspective to ensure a level playing field between all technologies. Today's pure electric and hydrogen vehicles often do not emit zero POLLUTANTS WTW, therefore this criteria seems too stringent. Option 1 should therefore be preferred. This comment is also valid for the other product categories.	Comment not accepted: the environmental analysis shows that air pollutants emitted by traffic is one of the major environmental and health concerns in urban areas. Impacts associated to air pollutants emissions are local so the place where they occur shall be taken into account.
Air pollutant emissions from NG vehicles	The IGU (International Gas Union) has published a report about how to improve the air quality in cities http://www.igu.org/sites/default/files/IGU_Urban_Air_Quality%20Report%202016_1711.pdf As example, Berlin road transport remains the largest source of emissions for many air POLLUTANTS, particularly NO _x , Carbon Monoxide, particulate matter and organic gases (Ozone). To address traffic-related emissions, Berlin has promoted the use of natural gas vehicles since 2000, and continues to do so under the city's current air quality plan for the 2011-2017	Comment not accepted: the air pollutant emissions criteria can be formulated based on performance of the vehicle, and it is not necessary to specify any particular technology. Best performing vehicles will benefit from by the award criterion proposed

Selected information subject to the comment	Comment description	Assessment by JRC
	<p>period. Although the share of CNG vehicles remains very low, at less than 1% of the active vehicle fleet, the air quality impacts can be quite significant on the local level, especially in areas with a high concentration of taxi traffic (e.g., around airports and train stations). Acknowledging natural gas as a "clean alternative" to diesel vehicles in transportation, the city's plan envisions steps to support CNG vehicles with public sector vehicle purchases, reduced tolls for natural gas-powered trucks and a widespread communication campaign highlighting the benefits of natural gas vehicles, among other measures</p>	
TS Air polluting emissions	The criteria in TS2 for diesel cars should not be less stringent compared to those for petrol cars.	Comment not accepted the EU GPP criteria are aimed at selecting the technologies going beyond the mandatory limits, they need to converge with the Euro standards that rule the automotive industry and that are the main drivers currently pushing the market towards those better technologies.
TS Air polluting emissions	The TS2 criterion should foresee a limit of 60 mg NO _x /km because GPP criteria must go beyond the statutory requirements.	Comment partially accepted: EU GPP criteria are aimed at selecting the technologies going beyond the mandatory limits, they need to converge with the Euro standards that rule the automotive industry and that are the main drivers currently pushing the market towards those better technologies. Nevertheless the award criterion should compare the performance of the vehicle in absolute terms on a competitive basis. Therefore, the formula to calculate the points is based on the performance of the vehicle in terms of emissions per km, and no points would be allocated to the vehicle with the highest air pollutant emissions.

Selected information subject to the comment	Comment description	Assessment by JRC
conformity factor of 1.5	The 1.5 conformity factor in TS2 (chapter 3.2.2.2) for the core criteria is a legal requirement, and therefore it cannot be used to define the level of ambition for GPP.	Comment not accepted: the criterion will be a legal requirement in 2021, not in 2019
Consultation questions	<p>3.2.2.4 Consultation questions</p> <p>- Do you agree with the exceedance factor(s) proposed for the RDE for the core criteria? No we are not in favour of/do not agree with the exceedance factors (first a factor 2,1 later on 1,5). In many cities in Europe and also in a lot of Dutch cities there are severe problems with air quality, due to NOx-emissions of (mainly) diesel cars. The solution of these problems should not be postponed, certainly not when good and cost-effective solutions like BEV (PHEV) and CNG (biomass based) solutions are available.</p> <p>So our proposal is to maintain the euro-6 emission limits values, also in RDE-testcyclus, and also no acceptance of delay and of exceedance factors. It's up to the car-manufacturers to show/prove that their cars will comply with in euro-6 limit values (in RDE-test cyclus). If this is not possible yet, the diesel cars should be excluded from the purchase-tender. The alternative solutions, compliant with the euro-6 emission limit values, are available.</p> <p>- Do you agree on the criteria proposed on the gasoline particle filters? Yes, we do.</p> <p>- Do you agree with the zero emissions capabilities proposed? Is the threshold proposed appropriate? Threshold proposed (40 km zero emission) is OK. We would like to add another nearly zero-emission option: biobased CNG. This fuel has low GHG EMISSIONS-emission, as well as</p>	Comment partially accepted: the manufacturers need a transition for the new tests. A specific provision for urban areas with poor air quality has been introduced. For the comment related to CNG, please see the section on GHG emissions.

Selected information subject to the comment	Comment description	Assessment by JRC
	low polluting emissions.	
Do you agree with the zero emissions capabilities proposed? Is the threshold proposed appropriate?	<p>Yes</p> <p>Yes</p> <p>Yes, Yes. Zero emission should be taken into account from the WtW perspective. EV running on electricity produced from carbon should not be considered zero emission, at the same time natural gas vehicles running on renewable gas (biomethane or power to gas) could be included as zero emission vehicles.</p>	<p>Comment not accepted: the environmental analysis shows that air pollutants emitted by traffic is one of the major environmental and health concerns in urban areas. Impacts associated to air pollutants emission are local so the place where it occurs shall be taken into account.</p>

Selected information subject to the comment	Comment description	Assessment by JRC
Petrol vehicles need to be equipped with a Gasoline Particle Filter	For public procurement, would be easier to use fuel technology independent criteria to give points to vehicles. If it is not possible, a criterion based on NOx emission rates and type of fuel and would be easier to manage.	Comment accepted
Petrol vehicles need to be equipped with a Gasoline Particle Filter	The set of criteria needs to be technology neutral. As a consequence, the criterion for gasoline particle filters in TS2 should be removed.	Comment accepted: the criterion has been reformulated in a technology neutral way
Petrol vehicles need to be equipped with a Gasoline Particle Filter	In section 3.2.2.2 (p22) the core criteria proposed is a Conformity Factor (CF) of 1.5 for diesels in 09/2019 (and 1.1 from 01/2021) while petrol cars have to be fitted with a Gasoline Particle Filter. This definition is not technology-neutral and should rather be based only on CFs. This is possible as CFs are now defined not only for NOx but also for PN (third RDE package voted in TCMV on 20 December 2017 and to be published in Q2 2017).	Comment accepted
Points will be awarded to GDI (gasoline direct injection) vehicles that are equipped with a	Maybe the same outcome would be achieved by using a Technology neutral formula, based on Nox and Co2 particles. This would allow the evaluation formula used in the procurement to be simpler.	Comment accepted

Selected information subject to the comment	Comment description	Assessment by JRC
Gasoline Particle Filter.		
RDE emission performance	<p>For the core criteria a Real Driving Emissions (RDE) factor of 1.3 should apply, setting a limit at 60mg NO_x/km while ensuring technology neutrality between petrol and diesel. This is needed because today the NO_x limit for diesel cars is 80mg while the limit for petrol vehicles is 60mg. A technology neutral approach therefore should stop favouring diesel cars.</p>	<p>Comment partially accepted: EU GPP criteria are aimed at selecting the technologies going beyond the mandatory limits, they need to converge with the Euro standards that rule the automotive industry and that are the main drivers currently pushing the market towards those better technologies. Nevertheless the award criterion should compare the performance of the vehicle in absolute terms on a competitive basis. Therefore, the formula to calculate the points is based on the performance of the vehicle in terms of emissions per km, and no points would be allocated to the vehicle with the highest air pollutant emissions.</p>
Vehicles that can prove zero tailpipe emission capability.	<p>Not only vehicles that are zero tailpipe emission can contribute to improve the air quality issue. As example, CNG can provide significant reductions in NO_x, SO_x, CO, PM and noise.</p> <p>Also, several cities have included CNG collection waste vehicles on the public procurement due the noise reduction benefits for night collection, as it is the case of The Netherlands (PIEK certificate) http://www.piek-international.com/</p>	<p>Comment acknowledged</p>
Verification	<p>As long as the criterion is based on the information available in technical sheets, it is impossible for public procurers to check whether this information is accurate.</p>	<p>Comment accepted: technical sheets are replaced by certificate of conformity, based on type approval tests which are done or witnessed by a technical service</p>

Selected information subject to the comment	Comment description	Assessment by JRC
		appointed by the national authorities
Zero tailpipe emissions capability as TS	The TS2 comprehensive criteria should be worded in a technology neutral manner, asking for zero emissions at the tailpipe.	Comment partially accepted: see the provision for urban areas with air quality issues

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Annex table 3: Technical options to reduce GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Do you agree with new criteria proposed?	All can be seen as an core criteria YEs Yes	Comment partially accepted: some criteria are just part of the comprehensive set to simplify the core set.
Do you agree with new criteria proposed?	We suggest not to keep this category’s criteria (chapter 3.2.3.2) in its current form. Oil and tyre criteria (TS7, TS8) should be integrated in an additional category on vehicle maintenance. Criteria TS3, TS4, TS6, AC5, AC6 should be moved to comprehensive criteria. Criterion TS5 on TPMS should be dropped, since TPMS is mandatory in all vehicles.	Comment partially accepted: the criteria set has been simplified as much as possible, taking into account cost effectiveness and market penetration. TPMS is not mandatory for vans
GSI and TPMS	Including GSI and TPMS in LCVs seems to be really effective measure in order to reduce GHG EMISSIONS.	Comment acknowledged
Low rolling resistance tyres	Requiring low rolling resistance tyres in the vehicles at their purchase reduces GHG EMISSIONS emission, and therefore, we would like to use this criterion. Nevertheless, this would only apply to the first period of the vehicle lifecycle. In the long term, only the vehicle maintenance are in charge of tyres, and can make this criterion significant.	Comment accepted: criteria on maintenance have been introduced in the service categories
Lubricants	Requiring low viscose lubricants at their purchase reduces GHG EMISSIONS emission, and therefore, we would like to use them as a minimum for the purchase. Nevertheless, this would only apply to the first period of the vehicle lifecycle. In the long term, only the vehicle maintenance are in charge of the lubricants, and can make	Comment accepted: criteria on maintenance have been introduced in the service categories

Selected information subject to the comment	Comment description	Assessment by JRC
	this criterion significant for the environment.	
Traffic information and route optimisation	<p>If possible, we would drop this criterion. First of all, implies that it needs a SIM connection. This means, a hidden cost with a subscription. In some cases, the car manufacturer is the service provider and does not allow the users to choose which mobile network to use, maps applications, etc.</p> <p>Also, there is also a security risks, as vehicles could be tracked. A big percentage of public vehicles should not be tracked, and this kind of systems are likely to be vulnerable. Traffic optimization and routes are easily granted with an ordinary mobile phone.</p>	Comment accepted
Tyres	<p>The tyre label regulation does not apply to retreaded tyres, hence it makes no sense to require governments to purchase retreaded tyres of the highest fuel energy efficiency class, as part of the EU GPP criteria. Nevertheless, it makes sense to promote through GPP criteria the purchase of retreaded truck tyres (see Rationale)</p> <p>Given the market availability, it seems to be justified to also require governments to purchase new tyres of the highest fuel energy efficiency class or retreaded tyres, as part of the EU GPP criteria. Therefore it is included as a technical specification for core and comprehensive criteria.</p>	Comment accepted: retreaded tyres are not required to have this label, and can comply with this criterion.

