

# EU GPP Criteria for Transport

Green Public Procurement (GPP) is a voluntary instrument. This document provides the GPP criteria developed for transport. The accompanying Technical Background Report provides full details on the reasons for selecting these criteria and references for further information.

For each product / service group two sets of criteria are presented:

- The core criteria are those suitable for use by any contracting authority across the Member States and address the key environmental impacts. They are designed to be used with minimum additional verification effort or cost increases.
- The comprehensive criteria are for those who wish to purchase the best environmental products available on the market. These may require additional verification effort or a slight increase in cost compared to other products with the same functionality.

## 1. Definition and Scope

Vehicle types acquired by public administrations vary greatly between vehicles for ordinary use (for example official vehicles, vehicles of inspection bodies, delivery vans or equipment for gardening), emergency vehicles (ambulances, fire engines, cars and police vans...), and special vehicles (sweeping trucks, garbage trucks, buses, etc.).

Criteria have been developed for the following three product groups:

- Passenger cars directly purchased or contracted under leasing/renting systems
- Public transport vehicles and services
- Waste collection trucks and services

The criteria and contracting procedures defined in this document may also be used as guidance to define specifications for the purchase of vehicle types and service contracts not explicitly covered here.

Furthermore, the proposed criteria should be read in conjunction with Directive 2009/33/EC on the promotion of clean and energy efficient road transport vehicles and national legislation implementing this directive. This Directive obliges public authorities and operators under a public service contract to consider, when purchasing road transport vehicles, the operational life time energy and environmental impacts which shall include at least energy consumption, emissions of CO<sub>2</sub> and emissions of pollutants, including NO<sub>x</sub>, NMHC, and particulate matter. This can be done either by including requirements for energy and environmental performance on each of the impacts considered (as minimum technical specifications or as award criteria) or by monetising these impacts in the purchasing decision according to a calculation methodology provided for in the Directive. The recommended criteria included in this

product sheet can provide guidance to public authorities to implement the Directive using the first or second option, namely by including requirements for energy and environmental performance as technical specifications and/or award criteria. The criteria can also be used alongside a life-cycle cost assessment using the methodology set out in Article 6 of the Directive, or equivalent tool such as that at [www.cleanvehicle.eu](http://www.cleanvehicle.eu) to aid the purchasing decision taking into account both life cycle costs as well as minimum environmental criteria. Since not all Member States, when implementing the Clean Vehicles Directive, have allowed the use of both options mentioned above, it is imperative that public authorities verify what obligations national legislation is setting before choosing their GPP approach for this product group.

For more information on relevant EU legislation see accompanying technical background report.

### **1.1. Passenger cars and light-duty vehicles**

For passenger cars and light-duty vehicles:

The **Core** set of criteria will focus on CO<sub>2</sub> and other pollutant emissions and noise emissions.

The **Comprehensive** criteria cover in addition the other elements that can influence the consumption of fuel or other environmental impacts of vehicles. A specific section addresses the case of car rental or lease. Some environmental aspects relating to maintenance will need to be included in the tendering procedure for the leasing or renting of vehicles, as the maintenance tasks will be carried out by the tenderer.

In both cases, in order to encourage improvement, award criteria have been defined.

### **1.2. Public transport vehicles and services**

Until some years ago, most public transport services were under the management of public authorities (mainly local and regional administrations) either directly by civil officers or through a public company in charge of the service. However, in recent years, competitive tendering for public bus services has considerably increased. Therefore criteria are provided for both the direct purchase of buses as well as for the procurement of public transport services. For the procurement of buses, the **Core** criteria focus on the main environmental and health related aspects of buses, which are exhaust gas and noise emissions (by defining certain technical characteristics of the vehicles). The **Comprehensive** criteria will consider other elements that will help reduce other environmental impacts.

For the procurement of bus services, the **Core** criteria also concentrate on exhaust and noise emissions and eco-driving training for bus drivers to reduce fuel consumption. The **Comprehensive** criteria consider additional aspects, such as extra features to help reduce fuel consumption. In this case most criteria will be defined as award criteria in order to be able to award more points to the more environmentally friendly.

### **1.3. Waste collection trucks and services**

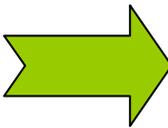
As for transport services, waste collection services are increasingly tendered out to private companies. Therefore criteria are provided for both the direct purchase of trucks as well as for the procurement of waste collection services.

The criteria are very similar to those for buses as trucks are also heavy-duty vehicles.

The only difference is that for trucks it is recommended to exclude the criteria on GWP (Global Warming Potential). Criteria for air conditioning systems seem also less relevant as only the driver's cabin would be climatized and in several countries the service is carried out during the night or early morning when it is unnecessary to use the air conditioning. Therefore the criteria for this element is excluded for waste collection trucks.