Selected information subject to the comment	Comment description	Assessment by JRC
Tyres	<p>The tyre label regulation does not apply to retreaded tyres, hence it makes no sense to require governments to purchase retreaded tyres of the highest fuel energy efficiency class, as part of the EU GPP criteria. Nevertheless, it makes sense to promote through GPP criteria the purchase of retreaded truck tyres (see Rationale)</p> <p>Compared to non-retreadable tyres, retreaded tyres generate 70% material savings thanks to material recovery and a longer lifespan. This saving induces further savings on the consumption of natural resources (oil, water) required for the production of those materials.</p> <p>The natural rubber economy also uses less land, and decreases pressure on rubber crops, which today are 70% devoted to the tyre industry. As 12% of rubber today is grown on areas deforested since the mid-90s, retreading helps reducing deforestation. Finally, with lower rolling resistance compared to non-retreadable imported tyres, retreaded tyres can reduce air pollution from particulate matter, as well as CO2 emissions.</p> <p>The rolling resistance for new tyres, expressed in kg/tonne shall comply with the highest fuel energy efficiency class, as defined by Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters. The rolling resistance of new tyres shall be tested according to the Annex I of Regulation (EC) No 1222/2009. This requirement shall not prevent the public authority from purchasing tyres with the highest wet grip class where justified by safety. Retreaded tyres should generally be promoted due to their overall lower environmental impacts compared to low end imported non-</p>	<p>Comment accepted: retreaded tyres are not required to have this label, and can comply with this criterion.</p>

Selected information subject to the comment	Comment description	Assessment by JRC
	<p>retreadable tyres. Compared to non-retreadable tyres, retreaded tyres generate 70% material savings thanks to material recovery and a longer lifespan. This saving induces further savings on the consumption of natural resources (oil, water) required for the production of those materials. The natural rubber economy also uses less land, and decreases pressure on rubber crops, which today are 70% devoted to the tyre industry. As 12% of rubber today is grown on areas deforested since the mid-90s, retreading helps reducing deforestation. Finally, with lower rolling resistance compared to non-retreadable imported tyres, retreaded tyres can reduce air pollution from particulate matter, as well as CO2 emissions.</p>	
Tyres	<p>“The rolling resistance for new tyres, expressed in kg/tonne shall comply with the highest fuel energy efficiency class, as defined by Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters. The rolling resistance of new tyres shall be tested according to the Annex I of Regulation (EC) No 1222/2009. This requirement shall not prevent the public authority from purchasing tyres with the highest wet grip class where justified by safety. Retreaded tyres should generally be promoted due to their overall lower environmental impacts compared to low end imported non-retreadable tyres “</p> <p>“The rolling resistance for new tyres, expressed in kg/tonne shall comply with the highest fuel energy efficiency class, as defined by Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other</p>	Comment accepted: retreaded tyres are not required to have this label, and can comply with this criterion.

Selected information subject to the comment	Comment description	Assessment by JRC
	<p>essential parameters. The rolling resistance of new tyres shall be tested according to the Annex I of Regulation (EC) No 1222/2009. This requirement shall not prevent the public authority from purchasing tyres with the highest wet grip class where justified by safety. Retreaded tyres should generally be promoted due to their overall lower environmental impacts compared to low end imported non-retreadable tyres "</p> <p>Compared to non-retreadable tyres, retreaded tyres generate 70% material savings thanks to material recovery and a longer lifespan. This saving induces further savings on the consumption of natural resources (oil, water) required for the production of those materials.</p> <p>The natural rubber economy also uses less land, and decreases pressure on rubber crops, which today are 70% devoted to the tyre industry. As 12% of rubber today is grown on areas deforested since the mid-90s, retreading helps reducing deforestation. Finally, with lower rolling resistance compared to non-retreadable imported tyres, retreaded tyres can reduce air pollution from particulate matter, as well as CO2 emissions.</p>	

Annex table 4: Noise

Selected information subject to the comment	Comment description	Assessment by JRC
Core/comprehensive criteria	Vehicle noise (Chapter 3.2.4.2) must not be included in the core criteria which in general should focus on CO2 emissions as a priority issue.	Comment accepted
Core/comprehensive criteria	Therefore, the award criterion for vehicle noise (AC8) should only apply to the comprehensive criteria set, and be moved to the new category on vehicle maintenance.	Comment partially accepted: there is not enough data within this revision process to include maintenance services in the scope, but it is included as part of the service categories
Core/comprehensive criteria	The Tyre noise criterion (AC7) should only apply to the comprehensive criteria set, and be moved to the new category on vehicle maintenance.	Comment partially accepted: see above
Do you agree with the ambition level proposed for both core and comprehensive levels?	Yes	Comment acknowledged
General	Do you agree with the ambition level proposed for both core and comprehensive levels? Yes we do agree.	Comment acknowledged
Tyres	Although it is a good thing to give points for noise emissions of tyres, this would only apply to the first set of tyres of the vehicles. After that, only the maintenance service will be able to put low noise emitting tyres or not.	Comment accepted: criteria on maintenance have been introduced in the service categories

Selected information subject to the comment	Comment description	Assessment by JRC
Tyres	<p>“Quality standards for retreading are laid down in the UNECE Regulation 109 (for commercial vehicles and their trailers, a.o. truck tyres).</p> <p>UNECE Regulation 109 leads to harmonised requirements for the retreading of tyres and to a high level of safety and environmental protection. They enable the free circulation of retreaded tyres.</p> <p>By the Council Decision 2006-443, as from 13 September 2006, the provisions of UNECE Regulation 109 apply as a compulsory condition for the placing on the market in the Community of retreaded tyres falling under the scope of that Regulation.</p> <p>For retreaded tyres, a specific "RETREAD" marking needs to be affixed on the tyre according to UNECE Regulation 109, which also impose quality requirements on the retreading process.</p> <p>Test reports according to Annex I of Reg 1222/2009 do not apply to retreaded tyres</p>	Comment accepted: retreaded tyres are not required to have this label, and can comply with this criterion.
Tyres	<p>Test reports according to Annex I of Reg 1222/2009 do not apply to retreaded tyres</p> <p>For retreaded tyres, a specific "RETREAD" marking needs to be affixed on the tyre according to UNECE Regulation 109, which also impose quality requirements on the retreading process.</p> <p>“Quality standards for retreading are laid down in the UNECE Regulation 109 (for commercial vehicles and their trailers, a.o. truck tyres).</p> <p>UNECE Regulation 109 leads to harmonised requirements for the retreading of tyres and to a high level of safety and environmental protection. They enable the free circulation of retreaded tyres.</p> <p>By the Council Decision 2006-443, as from 13 September</p>	Comment accepted: see above

Selected information subject to the comment	Comment description	Assessment by JRC
	<p>2006, the provisions of UNECE Regulation 109 apply as a compulsory condition for the placing on the market in the Community of retreaded tyres falling under the scope of that Regulation.</p> <p>These regulations introduce similar standards of safety and quality control for retreaded tyres as for new tyres. By making UNECE Regulation 109 compulsory for retreaded commercial vehicle tyres, the EU avoided the necessity to develop its own prescriptions for retreaded tyres, while at the same time ensuring that its tyre manufacturers can benefit from a wide market which extends far beyond the EU borders.”</p>	

Annex table 5: Noise

Selected information subject to the comment	Comment description	Assessment by JRC
Core/comprehensive criteria	Vehicle noise (Chapter 3.2.4.2) must not be included in the core criteria which in general should focus on CO2 emissions as a priority issue.	Comment accepted
Core/comprehensive criteria	Therefore, the award criterion for vehicle noise (AC8) should only apply to the comprehensive criteria set, and be moved to the new category on vehicle maintenance.	Comment partially accepted: there is not enough data within this revision process to include maintenance services in the scope, but it is included as part of the service categories
Core/comprehensive criteria	The Tyre noise criterion (AC7) should only apply to the comprehensive criteria set, and be moved to the new category on vehicle maintenance.	Comment partially accepted: see above
Do you agree with the ambition level proposed for both core and comprehensive levels?	Yes	Comment acknowledged
General	Do you agree with the ambition level proposed for both core and comprehensive levels? Yes we do agree.	Comment acknowledged
Tyres	Although it is a good thing to give points for noise emissions of tyres, this would only apply to the first set of tyres of the vehicles. After that, only the maintenance service will be able to put low noise emitting tyres or not.	Comment accepted: criteria on maintenance have been introduced in the service categories

Selected information subject to the comment	Comment description	Assessment by JRC
Tyres	<p>“Quality standards for retreading are laid down in the UNECE Regulation 109 (for commercial vehicles and their trailers, a.o. truck tyres).</p> <p>UNECE Regulation 109 leads to harmonised requirements for the retreading of tyres and to a high level of safety and environmental protection. They enable the free circulation of retreaded tyres.</p> <p>By the Council Decision 2006-443, as from 13 September 2006, the provisions of UNECE Regulation 109 apply as a compulsory condition for the placing on the market in the Community of retreaded tyres falling under the scope of that Regulation.</p> <p>For retreaded tyres, a specific "RETREAD" marking needs to be affixed on the tyre according to UNECE Regulation 109, which also impose quality requirements on the retreading process.</p> <p>Test reports according to Annex I of Reg 1222/2009 do not apply to retreaded tyres</p>	<p>Comment accepted: retreaded tyres are not required to have this label, and can comply with this criterion.</p>

Selected information subject to the comment	Comment description	Assessment by JRC
Tyres	<p>Test reports according to Annex I of Reg 1222/2009 do not apply to retreaded tyres</p> <p>For retreaded tyres, a specific "RETREAD" marking needs to be affixed on the tyre according to UNECE Regulation 109, which also impose quality requirements on the retreading process.</p> <p>"Quality standards for retreading are laid down in the UNECE Regulation 109 (for commercial vehicles and their trailers, a.o. truck tyres).</p> <p>UNECE Regulation 109 leads to harmonised requirements for the retreading of tyres and to a high level of safety and environmental protection. They enable the free circulation of retreaded tyres.</p> <p>By the Council Decision 2006-443, as from 13 September 2006, the provisions of UNECE Regulation 109 apply as a compulsory condition for the placing on the market in the Community of retreaded tyres falling under the scope of that Regulation.</p> <p>These regulations introduce similar standards of safety and quality control for retreaded tyres as for new tyres. By making UNECE Regulation 109 compulsory for retreaded commercial vehicle tyres, the EU avoided the necessity to develop its own prescriptions for retreaded tyres, while at the same time ensuring that its tyre manufacturers can benefit from a wide market which extends far beyond the EU borders."</p>	<p>Comment accepted: retreaded tyres are not required to have this label, and can comply with this criterion.</p>

Annex table 6: Vehicle manufacturing

Selected information subject to the comment	Comment description	Assessment by JRC
Vehicle materials	Criterion AC9 proposed in Chapter 3.2.5.2 should be considered a comprehensive criterion and be rephrased, so as to ease the verification process. We consider the lifecycle approach to be correct.	Comment not accepted: although the use of recycled materials could be a good way to improve the circular economy, the issues related to the traceability and the verification of the sources of recycled material have forced its dropping from the criteria proposal
Do you think the verification proposed is feasible?	- Yes - Yes	Comment not accepted: see above
Erratum	It should be 2-3 kg CO ₂ -e per kg	Comment acknowledged
General	3.2.5 Car manufacturing Is not a focus point/ main point for the Dutch GPP.	Comment acknowledged
Lubricants	Criterion AC9 verification depends on the vehicle manufacturer recommendation stated on the technical sheet. Not even the lubricants with which the vehicle is delivered in the purchase. This can lead to a situation in all vehicles could get the maximum points, but the lubricants used could still be the worst. This criterion does not necessarily have any impact in environment.	Comment accepted: criteria on maintenance have been introduced in the service categories, and the criteria on vehicle manufacturing are withdrawn.

Annex table 7: Battery warranty and reuse of the battery

Selected information subject to the comment	Comment description	Assessment by JRC
60 months or 100 000 km against capacity loss below 70%.	According to ACEA in the European Union are on average 9.73 years old. This has been steadily increasing over the last years. This should be taken in account. 5 years or 100.000 km is too short as a minimum warranty. For CNG vehicles the cylinders have to be certified for at least 10 years. http://www.acea.be/statistics/tag/category/average-vehicle-age Public fleet owners are also taking into account TCO (Total Cost of Ownership) plus the available infrastructure when choosing a certain fuel technology. This criterion will increase the TCO of electric vehicles significantly.	Comment accepted: the criterion has been raised to 9 years or 150000 km
Battery weight/size	With regard to a discussion point at the 1st AHWG meeting, we would like to stress that any additional criteria on weight and/or size of the battery are counterproductive. It would in fact encourage Plug-in Hybrid Electric Vehicles (PHEVs) which end up emitting more than normal Internal Combustion Engine Vehicles (ICEVs).	Comment accepted
Capacity loss	The minimum warranty of the battery in TS11 should be defined against a capacity loss below 75% instead of 70% in order to be more appropriate.	Comment accepted
Core criteria	The criteria on warranties (TS 11 and AC11) in chapter 3.2.6.2 should be included only in the comprehensive criteria set because of the reservations expressed by procurers during the 1st AHWG meeting.	Comment accepted
criterion on warranty of the battery is proposed	Batteries used across the industry will easily meet the requirements in the criteria proposal. Though, an additional declaration would cause costs and should therefore not be used as a criterion.	Comment partially accepted: the criterion is proposed at comprehensive level and the thresholds are stricter. Not all batteries comply with them
Reuse of the battery	There is no need for the award criteria proposed in chapter 3.2.6.2 on the reuse of the battery (AC12). Even if the battery is not suitable anymore to power a vehicle, there is a second hand	Comment accepted: the criteria proposal has been withdrawn

Selected information subject to the comment	Comment description	Assessment by JRC
	market for batteries which are still very valuable for energy storage facilities.	
Warranty terms	An additional criteria could be the availability of the battery spare parts in the future e.g. 5 years	Comment not accepted: the main impact related to the battery is due to the materials that produce the electrochemical reactions, so the criterion is aimed at extending the lifetime of the electrochemical capacity of the battery and reduce the number of replacements needed
LCA	The debate about WtW emissions should be changed to an LCA approach and take into account the recycling and end of life of the vehicle, including batteries (cradle-to-grave)	Comment acknowledged: there is criterion on warranty of the EV batteries, based on the outcomes of LCA literature review

Category 2 Mobility services

Annex table 8: Optimised vehicle use

Selected information subject to the comment	Comment description	Assessment by JRC
Do you find suitable the training hours proposed?	We prefer a verification method by certification, rather than setting targets for training hours. See for example our system 'the new driving/ecodrive' https://www.ecodrive.eu/en/csr/the-new-driving	Comment not accepted: private certification schemes cannot be requested as criterion, however, certified training could be accepted as proof of compliance.
Do you find suitable the training hours proposed?	-yes -Yes	Comment acknowledged
Training	We suggest inserting an additional selection criterion: drivers should be monitored and get regular feedback on the way they drive (similar to what is currently a common practice in HDV fleets).	Comment accepted

Annex table 9: GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
<p>Consultation questions</p>	<p>Consultation questions</p> <ul style="list-style-type: none"> - Do you think it is feasible to set minimum requirements on the fleet composition to ensure a proportion of low WTW GHG emissions vehicles? - Do you agree with the percentages proposed? <p>Comments: Complicated and complex method for tenderers.</p>	<p>Comment accepted: the criterion proposed is an award criterion based on average CO2 TTW emissions</p>
<p>Some companies are specialised in specific models: premium, hybrid, electric, etc. In Brussels, the car sharing company Zen Car offers 20 electric cars and 40 pick-up/drop-off points (BBL Belgium; et al, 2011).</p>	<p>Not only electric vehicles are used for car-sharing services. CNG cars are used as well. Sunfleet has received 42 Bifuel Volvo cars to add to their fleet. These CNG vehicles will only drive on biomethane. 38g CO2/km (according to the Swedish Transport Administration's calculation method for biomethane).</p> <p>http://www.westport.com/news/2015/0923-volvo-sunfleet-sweden-only</p> <p>Also, in Belgium, companies as Leaseplan or Atlon, are offering CNG cars on their fleet (for leasing and renting services)</p>	<p>Comment not accepted:</p> <ol style="list-style-type: none"> 1) Most cars and vans are dual-fuel vehicles, and hence the filling with natural gas is not ensured. 2) It is not so clear that a system of credits could promote additional biomethane capacity at national level. According to the data about number of NG vehicles and biomethane available for transport, the number of NG vehicles does not seem to influence the ratio biomethane/fossil natural gas. In 2013, Sweden with 27 995 Nm3/h of biomethane capacity had less than 1% of NG vehicles, while Italy with a capacity below 1000, doubled this share of NG vehicles (EBA Biogas report 2014 and FC Gas Intelligence - Europe's Natural Gas and Biomethane Vehicle Market, 2014). This might be due to the fact that biomethane is also demanded for heating. 3) The benefits of biogas, with and without upgrading, are acknowledged, however, any

Selected information subject to the comment	Comment description	Assessment by JRC
		increase in the demand of natural gas should be evaluated cautiously, factoring in whether the potential capacity of biogas would be able to meet that additional demand, or on the contrary, that demand would lead to an increase of fossil natural gas consumption.
12% of the fleet shall be electric vehicles.	From a technology neutral approach all the technologies should be considered	Comment acknowledged, however, this percentage is related to L-category vehicles
Do you think it is feasible to set minimum requirements on the fleet composition to ensure a proportion of low WTW GHG emissions vehicles?	Yes, alternative fuel mandates for cities/public procurement (e.g. 25% gas, 25% electric, 50% open) are needed. It is important to offer a technology neutral approach, especially when defining low and zero emission/pollution vehicles: Combustion engines running on natural gas are low CO2 emission and zero CO2 emission with renewable gas. Moreover, natural gas vehicles are extremely low pollution = no ban in European cities.	Comment partially accepted: the percentages have been replaced by an award criterion on average CO ₂ emissions, since it is more representative of the fleet performance than the percentages
General	<ul style="list-style-type: none"> • Measure emissions on the tailpipe (tank to wheel) to ensure consistency. • We agree with the percentages proposed. 	Comment partially accepted: the criterion based on type approval CO ₂ emissions but based on average of the fleet

Annex table 10: Air pollutant emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Consultation questions	<p>In the AC, and preferably in the TS, should be a strong emphasis on zero-emission possibilities.</p> <p>In many Dutch cases there is a growing share of zero-emission vehicles during the contract.</p>	Comment accepted: the comprehensive TS includes a provision to use zero tailpipe emissions vehicles in urban areas with poor air quality.
Age of the fleet: T The vehicles shall not be older than 4 years	TS3: 4 years seem to be too short for a vehicle lifecycle. Right now, the minimum period allowed in Spain for public procurement amortization of vehicles is 6 years, and encourage all organisms to increase their amortization time period.	Comment accepted: the option based on age of the vehicle is withdrawn
Award criterion for zero emissions vehicles is proposed in line with the category 1.	This is a methodology issue. Award criterion should not be based upon TTW zero emissions but based upon WTW reduced CO2 emissions. The whole cycle should be taken in account especially for public procurement.	Comment not accepted: the environmental analysis shows that air pollutants emitted by traffic is one of the major environmental and health concerns in urban areas. Impacts associated to air pollutants emission are local so the place where it occurs shall be taken into account.
Consultation questions	<ul style="list-style-type: none"> - Do you think it is feasible to set minimum requirements on the fleet composition to ensure a proportion of EURO 6 and minimum EURO 5 compliance for the fleet? - Do you agree with the percentages proposed? Are they suitable for fleets used in mobility services such as car-sharing? - Do you think the option based on the fleet age is more appropriate? In this case, which thresholds do you 	Comment accepted: the option based on age of the vehicle is withdrawn