Minimum requirements for CO<sub>2</sub> emissions are not within the criteria for public transport and waste collection vehicles, as the large variation in size and usage patterns of the vehicles makes them very difficult to measure and verify in an appropriate way. The criteria for exhaust gas emissions are based on the EURO standards. However, in line with the Clean Vehicles Directive authorities should consider the lifetime energy consumption and CO<sub>2</sub> emissions of the particular vehicles under consideration. This can be achieved by a life-cycle cost assessment using the methodology set out in Article 6 of the Directive, or equivalent tool such as that at [www.cleanvehicle.eu](http://www.cleanvehicle.eu)

## 2. Key environmental impacts<sup>1</sup>

Key Environmental Impacts	GPP Approach
<ul style="list-style-type: none"> <li>• Contribution to climate change through the emission of greenhouse gases</li> <li>• Depletion of resources (especially non renewable fuels)</li> <li>• Air pollution through the emission of other exhaust gases that can cause:               <ul style="list-style-type: none"> <li>- Local health (especially respiratory) and regional problems</li> <li>- Damage to the environment, buildings and monuments</li> </ul> </li> <li>• Noise pollution</li> <li>• Generation of waste lubricant, oils and tyres</li> <li>• Generation of waste parts and materials at end of vehicle life</li> </ul>	 <ul style="list-style-type: none"> <li>• Procurement of low emission vehicles (GHG, other exhaust gases and noise)</li> <li>• Reduce fuel consumption through eco-driving, tyre pressure monitoring systems and gear shift indicators</li> <li>• Reduce fuel consumption by using low viscosity lubricants and low rolling resistance tyres</li> <li>• Procurement of vehicles with air-conditioning systems with low GWP (Global Warming Potential) coolers</li> <li>• Procurement of environmentally friendly tyres and regenerated lubricant oils</li> <li>• Ensure the correct collection and management of used lubricant oils and tyres</li> <li>• Encourage vehicles made with recycled/bio-materials</li> </ul>

Please note that the order of impacts does not necessarily translate to the order of their importance.

<sup>1</sup> Environmental impact = environmental degradation: deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife.

### 3. EU GPP Criteria for Transport

Core criteria	Comprehensive criteria																																								
<b>3.1 EU GPP criteria for Passenger Cars and Light-Duty Vehicles</b>																																									
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<p><b>1. CO<sub>2</sub> emissions</b></p> <p>According to the vehicle technical sheet CO<sub>2</sub> emissions for vehicles shall not exceed the following values:</p> <table border="1"> <thead> <tr> <th>Vehicle Type<sup>2</sup></th> <th>CO<sub>2</sub> g/km</th> </tr> </thead> <tbody> <tr><td>Mini</td><td>110</td></tr> <tr><td>Small</td><td>120</td></tr> <tr><td>Compact</td><td>130</td></tr> <tr><td>Mid</td><td>150</td></tr> <tr><td>Large</td><td>170</td></tr> <tr><td>High/Exclusive</td><td>270</td></tr> <tr><td>Offroad/Family Wagon</td><td>210</td></tr> <tr><td>Small vans (N1, class I)</td><td>150</td></tr> <tr><td>Other vans (N1, class II and class III)</td><td>220</td></tr> </tbody> </table> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where the CO<sub>2</sub> emissions are stated.</p>	Vehicle Type <sup>2</sup>	CO <sub>2</sub> g/km	Mini	110	Small	120	Compact	130	Mid	150	Large	170	High/Exclusive	270	Offroad/Family Wagon	210	Small vans (N1, class I)	150	Other vans (N1, class II and class III)	220	<p><b>1. CO<sub>2</sub> emissions</b></p> <p>According to the vehicle technical sheet CO<sub>2</sub> emissions for vehicles shall not exceed the following values:</p> <table border="1"> <thead> <tr> <th>Vehicle Type<sup>2</sup></th> <th>CO<sub>2</sub> g/km</th> </tr> </thead> <tbody> <tr><td>Mini</td><td>90</td></tr> <tr><td>Small</td><td>100</td></tr> <tr><td>Compact</td><td>110</td></tr> <tr><td>Mid</td><td>130</td></tr> <tr><td>Large</td><td>150</td></tr> <tr><td>High/Exclusive</td><td>200</td></tr> <tr><td>Offroad/Family Wagon</td><td>170</td></tr> <tr><td>Small vans (N1, class I)</td><td>130</td></tr> <tr><td>Other vans (N1, class II and class III)</td><td>180</td></tr> </tbody> </table> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where the CO<sub>2</sub> emissions are stated.</p>	Vehicle Type <sup>2</sup>	CO <sub>2</sub> g/km	Mini	90	Small	100	Compact	110	Mid	130	Large	150	High/Exclusive	200	Offroad/Family Wagon	170	Small vans (N1, class I)	130	Other vans (N1, class II and class III)	180
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<sup>2</sup> See [www.cleanvehicle.eu](http://www.cleanvehicle.eu) for vehicle type examples

<p><b>2. Exhaust gas emissions</b></p> <p>Vehicles must comply with the EURO 5 standard.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>	<p><b>2. Exhaust gas emissions</b></p> <p>Vehicles must comply with the EURO 6 standard.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
<p><b>3. Eco driving</b></p> <p>Cars/vans are provided with information/instructions on eco driving relevant to the vehicle.</p> <p><b>Verification:</b> Tenderer provides documentation containing the required information.</p>	<p><b>3. Eco driving</b></p> <p>Cars/vans are provided with information/instructions on eco driving relevant to the vehicle.</p> <p><b>Verification:</b> Tenderer provides documentation containing the required information.</p>
	<p><b>4. Gear shift indicators (GSI)</b></p> <p>The vehicle offered is equipped with a gear shift indicator.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
	<p><b>5. Tyre pressure monitoring systems (TPMS)</b></p> <p>The vehicle offered is equipped with tyre pressure monitoring systems (TPMS)</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
	<p><b>6. Fuel consumption display</b></p> <p>The vehicles offered are equipped with a mechanism to display to the driver fuel consumption figures.</p>