Selected information subject to the comment	Comment description	Assessment by JRC
	<p>recommend?</p> <p>-yes -Yes.</p> <p>- No, time is only part of the whole TCO that should be considered. TCO approach is more appropriate</p>	
<p>Points will be awarded to tenders offering a service fleet with at least 12% of vehicles that can demonstrate at least 40 km of zero tailpipe emission capability, in proportion to the excess over this threshold.</p>	<p>We are against this methodology. The criteria should be to reduce WtW Co2 emissions.</p> <p>This approach has demonstrate that after 40km, some vehicles can have a higher CO2 emission that the average (as the hybrid). This should become a moving target and base upon RDE test</p>	<p>Comment not accepted: these criteria are aimed at reducing air pollutant emissions particularly in urban areas, and the zero tailpipe emission capability of plug-in hybrid can contribute to reduce the air pollutant emissions in urban areas.</p>
<p>Points will be awarded to those tenders offering a higher percentage than the one set by the TS3 for the fleet to be used under the contract, in proportion to the</p>	<p>On the award criterion AC2 in chapter 4.2.3.2 we think it is necessary to clarify whether the service tendered is a dedicated service or a limited contract (e.g. with vehicles in continuous use).</p>	<p>Comment partially accepted: the scope of the category has been clarified, it covers taxi services, car sharing and combined mobility services, which by definition are not services providing a dedicated fleet</p>

Selected information subject to the comment	Comment description	Assessment by JRC
excess over the TS3.		
Age of the fleet: The vehicles shall not be older than 4 years	Criterion TS3, option 2, should foresee a frequency lower than 4 years for the renewal of the fleet, which is already what is the practice today.	Comment accepted: the option based on age of the vehicle is withdrawn

Annex table 11: technical measures and combined mobility services

Selected information subject to the comment	Comment description	Assessment by JRC
Do you agree on the proposal to apply these sets of criteria based on the needs of the service?	-yes	Comment not accepted: the use of mobility services instead of vehicle purchase entails an environmental benefit itself, and therefore, the criteria should be as simple as possible to encourage its choice over the vehicle purchase option
Dedicated parking spaces together with associated electric recharging points;	This is highly biased towards electrical vehicles (not based on technology-neutral approach). Other alternative fuels would not have a chance. This should refer to alternative fuels (low and zero emission vehicles)	Comment acknowledged: the paragraph refers to a criterion from the EU GPP of buildings, and it has been deleted since the criterion proposed does not refer to electric vehicles
This will include bikes, e-bikes, public transport, ride-sharing, car sharing, taxi services, L-category vehicles.	Add cargo bikes to the list in criterion AC14.	Comment accepted

Category 3 Purchase or lease of buses

Annex table 12: GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
AC Option 1	Apart for what has been mentioned above that applies here as well, depending on the points allocated to each of the two criteria within criterion AC1 (larger GHG savings and advanced biofuel), you might be encouraging biofuels rather than hydrogen or electricity as you could get points for the reduction of GHG and for the advanced biofuel, compared to those other technologies that only get points for the reduction of GHG.	Comment accepted: the AC on fuels is withdrawn.
AC on fuels	Power-to-gas to be included from excess electricity or 100% RES	Comment not accepted: requirements on fuels have been removed
Alternative fuels	Proposal: The use of alternative fuels, in general and electricity in particular, could be considered as award criterion within EU GPP criteria - mobility services. The category 3 -purchase or lease buses and the category 6 - bus services take into account this criterion.	Comment not accepted: requirements on fuels have been removed
Biomethane	<p>Biogas should be mention as biomethane</p> <p>GHG savings from biogas from landfill should land closer to 85-90% (not only more than 60%)</p> <p>Renewable gas produced from excess electricity (power-to-gas) has not been included</p>	Comment accepted

Selected information subject to the comment	Comment description	Assessment by JRC
Data from the literature review	<p>The corrolation between table 3, 4 and 5 is incorrect.How is it possible from table 3 -69.9 WTT factor for biomethane to only 32.8% WTW GHG reduction on biomethane. We embrace a debate on LCA not on WTW emissions for buses.TCO approach should also be incoperated in the criteria.</p> <p>Please make sure biomethane is mentioned and not biogas.</p>	Comment partially accepted: Those tables contained data from LowCPV initiative and those results come from buses running on a blend fossil/biomethane. The criteria are based on the outcomes of LCA and WTW analysis but they have to be built upon common metrics and test methods
Hydrogen produced with 100% RES electricity shall demonstrate the on-site production of RES electricity.	The same approach should be done for all fuels. The EU/national mix to be taken into account.	Comment not accepted: requirements on fuels have been removed
LCA based criteria	not agree, the criteria should be based on LCA (should therefore include the vehicle production and the battery disposal in case of the e-buses)	Comment not accepted: The criteria are based on the outcomes of LCA and WTW analysis but they have to be built upon common metrics and test methods

Selected information subject to the comment	Comment description	Assessment by JRC
Options proposed	<p>In the purchase or lease of vehicles, the reality of Basque authorities is that the energy source (fuel or other) is provided by the authority, so the WTT values would be the ones of the energy sources the authority has (in case of diesel or other source they already supply). For new sources, the common practice would be for the authority to install new supply installations, so that the refilling happens in-house. In those cases, the energy to be supplied would come from a different contract between the authority and the energy supplier, therefore it seems difficult to link both elements in the tender for the purchase/lease of new buses.</p> <p>This criterion would make sense if it's for a service contract (category 4) that includes both things, but not for the purchase or lease of buses, given that the supply of the energy will be provided in most cases by the contracting authority through a different contract. The only way to keep it here would be if the authority provides the reference values for the WTT emissions based on their own supply contracts.</p>	Comment accepted: the requirements for fuels have been transferred to the service category
Options proposed	<p>It is easier to implement Option 1 for public procurement policies, and looks like the outcome in terms of environment would be similar to the second option outcome. Nevertheless, as long as the criterion is based on a tenderer declaration it is impossible for the the procurer to verify the accuracy of this information.</p>	Comment not accepted: it has been agreed that Option 2 is the only feasible option for the time being.

Selected information subject to the comment	Comment description	Assessment by JRC
Options proposed	<p>The technology-specific approach as outlined in option 2 (Chapter 5.2.1.1) is the best way forward at the moment because it is straightforward for procurers to implement.</p> <p>When the specifying criteria for option 2, it should be avoided to mention requirements for biofuels because they are not provided by the manufacturer.</p>	Comment accepted
TS Option 1	One needs to have undisputable standard reference tools such as VECTO and reliable certificate systems.	Comment acknowledged
TS Option 2	<p>This option doesn't really discriminate technologies as it allows for different technologies (it discriminates based on the energy source, which again, might be linked to a different contract as mentioned for Option 1). So we are not sure of the practical usefulness of the criterion.</p> <p>If it's really a technology choice, then it should be hybrid, electric and/or fuel cell vehicles, the other options depend on the energy supply contracted through a different contract.</p>	Comment partially accepted: some technologies as natural gas vehicles and fuel cell vehicles depend on the pathway to produce the fuel that is consumed, therefore this has been introduced in the new criterion proposal so the contracting authority may qualify those technologies as eligible for the criterion if there is a supply of certain fuels
TS Option 2	If the authority doesn't define the specific technology as TS, there should be still a way to select between different offers, as in Option 1, but not linked to the fuel (which is normally contracted through a different contract than the supply/lease of buses) but either based on fuel consumption, WTW CO2 or based on costs as defined in the Clean Vehicles Directive.	Comment not accepted: the option 1 based on fuel consumption is not feasible for the time being
TS Option 2	Option 2 has the merit of restricting eligibility to alternative fuels, but still puts at the same level biofuels and zero-emission propulsion systems, which is debatable on grounds	Comment accepted; biofuels have been dropped from the criterion

Selected information subject to the comment	Comment description	Assessment by JRC
	of security of supply and overall WTW emissions.	
TS Option 2	Given the impact in terms of security of supply and indirect land use, a difference should be made between zero emissions technologies (fuel cell, battery) and other.	Comment accepted; biofuels have been dropped from the criterion
LCA approach	Any option should be based on the LCA approach The technologies included should be available and mature. Full Electric and Hydrogen buses are not yet commercially available	Comment not accepted: The criteria are based on the outcomes of LCA and WTW analysis but they have to be built upon common metrics and test methods.

Annex table 13: Air pollutant emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Core criteria	Criterion AC2 in chapter 5.2.2.2 should only apply for the comprehensive criteria set.	Comment not accepted: the criterion is very easy and addresses one of the most important issues of vehicles, so it is worth to keep it at core level
Do you agree with the thresholds proposed? Which issues could hinder the use of this criteria proposal?	<p>No. The approach should evaluate all the available alternative fuels, and not pick a single winner.</p> <p>Technology that can only provide 2.5 km range of zero emission should not be rewarded against other options.</p> <p>A bus which is running at least 12 hours per day should be able to use a fuel that provides flexibility and range.</p> <p>The TCO are not included anywhere, and is a fundamental criteria not only for private fleet operators but in many cases also for public fleets.</p>	Comment not accepted: this is an award criterion to recognise those technologies able to emit zero tailpipe emissions. The requirements of range are usually part of the 'fit for purpose' criteria and would discriminate the technologies not able to comply with them. TCO is already a strong market driver and it does not need a specific GPP criterion for fleet operators to implement it
Electric and hydrogen can reduce the emissions further, to zero tail pipe emissions	Natural gas can significantly contribute to improve the air quality issue. CNG buses (also LNG for intercity connections) should be taken into account.	Comment accepted: an award criterion for better performance than Euro VI is proposed

Selected information subject to the comment	Comment description	Assessment by JRC
Verification	<p>This criterion is based on the Technical Sheet of the vehicle. In the Bus market, the public technical sheet provided by bus manufacturers is very limited, and, in some cases, is almost limited to the model name. Moreover, the buses used for city transportation, are customised for cities, so they do not really exist as a final product. The mandatory technical sheet that all vehicles need to be allowed to be driven (ITV) also does not state anything about the zero emissions kilometres range.</p> <p>This leads to a situation where this criterion depends on the tenderer declaration, and cannot be contrastable.</p>	<p>Comment accepted: the certificate of conformity is proposed as proof of compliance. It is a document issued by the manufacturers as part of the type approval process, and contains all the information required for the verification of the criteria</p>
Zero tailpipe emissions capability	<p>This criteria favours certain technologies (i.e. electric and hybrid buses) so its opposite to the "technology-neutral" criteria proposed in TS1 Option 1.</p> <p>The criteria could be clearer for procurers (and companies) if expressed directly as giving points for full electric buses, fuel cell electric buses or plug-in hybrids buses.</p> <p>The use of the 2.5 or 5 km thresholds might pose a problem as that information is not readily available for buses in the regular technical sheets. If no-plug-in hybrid buses comply with the 2,5 km threshold, it could be included for the core level and removed for the comprehensive level.</p> <p>Another option would be to simply give points based on lower pollutant emissions than the maximum defined by Euro VI available in the type approval technical sheet of the vehicle.</p>	<p>Comment accepted</p>

Selected information subject to the comment	Comment description	Assessment by JRC
Zero tailpipe emissions capability	Setting precise numerical thresholds is difficult since the zero-emission need will depend on the mission profile and can be extended via infrastructure means (e.g : opportunity charging for battery-powered buses). So perhaps the cities should be left to specify what autonomy is required.	Comment accepted
Zero tailpipe emissions capability	The city must be extremely precise in the zero-emission mission profile (topography, weight, conditions etc) to make sure there is no room for contestation as a result of the tender. Means of compliance with the criteria must be added too (VECTO?).	Comment partially accepted: instead of distance, the technologies electric, plug-in and fuel cell are required explicitly for the award criterion
Zero tailpipe emissions capability	Providing they using renewable electricity. Also RED tests should be taken into account	Comment not accepted: the criterion is aimed at decreasing air pollutants in urban areas. Euro VI already includes RDE in-service tests
Zero tailpipe emissions capability	The scheme and AC2 criteria proposed are far too short to be practicable. Instead of 5km of zero emission capabilities, the vehicle should demonstrate at least 20km.	Comment partially accepted: the distance is withdrawn and the technologies are explicitly mentioned.
Zero tailpipe emissions capability	In the short term, technologies need to be explicitly specified in the criteria, in order to avoid public authorities resorting to unsustainable solutions (e.g. biodiesel). We suggest including plug in hybrid electric vehicles (PHEV), battery electric vehicles (BEV), and fuel cell electric vehicles (FCEV).	Comment accepted

Selected information subject to the comment	Comment description	Assessment by JRC
Criterion on Euro vi removed	<p>In the Buses section (section 5.1, p51) the draft report says "The criterion for exhaust gas emissions (current TS1) is proposed to be deleted in the revised version of EU GPP criteria, because of a lack of an update of the Euro VI emission standard (mandatory for all new buses and trucks) and because a further reduction of air polluting emissions asks for the use of alternative fuels and powertrains, which is already covered by TS1 GHG emissions and AC2 Zero tailpipe emission capability proposed"</p> <p>However, a Euro VID emissions stage will be introduced from 2018 on and will better address real-world low load/urban operation (COMMISSION REGULATION (EU) 2016/1718 of 20 September 2016). As a result, AECC believes that the regulated pollutant criteria should not be disregarded.</p>	<p>Comment accepted: a criterion on improved air pollutants emissions performance has been introduced for buses and waste collection trucks</p>

Annex table 14: Technical options to reduce GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Core criteria	These criteria in chapter 5.2.4.2 should only be comprehensive and limit them to tyre rolling resistance (TS4) and tyre pressure monitoring system (TS5).	Comment not accepted: the criterion on rolling resistance is kept at both levels in order to align with the provisions of the Energy Efficiency Directive on rolling resistance of tyres. TPMS are cost effective and easy to verify
Core criteria	Move criteria on lubricant oils (TS3) and air conditioning gases (AC3) to a category dedicated to vehicle maintenance. The rationale behind this suggestion is to make criteria related to oils and tyres more effective and easier to apply. Those criteria would foresee minimum quality standards for oils and tyres used both by contracted service providers as well as by public authorities, who may do the maintenance of their vehicle fleet themselves.	Comment accepted
GWP conditioning Air	This criterion is feasible, as long as vehicles manufacturers are aware of the air conditioning system formulae. It would be advisable to check whether this information is really available to them.	Comment acknowledged
Lubricant oils	<p>Both, consulted administrations and companies, mentioned that it would depend on the specifications by the vehicle's manufacturer. We don't know if requiring it as TS for both levels is realistic, as we don't know the feedback you received from manufacturers.</p> <p>We would suggest to at least consider it as an AC for the core level, or to leave it only for the comprehensive criteria. If not, the core will be a very long list of criteria, which, from our point of view, is not the objective of the core criteria.</p>	Comment accepted: the TS is set only at comprehensive level

Selected information subject to the comment	Comment description	Assessment by JRC
Lubricant oils	As long as it is a recommendation of proposed lubricant, the impact on environment can be virtually zero.	Comment accepted; the criterion is reworded and set only at comprehensive level. It is also part of the maintenance criteria within the service categories
Tyre Pressure Monitoring Systems (TPMS)	Ok as is. Consulted bidders considered something they already provided or that would be easy to provide.	Comment acknowledged
Vehicle tyres - rolling resistance	<p>It might be better to present as a means of proof the tyres label rather than the test report, as I'm not sure if the test report provides only the RRC (rolling resistance coefficient) value or also the energy efficiency class. If the test doesn't include the energy efficiency class, for a procurer it would be better to present the tyre label.</p> <p>Regarding the level of ambition, as before, it could be a criterion only for the comprehensive level. Half of the consulted companies didn't know much about the tyres noise levels they use in the buses.</p>	Comment partially accepted: the criterion on rolling resistance is kept at both levels in order to align with the provisions of the Energy Efficiency Directive on rolling resistance of tyres

Annex table 15: Noise

Selected information subject to the comment	Comment description	Assessment by JRC
Core criteria	<ul style="list-style-type: none"> • Tyre noise criteria in chapter 5.2.5.2 should be included in the new category dedicated to vehicle maintenance • Criteria AC4 and AC5 should be moved to the comprehensive set of criteria. 	Comment partially accepted: there is not enough data to include maintenance services in the scope, but maintenance criteria are included in the service categories
Tyre noise	<p>The criteria could be simplified by requiring or giving points when “the tyres have the lowest noise emission class of the three possible for external rolling noise as defined in the EU tyre label (Regulation 1222/2009)”. If you want tenderers to provide the noise level tests and not the label, the criteria should include a table with the maximum levels established in the regulation, to be able to easily evaluate if they are 3dB below or not. Based on feedback received by consulted administrations and companies, the ambition level seems correct.</p>	Comment accepted: the label is proposed as proof of compliance
Tyre noise	<p>Idem as for AC4: The criteria could be simplified by requiring or giving points when “the tyres have the lowest noise emission class of the three possible for external rolling noise as defined in the EU tyre label (Regulation 1222/2009)”. If you want tenderers to provide the noise level tests and not the label, the criteria should include a table with the maximum levels established in the regulation, to be able to easily evaluate if they are 3dB below or not. Based on feedback received by consulted administrations and companies, the ambition level seems correct.</p>	Comment accepted: the label is proposed as proof of compliance

Selected information subject to the comment	Comment description	Assessment by JRC
Tyre noise	Although it is a good thing to give points for noise emissions of tyres, this would only apply to the first set of tyres of the vehicles. After that, only the maintenance service will be able to put low noise emitting tyres or not.	Comment accepted: the criterion is also part of the maintenance criteria within service categories
Vehicle noise	<p>The criteria would be more useful and easier to use if it included the table with those Phase 3 limits defined in the regulation.</p> <p>Based on feedback received by consulted administrations, they consider this criteria should be in any case an award criteria. To differentiate between core and comprehensive, an option would be to evaluate in the core level any noise reduction from the maximum levels of the actual phase at the time of purchase, and for the comprehensive level, evaluate compliance with Phase 3 levels. After that (if the criteria are not revised before 2024) the wording would be like for the core option proposed.</p>	Comment partially accepted: since manufacturers are still preparing the vehicles for phase 3, the criterion is proposed as award criterion at comprehensive level.

Annex table 16: Vehicle manufacturing

Selected information subject to the comment	Comment description	Assessment by JRC
General	Since this criterion AC6 (chapter 5.2.6.2) is even less important for buses than for cars (because of higher distance travelled), we suggest deleting it.	Comment accepted
Lubricant oils, hydraulic fluids and grease	Regenerated lubricant oils are normally part of regular oils (normally in a %) so it would be rather a criterion for Category 4. Idem for the hydraulic fluids.	Comment accepted
Vehicle materials	<p>If the data used for the LCA is the average provided in any inventory database (i.e. Ecoinvent) there would be no point in requiring this criteria. If anything the verification document should be a declaration by the aluminium or thermoplastic manufacturer, an ecolabel fulfilling that criterion (you should include the names of those that comply) or a dossier by an independent body.</p> <p>In any case, this should be only an AC for the comprehensive level, if at all.</p>	Comment accepted: due to the verification issues, this criterion proposal is withdrawn
Vehicle materials	Promoting the use of recyclable materials is positive, but selecting the materials may be questionable. Material technology in transport applications and buses evolve, especially with new demands to be managed (battery weight). So it may be an issue: what if a supplier has a product using more efficient materials (composites) in the near future ?	Comment accepted: due to the verification issues, this criterion proposal is withdrawn
Vehicle materials	All recyclable materials should be favoured. There again, compliance should be verifiable and transparent.	Comment accepted: due to the verification issues, this criterion proposal is withdrawn

Annex table 17: Warranty and reuse of the batteries

Selected information subject to the comment	Comment description	Assessment by JRC
Core criteria	The criteria on warranties should be included only in the comprehensive criteria set because of the reservations expressed by procurers during the 1st AHWG meeting.	Comment partially accepted: the criterion is withdrawn due to the lack of data and the innovations currently developing
Reuse of the battery	There is no need for the award criteria proposed in chapter 5.2.7.2 on the reuse of the battery (AC9). Even if the battery is not suitable anymore to power a vehicle, there is a second hand market for batteries which are still very valuable for energy storage facilities.	Comment accepted
Which warranty terms could be requested to the batteries used in electric buses?	The best would be to have a reference model to quantify the energy needed by one duty cycle and then request a guarantee equal to X years of operation.	Comment not accepted: the criteria on batteries have been withdrawn from the buses and waste collection trucks categories due to the lack of data and the innovations currently developing