	<p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
	<p><b>7. Air conditioning gases</b></p> <p>The vehicle offered meets the following requirement: If the vehicle is fitted with an air-conditioning system designed to contain fluorinated greenhouse gases, the specific gas must have a global warming potential (GWP) <math>\leq 150</math> (related to CO<sub>2</sub> and a time horizon of 100 years).</p> <p>If the GWP is higher, the leakage rate from the system must not exceed 40g of fluorinated greenhouse gases per year for a single evaporator system, or 60g of fluorinated greenhouse gases per year for a dual evaporator system.</p> <p><b>Verification:</b> The tenderer must provide the name, formula and GWP of the refrigerating gas used in the air conditioning system. If a mixture of gases is used (n number of gases), the GWP will be calculated as follows:</p> $\text{GWP} = \Sigma(\text{Substance } X_1 \% \times \text{GWP}(X_1)) + (\text{Substance } X_2 \% \times \text{GWP}(X_2)) + \dots + (\text{Substance } X_n \% \times \text{GWP}(X_n))$ <p>where % is the contribution by weight with a weight tolerance of +/- 1 %.</p> <p>Information on GWP of gases can be found at:</p> <p><a href="http://www.grida.no/publications/other/ipcc_tar/?src=/climate/ipcc_tar/wg1/248.htm">http://www.grida.no/publications/other/ipcc_tar/?src=/climate/ipcc_tar/wg1/248.htm</a></p> <p>If GWP is &gt; 150, leakage tests results shall be provided.</p>
	<p><b>8. Lubricant oils</b></p> <p><b>a.</b> Vehicles must use low viscosity engine lubricant oils (LVL) or regenerated lubricant oils, with a minimum of 25% regenerated base oils, in vehicle</p>

	<p>maintenance. LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.</p> <p><b>b.</b> Hydraulic fluids and greases should have no Health or Environmental Hazard statement or R-phrase at the time of application (Lowest classification limit in Regulation (EC) No. 1272/2008 or Council Directive 99/45/EC).</p> <p><b>c.</b> No derogation from the exclusion in Article 6(6) of Regulation (EC) No. 66/2010 may be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No. 1907/2006, when present in mixtures, in concentrations higher than 0.010% (w/w).</p> <p><b>d.</b> Carbon content should be <math>\geq 45\%</math> derived from renewable raw materials.</p> <p><b>e.</b> The cumulative mass percentage of substances present that are both non-biodegradable and bioaccumulative shall not be more than 0.1% (w/w).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the proposed lubricants. Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof such as a technical dossier or a test report from an independent body will also be accepted.</p>
	<p><b>9. Vehicle tyres - noise</b></p> <p>The vehicles must be equipped with tyres with noise emission levels below the maximum established in Regulation 661/2009 Annex II Part C (See Annex II in this document). This is equivalent to the top two categories (of the three available) of the EU tyre label external rolling noise class.</p> <p><b>Verification:</b> The tenderer must provide a list of the tyres that will be used in maintenance tasks, the technical sheet or test results of the tyres where the noise emissions are displayed, and a signed declaration of commitment for</p>

	the duration of the contract to use these products.												
	<p><b>10. Vehicle tyres - rolling resistance</b></p> <p>The rolling resistance (for both new and retreaded tyres), expressed in kg/tonne must not exceed the following limit values according to ISO 28580 or equivalent:</p> <table border="1" data-bbox="1128 475 1944 715"> <thead> <tr> <th data-bbox="1128 475 1400 587">Tyre class</th> <th data-bbox="1400 475 1671 587">Max rolling resistance (kg/tonne) value</th> <th data-bbox="1671 475 1944 587">Tyre label fuel efficiency class</th> </tr> </thead> <tbody> <tr> <td data-bbox="1128 587 1400 628">C1</td> <td data-bbox="1400 587 1671 628">10.5</td> <td data-bbox="1671 587 1944 628">E</td> </tr> <tr> <td data-bbox="1128 628 1400 670">C2</td> <td data-bbox="1400 628 1671 670">9.2</td> <td data-bbox="1671 628 1944 670">E</td> </tr> <tr> <td data-bbox="1128 670 1400 715">C3</td> <td data-bbox="1400 670 1671 715">7</td> <td data-bbox="1671 670 1944 715">D</td> </tr> </tbody> </table> <p><b>Verification:</b> The tenderer must provide a list of the tyres that will be used, the test results according to ISO 28580 or equivalent of the tyres to check compliance, and a signed declaration of commitment for the duration of the contract to use these products.</p> <p>Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.</p>	Tyre class	Max rolling resistance (kg/tonne) value	Tyre label fuel efficiency class	C1	10.5	E	C2	9.2	E	C3	7	D
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AWARD CRITERIA	AWARD CRITERIA
<p>Additional points will be awarded for:</p> <p><b>1. Use of alternative fuels</b></p> <p>Vehicle is designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>	<p>Additional points will be awarded for:</p> <p><b>1. Use of alternative fuels</b></p> <p>Vehicle is designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>
<p><b>2. Noise emission levels</b></p> <p>Noise emissions lower than those established by law. (See Annex I)</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed, or the test results.</p>	<p><b>2. Noise emission levels</b></p> <p>Noise emissions lower than those established by law. (See Annex I)</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed, or the test results.</p>
<p><b>3. Lower CO<sub>2</sub> emissions</b></p> <p>Lower CO<sub>2</sub> emissions than those required in the specifications (1).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where the CO<sub>2</sub> emissions are stated.</p>	<p><b>3. Lower CO<sub>2</sub> emissions</b></p> <p>Lower CO<sub>2</sub> emissions than those required in the specifications (1).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where the CO<sub>2</sub> emissions are stated.</p>
	<p><b>4. Vehicle materials</b></p> <p>Extra points are awarded based on the percentage by weight of vehicle that is from recycled or renewable materials. Renewable materials include, for example, bioplastics derived from such sources as vegetable oil or corn starch.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>

	<p><b>5. Start and Stop</b></p> <p>The vehicle is fitted with a start and stop system.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
<p><b>CONTRACT PERFORMANCE CLAUSE (FOR LEASE CONTRACTS only)</b></p>	<p><b>CONTRACT PERFORMANCE CLAUSE (FOR LEASE CONTRACTS only)</b></p>
<p><b>1. Disposal of lubricant oils and tyres</b></p> <p>The contractor has provisions in place to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.</p> <p><b>Verification:</b> Contractor has contract with one or several authorised waste managers, or can provide proof of provisions in place for collection and disposal of used lubricants oils and tyres.</p>	<p><b>1. Disposal of lubricant oils and tyres</b></p> <p>The contractor has provisions in place to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.</p> <p><b>Verification:</b> Contractor has contract with one or several authorised waste managers, or can provide proof of provisions in place of collection and disposal of used lubricants oils and tyres.</p>

## Explanatory notes

**Euro standards:** To reduce vehicle pollutant emissions, the EU introduced the so-called **EURO standards** in 1992. These standards currently regulate the legal emission levels of both new cars and light and heavy-duty vehicles and are applied progressively, becoming stricter over time.

For passenger cars and Light-Duty Vehicles (LDV) EURO levels 1-6 have been defined. First specified in Directive 70/220/EC<sup>3</sup>, and subsequently amended, being repealed and replaced by Regulation 715/2007<sup>4</sup> which defined emissions for EURO 5 and EURO 6. EURO 5 is the current standard, the EURO 6 standard becomes the limit from 2014.

<sup>3</sup> Directive 70/220/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to measures to be taken against air pollution by gases from positive-ignition engines of motor vehicles

**CO<sub>2</sub> emission levels:** CO<sub>2</sub> emissions in g/km should be the combined cycle figures provided by manufacturers. Authorities should choose vehicles no larger than needed for the task they have to perform; procurement and use of a larger vehicle than needed unnecessarily adds to the environmental impact due to greater energy consumption and emissions.

**Noise emission levels:** The levels defined by law for vehicle noise emissions can be found in Annex 1 of this EU GPP criteria.

**Tyre noise emission levels:** The levels defined by law for tyre emissions can be found in [Annex II](#) of this EU GPP criteria.

**Award criteria:** Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least 15 % of the total points available.

Where the award criterion is formulated in terms of “better performance as compared to the minimum requirements included in the technical specifications”, points will be awarded in proportion to the improved performance.

**Alternative fuels:** Vehicle is able to be powered by non fossil fuel technology. This includes hybrid systems. Where possible alternative fuels should be derived from renewable energy sources. Renewable energy sources for transport include electricity and hydrogen produced from renewable sources and biofuels. Renewable sources for electricity and hydrogen generation include: solar, wind, biomass, hydropower and geothermal. For more information see the EU GPP criteria for electricity. Biofuels include biodiesel, bioethanol and biogas. Biodiesel is created from oils such as vegetable oils, palm oil and rapeseed. Bioethanol can be derived from crops such as sugar cane and corn. Biogas is formed from biodegrading materials such as sewage, municipal wastes and plant matter.

**Leasing clauses:** All specification requirements defined are valid also for leased vehicles.

**Type I or ISO 14024 ecolabels:** The Type I or ISO 14024 ecolabels are those where the underlying criteria are set by an independent body and which are monitored by a certification and auditing process. As such they are a highly transparent, reliable and an independent source of information. These labels have to meet the following conditions:

- The requirements for the label are based on scientific evidence
- The ecolabels are adopted with the participation of all stakeholders, such as government bodies, consumers, manufacturers, distributors and environmental organisations
- They are accessible to all interested parties.

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<sup>4</sup> Regulation (EC) No 715/2007 of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information

In public procurement, procurers may require that the criteria underpinning a certain ecolabel must be met, and that the ecolabel may be used as one form of proof of compliance. They are however not allowed to request that a product carries an ecolabel. Moreover, procurers may only use ecolabel criteria which refer to characteristics of the product or service itself or production processes, not those relating to the general management of the company.

**Proof of compliances:** Where the verification for the criteria states that other appropriate means of proof can be used, this could include a technical dossier from the manufacturer, a test report from a recognised body, or other relevant evidence. The contracting authority will have to satisfy itself on a case by case basis, from a technical/legal perspective, whether the submitted proof can be considered appropriate.