Annex table 18: Exhaust pipes

Selected information subject to the comment	Comment description	Assessment by JRC
Exhaust pipes	This is a very good core criteria and easy to check.	Comment acknowledged
Exhaust pipes	Keep the exhaust pipe location in Chapter 5.2.3.2 (TS2) as a core criterion.	Comment accepted

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Category 4 Bus services

Annex table 19: Optimised vehicle use

Selected information subject to the comment	Comment description	Assessment by JRC
Emission reduction and emissions monitoring plan GHG	In the main public transport services by Basque authorities the vehicles belong to the authority and new vehicles are decided by the authority itself, therefore the criteria wouldn't be relevant.	Comment partially accepted: it would be relevant if the contractor owns or leases the vehicles, which is also another contract model. It is explicitly mentioned that the criteria will only applied in those cases
Emission reduction and emissions monitoring plan GHG	If you require the presentation of a plan is to implement it so you could phrase the TS in a way that it is clear and you don't need an additional CPC.	Comment acknowledged: the formula TS based on a plan complemented CPC is commonly used in EU GPP
Staff training	Yes, staff and drivers should understand the benefits of driving an alternative fuelled bus.	Comment acknowledged

Selected information subject to the comment	Comment description	Assessment by JRC
Staff training on ecodriving and environmental management	<p>The training for management staff is difficult to verify as there is no specific training on that and you can be capable to do so without a specific training. The capacity will appear in the proposal, so no need to include as SC.</p> <p>For the drivers, first of all, in the Basque Country, regular eco-driving courses are 4 hours long. Second, if you mean that the drivers shall be trained (during the contract) then it would be a TS or CPC. If it's an obligation for assigned drivers, it would be ok then.</p> <p>What is not appropriate as SC is the second part about that the staff receives regular information on their performance. That would be a CPC.</p> <p>Another option would be to consider as AC the % of assigned staff that is trained on eco-driving.</p> <p>The provision of regular training to regular and new staff should be a TS or CPC, not a selection criteria. You could even consider requiring, as CPC, that all personnel assigned to the contract be trained in eco-driving during the first month of the contract and then, every 2 years.</p> <p>As mentioned by consulted authorities and companies, in most cases the public transport services are carried out by staff that is subrogated from one contract to the other, that have strong collective bargaining agreements that influence the capacity of conducting yearly trainings.</p>	Comment accepted
Staff training on ecodriving and environmental	In chapter 6.2.1.2, we recommend keeping the driver training as a criterion (SC1) with 8 hours per year both for new and existing staff being the right frequency.	Comment not accepted: drivers training has been dropped from this category because there is mandatory training that includes ecodriving

Selected information subject to the comment	Comment description	Assessment by JRC
management		
Rules for penalties for non-compliance.	No comments on the criteria but a general remark: Penalties for non compliance should be defined not only for CPC but for any TC in the tender and the AC the bidder commits to, therefore it shouldn't be included here as something special.	Comment acknowledged: the combination of TS based on a plan complemented CPC is commonly used in EU GPP

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Annex table 20: GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
AC1. GHG emissions	You can always evaluate and give points for lower levels than those defined in TS2, so no problem.	Comment acknowledged
Consultation questions:	<ul style="list-style-type: none"> - Do you think it is technically and economically feasible to set minimum requirements on the fleet composition to ensure a proportion of environmentally better performing technologies? - Would it be more appropriate to set a minimum GHG saving on the average GHG emissions of the fleet? - this solution runs the risk to hinge just towards one technology - This is a better solution, as it is more technology neutral 	Comment not accepted: Option 1 based on WTW has been ruled out for the time being. The list of technologies in TS1 category 3 gives enough options to the tenderers to comply with the criterion
hybrid technologies are all commercially available and should be seen as a first stage of electrification of the EU fleet,	There are several models of natural gas buses available (CNG, LNG, biomethane). see NGVA vehicle catalogue	Comment acknowledged

Selected information subject to the comment	Comment description	Assessment by JRC
Technical Specification	<p>As mentioned, in most public transport services by Basque authorities the vehicles belong to the authority and new vehicles are decided by the authority itself, therefore the criteria wouldn't be relevant.</p> <p>For the other cases, the characteristics and technology depends on the terrain and type of service, so it would be difficult to define a certain percentage, also because the type of available fuels depends on the region. For small service companies, it would be difficult to find certain fuel types affecting TS1 of Category 3. It might be wiser to simply consider as an AC the lower WTW emissions of the vehicles proposed for the service.</p>	<p>Comment partially accepted: it has been clarified that the criterion applies only if the contractor owns the fleet. Option 1 based on WTW has been ruled out for the time being. The list of technologies in TS1 category 3 gives enough options to the tenderers to comply with the criterion.</p>
TTW emissions	<p>In chapter 6.2.2.2, emissions should be measured on the tailpipe (tank to wheel) to ensure consistency.</p>	<p>Comment partially accepted: Option 1 based on WTW has been ruled out for the time being. There is not enough data on CO₂ emissions based on VECTO are available for the time being</p>

Annex table 21: Air pollutant emissions

Selected information subject to the comment	Comment description	Assessment by JRC
AC2. Air polluting emissions	No problem with this AC.	Comment acknowledged
Consultation questions	<p>--Do you think it is feasible to set minimum requirements on the fleet composition to ensure a proportion of EURO VI and minimum EURO V compliance for the fleet?</p> <p>- Do you agree with the percentages proposed? Are they affordable?</p> <p>yes</p> <p>- yes, depending on the technology used and TCO calculated</p>	Comment acknowledged
Technical Specification	<p>For services where the company uses its own vehicles, consulted companies said that it would be no problem that the average of the fleet be Euro IV or V. Euro VI would probably be too stringent.</p> <p>It was also mentioned that the average of the fleet could be misleading, the important would be the average based on km/day and vehicle (so depending on the assignation of buses to the different routes which absorb more or less of the service volume).</p> <p>For concession services where the company uses de authority vehicles, this criterion is not applicable.</p>	Comment acknowledged: for the sake of simplicity, the TS is proposed to be kept as fleet composition in vehicles. The optimised use of those vehicles would be part of the emissions reduction plan of the tenderer

Annex table 22: Technical measures

Selected information subject to the comment	Comment description	Assessment by JRC
<p>Consultation questions</p> <ul style="list-style-type: none"> - Do you agree on the proposal to apply these sets of criteria based on the needs of the service? - Is it suitable to disable this flexibility in case of bus services devoted to public transport? 	<p>For public transport services, in the Basque country most contracted companies manage the buses from the administration and only buy new ones based on the specifications that the administration defines, therefore such criteria are not relevant for the service but as specifications for new acquisitions. For other services whose fleet belongs to the company (in most cases small discretionary or special services – for trips or school buses) it could be left open, but it would be good to provide some recommendations on what criteria are more relevant based on the impacts reduction potential, facility to verify and de type of service. For example we would leave AC5, AC6 and AC7 out, and leave AC3 only for the comprehensive level.</p>	<p>Comment accepted: only requirements on TPMS and low rolling resistance tyres are kept for bus services</p>
<p>General</p>	<p>Please check our comments on the same criteria in Category 3</p>	<p>Comment accepted: only requirements on TPMS and rolling resistance are kept for bus services</p>

Annex table 23: New vehicles and Integrated public transport systems

Selected information subject to the comment	Comment description	Assessment by JRC
New vehicles	The Basque administrations that have service concessions define the characteristics and timings for any new purchase and include that in the tender for the service, so bidders buy the vehicles that the administration decides and not the other way around. So it's not a relevant criterion.	Comment acknowledged
New vehicles	We agree with criterion CPC3 in chapter 6.2.5.2 under the condition that tank to wheel emissions instead of well to wheel emissions are used as basis	Comment accepted
Integrated public transport systems	That should be a TS if the administration doesn't do it themselves. At least in Spain, we are not aware of that many mobility platforms as to make use of such a criteria. The administration should decide in which platform to include the BUS SERVICES information and not the bidder.	Comment accepted: the criterion has been removed
Integrated public transport systems	The criterion AC11 in chapter 6.2.6.2 is too specific and not adapted to GPP. It should therefore be deleted. If local procurers have already such an integrated public transport system, the authority will require it anyway.	Comment accepted

Category 5 Purchase or lease of waste collection vehicles

Annex table 24: GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Options proposed	Option 1, guaranteeing a technology-neutral approach. When biomethane/renewable gas is already available on the grid, this should be taken into account when calculating the WTW emission.	Comment not accepted: Option 1 is not feasible for the time being, since VECTO data are not available
Options proposed	<ul style="list-style-type: none"> • The technology-specific approach as outlined in option 2 is the best way forward at the moment because it is straightforward for procurers to implement. • When the specifying criteria for option 2, it should be avoided to mention requirements for biofuels because they are not provided by the manufacturer. 	Comment accepted
References	According to JEC 2014 biogas has WTT CO2 savings of 94%. Reference should be made to the same source, JEC was quoted until now (not Ricardo)	Comment not accepted: the savings shall be estimated WTW not only WTT. JEC report is on cars, not trucks

Annex table 25: Air pollutant emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Other emissions	<p>Noise reduction should be considered on the election criteria. Waste collection trucks also operate at nights and the noise is an important social and health factor to be added to the criteria.</p> <p>As example, Madrid waste truck fleets runs on gas due its lower level of noise.</p>	Comment accepted: an award criterion on noise is proposed
Verification	<p>This criterion is based on the Technical Sheet of the vehicle. Right now, the waste collection vehicles are configures using an ordinary truck cabin and a customised rear box (with the mechanisms for waste compactation).</p> <p>This means that, even in the case that the technical sheet stated the km range for zero emission capability, this figure would take into consideration the transformation into a waste collection truck.</p> <p>Tenderers could be obliged to run the tests with the final configuration of the truck, to be more realistic. Or assume that though this criterion is uncheckable for procurers, and not very accurate, but it is better to have a truck that can make some km with zero emission than no km at all.</p> <p>The mandatory technical sheet that all vehicles need to be allowed to be driven (ITV) also does not state anything about the zero emissions kilometers range.</p> <p>This leads to a situation where this criterion depends on the tenderer declaration, and cannot be contrastable.</p>	Comment accepted: the criterion based on distance is replaced by setting the specific technologies