### Cost considerations

When considering the life-cycle cost (LCC) of vehicles, energy consumption and disposal costs must be considered in addition to purchase price. The following cost elements must be taken into account within the scope of the LCC: **investment costs, annual motor vehicle taxes** (although in some countries, publicly purchased vehicles are exempt from such taxes); **energy consumption** based on the costs for the fuel consumed over the course of the service life of the vehicle; **maintenance costs** made up of material costs for engine oil, tyres, spare parts and the corresponding labour costs; **insurance costs**; and **end of life costs or revenues** (depending on whether the vehicle is disposed of or sold). The Clean Vehicles Directive 2009/33/EC states that the lifetime energy consumption and emissions can be monetised and used as part of the total cost. A methodology is presented in Article 6, or a tool such as [www.cleanvehicle.eu](http://www.cleanvehicle.eu) can be used.

Core criteria	Comprehensive criteria
<b>3.2 EU GPP criteria for Public Transport Vehicles (Bus Procurement)</b>	
<b>SUBJECT MATTER</b>	<b>SUBJECT MATTER</b>
Purchase or lease of low-emission buses	Purchase or lease of low-emission buses
<b>TECHNICAL SPECIFICATIONS</b>	<b>TECHNICAL SPECIFICATIONS</b>
<b>1. Exhaust gas emissions</b>  Vehicle engines must meet the EEV (enhanced environmentally friendly vehicle) standard for emissions level.  <b>Verification:</b> The tenderer must provide the technical documents of the vehicle where it states that it meets the standard.	<b>1. Exhaust gas emissions</b>  Vehicle engines must meet the EURO VI standard for emissions.  <b>Verification:</b> The tenderer must provide the technical documents of the vehicle where it states that it meets the standard.

	<p><b>2. Exhaust pipes</b></p> <p>Vehicles' exhaust pipes must not be located on the same side as the passenger door.</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle.</p>
	<p><b>3. Lubricant oils</b></p> <p><b>a.</b> Vehicles must use low viscosity engine lubricant oils (LVL) or regenerated lubricant oils, with a minimum of 25% regenerated base oils, in vehicle maintenance. LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.</p> <p><b>b.</b> Hydraulic fluids and greases should have no Health or Environmental Hazard statement or R-phrase at the time of application (Lowest classification limit in Regulation (EC) No. 1272/2008 or Council Directive 99/45/EC).</p> <p><b>c.</b> No derogation from the exclusion in Article 6(6) of Regulation (EC) No. 66/2010 may be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No. 1907/2006, when present in mixtures, in concentrations higher than 0.010% (w/w).</p> <p><b>d.</b> Carbon content should be <math>\geq 45\%</math> derived from renewable raw materials.</p> <p><b>e.</b> The cumulative mass percentage of substances present that are both non-biodegradable and bioaccumulative shall not be more than 0.1% (w/w).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the proposed lubricants. Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof such as</p>

	<p>a technical dossier or a test report from an independent body will also be accepted.</p>									
	<p><b>4. Tyres</b></p> <p>The buses must be fitted with tyres with rolling noise values less than the limit values in Regulation 661/2009 Annex II Part C. (see Annex I) This is equivalent to the top two categories (of the three available) of the EU tyre label external rolling noise class.</p> <p>The tenderer must have a commitment to using low rolling resistance tyres. The rolling resistance (for both new and retreaded tyres), expressed as kg/tonne must not exceed the following limit values, according to ISO 28580 or equivalent:</p> <table border="1" data-bbox="1128 711 1944 908"> <thead> <tr> <th data-bbox="1128 711 1400 823"><b>Tyre class</b></th> <th data-bbox="1400 711 1671 823"><b>Max rolling resistance value (kg/tonne)</b></th> <th data-bbox="1671 711 1944 823"><b>Tyre label fuel efficiency class</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="1128 823 1400 866">C2</td> <td data-bbox="1400 823 1671 866">9.2</td> <td data-bbox="1671 823 1944 866">E</td> </tr> <tr> <td data-bbox="1128 866 1400 908">C3</td> <td data-bbox="1400 866 1671 908">7</td> <td data-bbox="1671 866 1944 908">D</td> </tr> </tbody> </table> <p>These are the figures for driven wheels and wheels with other special functions. Free rolling tyres used should have a lower rolling resistance than those used for drive or special functions.</p> <p><b>Verification:</b> Tenderer must present a list of the tyres that will be used in maintenance tasks together with the relevant test results (according to ISO 28580 or equivalent).</p> <p>Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.</p>	<b>Tyre class</b>	<b>Max rolling resistance value (kg/tonne)</b>	<b>Tyre label fuel efficiency class</b>	C2	9.2	E	C3	7	D
<b>Tyre class</b>	<b>Max rolling resistance value (kg/tonne)</b>	<b>Tyre label fuel efficiency class</b>								
C2	9.2	E								
C3	7	D								

AWARD CRITERIA	AWARD CRITERIA
<p>Additional points will be awarded for:</p> <p><b>1. Use of alternative fuels</b></p> <p>Vehicle is designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>	<p>Additional points will be awarded for:</p> <p><b>1. Use of alternative fuels</b></p> <p>Vehicle is designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>
<p><b>2. Noise emission levels</b></p> <p>Noise emissions lower than those established by law. (See Annex I)</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed, or the test results.</p>	<p><b>2. Noise emission levels</b></p> <p>Noise emissions lower than those established by law. (See Annex I)</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed, or the test results.</p>
<p><b>3. Exhaust gas emissions</b></p> <p>The vehicle is certified as meeting the Euro VI standard for emissions (where applicable).</p> <p><b>Verification:</b> The tenderer must provide the technical documents of the vehicle where it states that it meet that standard.</p>	<p><b>3. Tyre pressure monitoring system</b></p> <p>Vehicles equipped with tyre pressure monitoring systems (TPMS).</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
	<p><b>4. Air conditioning gases</b></p> <p>The refrigerants used must have a global warming potential (GWP), related to CO<sub>2</sub> and a time horizon of 100 years, of &lt; 2500.</p> <p><b>Verification:</b> The tenderer must provide the name, formula and GWP of the refrigerating gas used in the air conditioning system. If a mixture of gases is</p>

	<p>used (n number of gases), the GWP will be calculated as follows:</p> $\text{GWP} = \Sigma(\text{Substance } X_1 \% \times \text{GWP}(X_1)) + (\text{Substance } X_2 \% \times \text{GWP}(X_2)) + \dots + (\text{Substance } X_n \% \times \text{GWP}(X_n))$ <p>where % is the contribution by weight with a weight tolerance of +/- 1 %.</p> <p>Information on the GWP of gases can be found at:  <a href="http://www.grida.no/publications/other/ipcc_tar/?src=/climate/ipcc_tar/wg1/248.htm">http://www.grida.no/publications/other/ipcc_tar/?src=/climate/ipcc_tar/wg1/248.htm</a></p> <p>Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.</p>
	<p><b>5. Vehicle materials</b></p> <p>Extra points are awarded based on the percentage by weight of the vehicle that is from recycled or renewable materials. Renewable materials include, for example, bioplastics derived from such sources as vegetable oil or corn starch.</p> <p><b>Verification:</b>  The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
	<p><b>6. Start and Stop</b></p> <p>The vehicle is fitted with a start and stop system.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>

## Explanatory notes

**Exhaust gas emissions:** In December 2007, the Commission has published a proposal for EURO VI standards. The new emission limits, comparable in stringency to the US 2010 standards, will become effective from 2013/2014 (more information at: <http://ec.europa.eu/environment/air/transport/road.htm>). The EURO V standards are effective for new type approvals as from October 2008 and have been applicable for type approvals of existing vehicles as from October 2009.

**Award criteria:** Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least 15 % of the total points available.

Where the award criterion is formulated in terms of “better performance as compared to the minimum requirements included in the technical specifications”, points will be awarded in proportion to the improved performance.

**Alternative fuels:** Vehicle is able to be powered by non fossil fuel technology. This includes hybrid systems. Where possible alternative fuels should be derived from renewable energy sources. Renewable energy sources for transport include electricity and hydrogen produced from renewable sources and biofuels. Renewable sources for electricity and hydrogen generation include: solar, wind, biomass, hydropower and geothermal. For more information see the EU GPP criteria for electricity. Biofuels include biodiesel, bioethanol and biogas. Biodiesel is created from oils such as vegetable oils, palm oil and rapeseed. Bioethanol can be derived from crops such as sugar cane and corn. Biogas is formed from biodegrading materials such as sewage, municipal wastes and plant matter.

**Type I or ISO 14024 ecolabels:** The Type I or ISO 14024 ecolabels are those where the underlying criteria are set by an independent body and which are monitored by a certification and auditing process. As such they are a highly transparent, reliable and an independent source of information. These labels have to meet the following conditions:

- The requirements for the label are based on scientific evidence
- The ecolabels are adopted with the participation of all stakeholders, such as government bodies, consumers, manufacturers, distributors and environmental organisations
- They are accessible to all interested parties.

In public procurement, procurers may require that the criteria underpinning a certain ecolabel must be met, and that the ecolabel may be used as one form of proof of compliance. They are however not allowed to request that a product carries an ecolabel. Moreover, procurers may only use ecolabel criteria which refer to characteristics of the product or service itself or production processes, not those relating to the general management of the company.

**Proof of compliances:** Where the verification for the criteria states that other appropriate means of proof can be used, this could include a technical dossier from the manufacturer, a test report from a recognised body, or other relevant evidence. The contracting authority will have to satisfy itself on a case by case basis, from a technical/legal perspective, whether the submitted proof can be considered appropriate.

### Cost considerations

The life-cycle costs, including that of the environmental impact of the bus should be taken into consideration in line with Directive 2009/33/EC.