Selected information subject to the comment	Comment description	Assessment by JRC
Zero tailpipe emissions capability	Gas vehicles running on renewable methane should be consider as zero-emission vehicles (WTW approach) Plug-in hybrid should not be considered zero-emission	Comment not accepted: the criterion is aimed at reducing air pollutant emissions in urban areas, and it promotes zero tailpipe emissions capable technologies: electric, plug-in and fuel cell
Zero tailpipe emissions capability	Before the definition of a zero-emission vehicle should be agreed upon	Comment not accepted: the criterion is aimed at reducing air pollutant emissions in urban areas, and it promotes zero tailpipe emissions capable technologies: electric, plug-in and fuel cell
Zero tailpipe emissions capability	This criterion is only an awarding one, meaning it's not a mandatory requirement but it gets points for evaluating the tenders. In fact, driving some km with zero emissions means biogas or biofuel powered vehicles will not fulfil it.	Comment acknowledged: the criterion is aimed at reducing air pollutant emissions in urban areas, and it promotes zero tailpipe emissions capable technologies: electric, plug-in and fuel cell
Zero tailpipe emissions capability	<p>The scheme and AC3 criteria proposed in chapter 7.2.3.1 are far too short to be practicable. Criterion AC3 should only apply for the comprehensive criteria set. Instead of 5km of zero emission capabilities, the vehicle should demonstrate at least 20km. It should only apply to the comprehensive criteria.</p> <p>In the short term, technologies need to be explicitly specified in the criteria, in order to avoid public authorities resorting to unsustainable solutions (e.g. biodiesel). We suggest including plug in hybrid electric vehicles (PHEV), battery electric vehicles (BEV), and fuel cell electric vehicles (FCEV).</p>	Comment accepted

Annex table 26: Technical options to reduce GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Core/comprehensive criteria	<p>These criteria in chapter 7.2.4.2 should only be comprehensive and limit them to tyre rolling resistance (TS4) and tyre pressure monitoring system (TS5).</p> <p>Move criteria on lubricant oils (TS3) and air conditioning gases (AC3) to a section dedicated to vehicle maintenance. The rationale behind this suggestion is to make criteria related to oils and tyres more effective and easier to apply. Those criteria would foresee minimum quality standards for oils and tyres used both by contracted service providers as well as by public authorities, who may do the maintenance of their vehicle fleet themselves.</p>	<p>Comment partially accepted: the criterion on rolling resistance is kept at both levels in order to align with the provisions of the Energy Efficiency Directive on rolling resistance of tyres. TPMS are cost effective and easy to verify. Lubricants and tyres criteria are part of maintenance criteria within the service categories</p>
GWP	<p>This criterion is feasible, as long as vehicles manufacturers are aware of the air conditioning system formulae. It would be advisable to check whether this information is really available to them.</p>	<p>Comment acknowledged</p>
Lubricants	<p>As long as it is a recommendation of proposed lubricant, the impact on environment can be virtually zero.</p>	<p>Comment accepted; the criterion is reworded and set only at comprehensive level as part of the maintenance criteria within the service categories</p>
Tyres	<p>Requiring low rolling resistance tyres in the vehicles at their purchase reduces GHG emission, and therefore, we would like to use this criterion.</p> <p>Nevertheless, this would only apply to the first period of the vehicle lifecycle. In the long term, only the vehicle maintenance are in charge of tyres, and can make this</p>	<p>Comment accepted; the criterion is also part of the maintenance criteria within the service categories</p>

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Annex table 27: Auxiliary units, noise, vehicle manufacturing, durability and reuse of the battery

Selected information subject to the comment	Comment description	Assessment by JRC
Auxiliary units	We agree with the criteria TS2 and AC2, as proposed in chapter 7.2.2.2.	Comment acknowledged
Noise criteria Core	<ul style="list-style-type: none"> Chapter 7.2.5.2 on tyre noise criteria should be included in the new category dedicated to vehicle maintenance Criteria AC5 and AC6 should be moved to comprehensive, and not core. 	Comment partially accepted: there is not enough data to include maintenance services in the scope, but maintenance criteria are included in the service categories
Noise tyres	Although it is a good thing to give points for noise emissions of tyres, this would only apply to the first set of tyres of the vehicles. After that, only the maintenance service will be able to put low noise emitting tyres or not.	Comment accepted: the criterion is also part of the maintenance criteria within service categories
Vehicle manufacturing lubricants	As long as it is a recommendation of proposed lubricant, the impact on environment can be virtually zero.	Comment accepted: the criterion on lubricants is moved to maintenance criteria within the service categories
Vehicle materials	Since this criterion AC7 is less important for waste collection vehicles than for cars (because of higher distance travelled), we suggest deleting it.	Comment accepted
Durability and reuse of the battery General	The criteria on warranties should be included only in the comprehensive criteria set because of the reservations expressed by procurers during the 1st AHWG meeting. There is no need for the award criteria proposed in chapter 7.2.7.1 on the reuse of	Comment partially accepted: the criterion on warranty is withdrawn due to the lack of data and the innovations currently developing. Criterion on reuse of the battery is also

	the battery (A10). Even if the battery is not suitable anymore to power a vehicle, there is a second hand market for batteries which are still very valuable for energy storage facilities.	withdrawn
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Category 6 Waste collection services

CRITERION	Selected information subject to the comment	Comment description	Assessment by JRC
1) OPTIMISED VEHICLE USE	TRAINING	In chapter 8.2.1.2 we recommend keeping the driver training as a criterion (SC1) with 8 hours per year being both for new and existing staff the right frequency. In order to ensure consistency, criteria TS1 and CPC2 in chapter 8.2.1.2 should apply a tank to wheel approach instead of the well to wheel approach proposed.	Comment partially accepted: drivers training has been dropped from this category because there is mandatory training that includes ecodriving. In the TS on emissions reduction plan, the indicators proposed are TTW.
2) GHG EMISSIONS	Consultation questions --Would it be more appropriate to set a minimum GHG saving on the average GHG emissions of the fleet?	YES/YES. Alternative fuel mandates for cities/public procurement (e.g. 25% gas, 25% electric, 50% open). Natural gas has no PM/PN, NOx and noise problem, strong acknowledgement when internalising external costs.	Comment not accepted: the criterion is not meant at promoting alternative fuels, but the technologies demonstrating low CO ₂ emissions
2) GHG EMISSIONS	Market data	According NGVA Europe statistics, end 2015 there were 1.2 million NGVs in EU28 (cars and light commercial vehicles) and 8,200 units of heavy duty vehicles (N2/N3)	Comment acknowledged

CRITERION	Selected information subject to the comment	Comment description	Assessment by JRC
2) GHG EMISSIONS	TTW emissions	Measure emissions on the tailpipe (tank to wheel) to ensure consistency.	Comment not accepted: VECTO tool is not available for the time being, so the criterion is based on technologies
3) AIR POLLUTING EMISSIONS	Consultation questions--Do you agree with the percentages proposed? Are they affordable?	Yes. Not necessarily, it is important to include a minimum % of alternative fuel technologies (gas, EV, etc) in the criteria	Comment not accepted: the criterion is not meant at promoting alternative fuels, but best vehicles in terms of tailpipe air pollutant emissions
3) AIR POLLUTING EMISSIONS	General	<ul style="list-style-type: none"> We agree with the TS3 and AC2 criteria proposed in chapter 8.2.3.2 and think the percentages proposed are affordable. The drivers' training should help reduce air polluting emissions. 	Comment acknowledged
4) TECHNICAL MEASURES	General	Please check our respective comments in chapter 7.2	Comment acknowledged
5) NEW VEHICLES	General	We agree with criterion CPC3 in chapter 8.2.6.2 under the condition that tank to wheel emissions instead of well to wheel emissions are used as basis.	Comment accepted
6) ROUTE OPTIMISATION	General	The criterion AC11 in chapter 8.2.5.2 is not needed because any waste collection service will optimize their routes in order to save time and fuel.	Comment not accepted: this technology to optimise the routes based on the bins load is not very common and is worth to promote it due to its saving potential

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Category 7 Post, courier and moving services

Annex table 28: Optimised vehicle use

Selected information subject to the comment	Comment description	Assessment by JRC
Emission Reduction plan	<p>We believe a emission reduction plan is a good idea, and would like to change the part about a fine (regulating) into a bonus (stimulating). This is more positive and attractive for entrepreneurs.</p> <p>Maybe it can also be interesting to ask for a history of reduction plans, (comprehensive criteria) as a way to award companies that already have this policy in place for a longer period of time, and therefore you reward the frontrunners in this and give them an advantage towards the slow adaptors.</p>	<p>Comment partially accepted: a contract performance clause is proposed in order to allow the contracting authority to set penalties for non compliance and bonuses for exceeding the objectives of the emissions reduction plan. A selection criterion on competence and experience of the tenderer has been included in order to ensure the proper implementation of the emissions reduction plan and the other environmental management measures. However, it would be hard to formulate an award criterion able to appraise the experience and the evolution of the emissions of the tenderers in a fair way, since the indicators and monitoring methods are not standardised</p>
Training program	<p>We would like to suggest that the training of drivers/Chauffeurs is coherent with the Code 95 training program. In this program drivers have to be trained 35 hours in 5 years which usually results in 7 hours training per year. In this program there are several options of courses that zoom in on fuel consumption and efficient driving. If you would use this as a guideline, that the drivers have to have these specific training than it can be combined and it will become economically feasible. Else 7 hours plus an additional 8 hours a year is too much in our opinion.</p> <p>The same can be said for new employees, every (new driver) has to have Code 95, so adding extra 16 hours (especially in the first 4 weeks, which is often probation time is (economically) not feasible</p> <p>Furthermore we would like to suggest the training of management to be left out and be replaced by the ISO</p>	<p>Comment partially accepted: the training is not required to drivers that need the Driver Certificate of Professional Competence (Driver CPC) according to Directive 2003/59/EC. Regarding the ISO 14001 certificate, it is proposed that it can be used as a proof of compliance of the TS Environmental management measures</p>

Selected information subject to the comment	Comment description	Assessment by JRC
	14001 certificate, in which fuel consumption and emission reduction are major points of the ISO audit and standard and in this way embedded in the removal/relocations organisation.	
Training program	<ul style="list-style-type: none"> • We recommend keeping the driver training as a criterion (SC1) with 8 hours per year for both new and existing staff being the right frequency. • In order to ensure consistency, criteria TS1 and CPC2 in chapter 9.2.1.2 should apply a tank to wheel approach instead of the well to wheel approach proposed. 	Comment partially accepted: the update training duration has been halved since the LCC shows 8 hours would not be cost effective.