Core criteria	Comprehensive criteria
<b>3.3 EU GPP criteria for Public Transport Services</b>	
<b>SUBJECT MATTER</b>	<b>SUBJECT MATTER</b>
Contract for the provision of bus services in an environmentally friendly manner.	Contract for the provision of bus services in an environmentally friendly manner.
<b>TECHNICAL SPECIFICATIONS</b>	<b>TECHNICAL SPECIFICATIONS</b>
<p><b>1. Exhaust gas emissions</b></p> <p>All vehicles used in carrying out the service must have engines meeting EURO IV standards. Where vehicles are not certified as EURO IV, but technical after-treatment has achieved the same standard, this should be documented in the tender application.</p> <p><b>Verification:</b> The tenderer must provide the technical sheets of the vehicles where emission standards are defined. For those vehicles where technical upgrade has achieved EURO IV standard the measures must be documented and included in the tender application, and this must be approved by an independent third party.</p>	<p><b>1. Exhaust gas emissions</b></p> <p>All vehicles used in carrying out the service must have engines meeting EURO V standards. Where vehicles are not certified as meeting EURO V, but technical after-treatment has achieved the same standard, this should be documented in the tender application.</p> <p><b>Verification:</b> The tenderer must present the technical sheets of the vehicles where emission standards are defined. For those vehicles where technical upgrade has achieved EURO V standard the measures must be documented and included in the tender application, and this must be approved by an independent third party.</p>
<p><b>2. Noise emissions</b></p> <p>Noise level of the vehicles to be used in carrying out the service lower than</p>	<p><b>2. Noise emissions</b></p> <p>Noise level of the vehicles to be used in carrying out the service lower than</p>

<p>the noise levels established by law. (See Annex I)</p> <p><b>Verification:</b> The tenderer must provide a list of all the vehicles that will be used to carry out the service with the noise levels for each one and the average noise emissions.</p>	<p>the noise levels established by law. (See Annex I)</p> <p><b>Verification:</b> The tenderer must provide a list of all the buses that will be used to carry out the service with the noise levels for each one and the average noise emissions.</p>
	<p><b>3. Lubricant oils</b></p> <p><b>a.</b> Vehicles must use low viscosity engine lubricant oils (LVL) or regenerated lubricant oils, with a minimum of 25% regenerated base oils, in vehicle maintenance. LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.</p> <p><b>b.</b> Hydraulic fluids and greases should have no Health or Environmental Hazard statement or R-phrase at the time of application (Lowest classification limit in Regulation (EC) No. 1272/2008 or Council Directive 99/45/EC).</p> <p><b>c.</b> No derogation from the exclusion in Article 6(6) of Regulation (EC) No. 66/2010 may be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No. 1907/2006, when present in mixtures, in concentrations higher than 0.010% (w/w).</p> <p><b>d.</b> Carbon content should be <math>\geq 45\%</math> derived from renewable raw materials.</p> <p><b>e.</b> The cumulative mass percentage of substances present that are both non-biodegradable and bioaccumulative shall not be more than 0.1% (w/w).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the proposed lubricants. Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof such as a technical dossier or a test report from an independent body will also be accepted.</p>

	<p><b>4. Tyres</b></p> <p>The tenderer must use tyres with rolling noise values less than the limit values in Regulation 661/2009 Annex II Part C. (see Annex I) This is equivalent to the top two categories (of the three available) of the EU tyre label external rolling noise class.</p> <p>The tenderer must have a commitment to using low rolling resistance tyres. The rolling resistance (for both new and retreaded tyres), expressed as kg/tonne must not exceed the following limit values, according to ISO 28580 or equivalent:</p> <table border="1" data-bbox="1128 603 1944 799"> <thead> <tr> <th>Tyre class</th> <th>Max rolling resistance (kg/tonne)</th> <th>Tyre label fuel efficiency class</th> </tr> </thead> <tbody> <tr> <td>C2</td> <td>9.2</td> <td>E</td> </tr> <tr> <td>C3</td> <td>7</td> <td>D</td> </tr> </tbody> </table> <p>These are the figures for driven wheels and wheels with other special functions. Free rolling tyres used should have a lower rolling resistance than those used for drive or special functions.</p> <p><b>Verification:</b> Tenderer must present a list of the tyres that will be used in maintenance tasks together with the relevant test results (according to ISO 28580 or equivalent). Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.</p>	Tyre class	Max rolling resistance (kg/tonne)	Tyre label fuel efficiency class	C2	9.2	E	C3	7	D
Tyre class	Max rolling resistance (kg/tonne)	Tyre label fuel efficiency class								
C2	9.2	E								
C3	7	D								
<b>AWARD CRITERIA</b>	<b>AWARD CRITERIA</b>									
<p>Additional points will be awarded for:</p> <p><b>1. Exhaust gas emissions</b></p> <p>Proportion of vehicles to be used in carrying out the service complying with</p>	<p>Additional points will be awarded for:</p> <p><b>1. Exhaust gas emissions</b></p> <p>Proportion of vehicles to be used in carrying out the service complying with</p>									

stricter EURO standards (EURO V, EEV, and EURO VI where applicable).

**Verification:** The tenderer must provide a list of all the vehicles to be used in the service with their standard and their respective technical sheets where emission standards are defined.

stricter EURO standards (EEV, and EURO VI where applicable).

**Verification:** The tenderer must provide a list of all the vehicles to be used in the service with their standard and their respective technical sheets where emission standards are defined.