Annex table 29: GHG emissions

Selected information subject to the comment	Comment description	Assessment by JRC
GHG Emissions	<p>This part refers to chapter 3. In which mainly the LCV vehicles are mentioned. We miss the standard for the HDV for GHG emissions. (N2 vehicles). Many removal/relocation companies use these kinds of vehicles in inner cities. We have not checked the specific values of the GHG emissions as shown in the table on page 15. We assume that these values match the values of new type approval vehicles in these years to come, as we can only invest in the technical solutions that are available in the market.</p> <p>The percentages that are mentioned in the report for GHG and WTW (12% and comp criteria) seem feasible to us. This should be no problem.</p> <p>For B-EV in general it can be said that at the moment there is no TCO with B-EV that can match the TCO of a conventional vehicle. Therefore not only bonus points should be given but public authorities should realise that the procurement will be more expensive in the upcoming years. An idea could be to use a sliding scale, where in the first year the gap between the TCO B-EV and ICE is 2017=100% covered by the public authorities up to 2025 0% coverage. Since we can assume that the investment will become lower once more adopted in the market.</p> <p>In regards to administration we do not foresee any problems.</p> <p>In regards to the percentages of the L-category we believe the report can be (much) more ambitious. The technical solutions are there, investments are reasonable and steps can be made in our opinion.</p> <p>Furthermore we are enthusiastic about stimulating cycle logistics and believe that can be a solution to a number of problems within bigger cities. Within the relocation/removal</p>	<p>Comment partially accepted: the criterion on GHG emissions will apply only to LCVs since there is not a monitoring and reporting standard fully implemented yet for HDVs. The criterion is proposed now as award criterion to give points to those fleets whose average type approval CO2 emissions is below the thresholds set for LCVs in category 1. This is the way to ensure that the criterion ensures the performance of the whole fleet instead of only a share. It also gives enough leeway to the operators to manage their fleets. We agree that L-category vehicles are fully prepared for electrification, so they are covered by the criteria on air pollutant emissions. Regarding the funding of the BEV, the formulation proposed would be part of the specific agreements between the contractor and the contracting authority, and it would be beyond the scope of EU GPP</p>

Selected information subject to the comment	Comment description	Assessment by JRC
	<p>industry however it will be limited due to the volume or removals, weight and size of used vehicles, but for post and courier services it would be great and should be very much stimulated.</p> <p>To answer your question whether it would be more suitable to work with an average of GHG emission we can give you a clear answer: NO, look at what happened in the passenger car industry. It is not ambitious enough and therefor smaller steps will be taken. If you raise the bar in this case, results will be made much faster, and it is more clear and predictable the way you propose it now.</p>	
TTW emissions	Measure emissions on the tailpipe (tank to wheel) to ensure consistency.	Comment accepted

Annex table 30: Air pollutant emissions

Selected information subject to the comment	Comment description	Assessment by JRC
Core/comprehensive criteria	<p>Award criterion AC4 should be moved to comprehensive criteria.</p> <p>For the award criterion AC4, vehicles have to demonstrate their ability to drive 40km emission free. This will have to be proven in the perimeter of the city.</p>	<p>Comment not accepted: the core criteria set is not too complex and brings enough room for more criteria. This is why the award criterion is zero emission capability is proposed at both core and comprehensive levels. The verification is based on the data available in the certificate of conformity of the vehicles and additional on-road testing would be unfeasible for both operators and contracting authorities</p>
General	<p>We believe the proposed criteria on Euro 5 and Euro 6 are feasible for the removal and relocation industry. L-category is again very unambitious and criteria should be stricter in our opinion.</p> <p>B-EV – same comment as above, feasible for many vehicles but more expensive.</p>	<p>Comment accepted: the percentage of L-category meeting Euro 4 has been raised to 40% and 60%.</p>
General	<p>We agree with the TS3 criteria proposed in chapter 9.2.3.2 and think the percentages proposed are affordable.</p>	<p>Comment acknowledged</p>
Tailpipe emissions	<p>Again, we do not agree on the methodology of measuring tailpipe emission, as we suggest a LCA method (or WtW approach)</p>	<p>Comment not accepted: the criterion is aimed at reducing air pollutant emissions in urban areas, so tailpipe emissions are the appropriate indicators.</p>

General

Annex table 31: General

Selected information subject to the comment	Comment description	Assessment by JRC
GENERAL	<p>The comments here provided are a mix of my input as expert on SPP and currently in charge of developing GPP criteria for bus public transport for the Basque Government; and from the input provided by the public authorities (5 in charge of urban and inter-urban transport services) and service providers (8 companies providing regular and discretionary services for urban and inter-urban transport) that were consulted for the Basque GPP criteria at the beginning of November.</p> <p>Detailed comments are included in the specific criteria but I wanted to make a general remark on the importance to differentiate the criteria based on the type of services to be contracted (i.e. regular or discretionary and for urban or inter-urban public transport) as not all criteria are equally important in one type or another.</p>	Comment acknowledged
GENERAL Award Criteria	According to the description in the text, points shall be awarded for succeeding technical specification based on Award Criteria. However, the evaluation/calculation scheme is not clear. Clarification would be much appreciated.	Comment accepted: the points will be allocated proportionally to the excess over the TS, or according to certain formula

Selected information subject to the comment	Comment description	Assessment by JRC
GENERAL	<p>We recommend that the JRC report and draft criteria proposal should be improved with regard to the following points of concerns which are outlined in further detail in the respective chapters:</p> <ul style="list-style-type: none"> • The GPP criteria for transport should be simplified and streamlined in order to facilitate their adoption by public authorities. • Therefore, the core criteria across the different proposed categories should focus mainly on CO2 emissions. The CO2 criteria should be technology neutral and aim at the lowest possible emissions at tailpipes. • The comprehensive sets of criteria should cover the following items: tyre, energy consumption display, gear shift indicator (GSi), oils, traffic route systems, air and conditioning gases. • A new category 8 focused only on vehicle maintenance should be added, covering aspects such as lubricating oils and tyres. • The revision of the EU GPP criteria for transport should encourage the use of alternative zero emission vehicles, such as cargo bikes. • The criteria should make a distinction between coaches, used for longer journeys, and buses operating in urban areas. • The comprehensive criteria should be understood as a means to build incentives for public procurers to resort to the cleanest transport solutions available, thus driving the market towards zero emission transport solutions. 	Comments partially accepted: see the rest of comments for further explanations

Selected information subject to the comment	Comment description	Assessment by JRC
GENERAL	<p>General comments relevant for categories 1-7</p> <ul style="list-style-type: none"> • The GPP criteria for transport should be simplified and streamlined in order to facilitate their adoption by public authorities. • Therefore, the core criteria across the different proposed categories should focus mainly on CO2 emissions. The CO2 criteria should be technology neutral and aim at the lowest possible emissions at tailpipes. • The comprehensive sets of criteria should cover the following items: tyre, energy consumption display, gear shift indicator (GSi), oils, traffic route systems, air and conditioning gases. • A new category 8 focused only on vehicle maintenance should be added, covering aspects such as lubricating oils and tyres. The rationale behind this suggestion is to make criteria related to oils and tyres more effective and easier to apply. Those criteria would foresee minimum quality standards for oils and tyres used both by contracted service providers as well as by public authorities, who may do the maintenance of their vehicle fleet themselves. • The comprehensive criteria should be understood as a means to build incentives for public procurers to resort to the cleanest transport solutions available, thus driving the market towards zero emission transport solutions. 	Comments partially accepted: see the rest of comments for further explanations

Annex table 32: General

Selected information subject to the comment	Comment description	Assessment by JRC
Market analysis	For more data on the relocation/removal market size in the EU we would like to redirect you to FEDEMAC. Which is the European organisation of all local brancheorganisations of the relation/removal companies. They should have this data. In general it can be said that the industry is characterised by low milage of the fleet and expensive bodywork (taillifts, swap bodies) therefor the life spam (depreciation period) of the trucks can be up to 15 years. We estimate that a lot of fleets are relatively old and that a lot of companies still us Euro 2-3-4 type vehicles.	Comment acknowledged
Market analysis	2.2 Market analysis Table 1: The size of the respective markets and the role of the public sector in these Purchases/procurement per year? Which year?	Comment accepted: the years have been included in the table
References	We recommend to include reference to LowCVP guide to low emission vans (http://www.lowcvp.org.uk/lev.htm) and use it as a supporting source for category 1, just like it was done for trucks.	Comment partially accepted: the report from LowCVP <i>Emissions Testing of Urban Delivery Commercial Vehicles</i> available at http://www.lowcvp.org.uk/projects/commercial-vehicle-working-group.htm has been consulted and the conclusions are that NG van increase the GHG emissions in the duty cycles 'city centers' (11%), 'urban' (9%) and 'regional' (1%) and reduce in the duty cycle 'long haul' (8%), compared to a diesel van. These results confirm that NG and diesel vehicles perform similar in terms of CO ₂ emissions

Selected information subject to the comment	Comment description	Assessment by JRC
		and that a criterion based on type approval CO ₂ emissions is the most suitable option to select the best ICEV in the market.
Definitions	The vehicle type classification is not defined within the proposal. A further clarification would be appreciated.	Comment accepted
SCOPE - NEW CATEGORY FOR VEHICLE MAINTENANCE	<p>A new category 8 on vehicle maintenance</p> <ul style="list-style-type: none"> • Vehicle maintenance covers aspects that can be difficult to monitor for the procurer when purchasing or leasing a vehicle. Therefore, a category dedicated to vehicle maintenance should be created in order to make the application of GPP criteria for transport easier. • This new category should include all items related to quality standards for oils and tyres. The rationale behind this suggestion is to make criteria related to oils and tyres more effective and easier to apply. Those criteria would foresee minimum quality standards for oils and tyres used both by contracted service providers as well as by public authorities who may do the maintenance of their vehicle fleet themselves. 	Comment not accepted: it is not possible at this stage, there is not enough information to develop criteria for maintenance service apart from tyres and lubricants. The criteria will be part only of the service categories.

JRC Mission

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