<p><b>2. Use of alternative fuels</b></p> <p>Proportion of vehicles designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>	<p><b>2. Use of alternative fuels</b></p> <p>Proportion of vehicles designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>
	<p><b>3. Tyre pressure monitoring systems</b></p> <p>Proportion of vehicles carrying out the service fitted with tyre pressure monitoring systems (TPMS).</p> <p><b>Verification:</b> The tenderer must provide the technical documents of the vehicle where this is stated.</p>
	<p><b>4. Air conditioning gases</b></p> <p>Proportion of vehicles to be used in carrying out the service whose air conditioning refrigerant have a low global warming potential (GWP). This condition shall be considered fulfilled if the GWP, related to CO<sub>2</sub> and a time horizon of 100 years, is &lt; 2500.</p> <p><b>Verification:</b> The tenderer must provide for each vehicle, the name, formula and GWP of the refrigerating gas used in the air conditioning system. If a mixture of gases is used (n number of gases), the GWP will be calculated as follows:</p> $\text{GWP} = \Sigma(\text{Substance } X_1 \% \times \text{GWP}(X_1)) + (\text{Substance } X_2 \% \times \text{GWP}(X_2)) + \dots + (\text{Substance } X_n \% \times \text{GWP}(X_n))$ <p>where % is the contribution by weight with a weight tolerance of +/- 1 %.</p> <p>Information on GWP of gases can be found at:  <a href="http://www.grida.no/publications/other/ipcc_tar/?src=/climate/ipcc_tar/wg1/248.htm">http://www.grida.no/publications/other/ipcc_tar/?src=/climate/ipcc_tar/wg1/248.htm</a></p>

	<p>Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.</p>
	<p><b>5. Vehicle materials</b></p> <p>Extra points are awarded based on the percentage by weight of the vehicle that is from recycled or renewable materials. Renewable materials include, for example, bioplastics derived from such sources as vegetable oil or corn starch.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
	<p><b>6. Start and Stop</b></p> <p>Proportion of vehicles fitted with a start and stop system.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
<b>CONTRACT PERFORMANCE CLAUSES</b>	<b>CONTRACT PERFORMANCE CLAUSES</b>
<p><b>1. New vehicles</b></p> <p>All vehicles purchased from new after the award of the contract and used in carrying out the service during the contract period must comply with the EEV standard (where applicable) and be fitted with TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the passenger door.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>	<p><b>1. New vehicles</b></p> <p>All vehicles purchased from new after the award of the contract and used in carrying out the service during the contact period must comply with the EURO VI standard (where applicable), be fitted with TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the passenger door.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>

<p><b>2. Fuel consumption data</b></p> <p>The contractor must provide data to the authority stating the amount of fuel consumed over a set period in carrying out the service (petrol, diesel, biofuels, CNG, electricity...). Contractors must also implement and report on measures that will improve this fuel consumption over time.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>	<p><b>2. Fuel consumption data</b></p> <p>The contractor must provide data to the authority stating the amount of fuel consumed over a set period in carrying out the service (petrol, diesel, biofuels, CNG, electricity...). Contractors must also implement and report on measures that will improve this fuel consumption over time.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>
<p><b>3. Training of drivers</b></p> <p>All drivers involved in carrying out the service for the duration of the contract period must be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.</p> <p><b>Verification:</b> The contractor will provide a list of the drivers who have carried out the service and their certificates of eco-driving training.</p>	<p><b>3. Training of drivers</b></p> <p>All drivers involved in carrying out the service for the duration of the contract period must be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.</p> <p><b>Verification:</b> The contractor will provide a list of the drivers who have carried out the service and their certificates of eco-driving training.</p>
<p><b>4. Disposal of lubricant oils and tyres</b></p> <p>The contractor has provisions in place for the duration of the contract period to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.</p> <p><b>Verification:</b> Contractor has contract with one or several authorised waste managers for the contract period, or can provide proof of provisions used for collection and disposal of used lubricants oils and tyres.</p>	<p><b>4. Disposal of lubricant oils and tyres</b></p> <p>The contractor has provisions in place for the duration of the contract period to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.</p> <p><b>Verification:</b> Contractor has contract with one or several authorised waste managers for the contract period or can provide proof of provisions used for collection and disposal of used lubricants oils and tyres.</p>
	<p><b>5. Wash bays</b></p> <p>Where buses are washed during the contract period, they shall be in a wash bay that has at least a sludge and oil separator.</p>

	<b>Verification:</b> Certificate that the wash bay used has sludge and oil separator before outlet to general sewage/purification plant or excerpt from self-monitoring program.
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## Explanatory notes

**Exhaust gas emissions:** In December 2007, the Commission has published a proposal for EURO VI standards. The new emission limits, comparable in stringency to the US 2010 standards, would become effective from 2013/2014 (more information at: <http://ec.europa.eu/environment/air/transport/road.htm>). The EURO V standards are effective for new type approvals as from October 2008 and will be applicable for type approvals of existing vehicles as from October 2009. When new EURO standards are approved, reference should be made to them.

**Award criteria:** Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least 15 % of the total points available.

Where the award criterion is formulated in terms of “better performance as compared to the minimum requirements included in the technical specifications”, points will be awarded in proportion to the improved performance.

**Alternative fuels:** Vehicle is able to be powered by non fossil fuel technology. This includes hybrid systems. Where possible alternative fuels should be derived from renewable energy sources. Renewable energy sources for transport include electricity and hydrogen produced from renewable sources and biofuels. Renewable sources for electricity and hydrogen generation include: solar, wind, biomass, hydropower and geothermal. For more information see the EU GPP criteria for electricity. Biofuels include biodiesel, bioethanol and biogas. Biodiesel is created from oils such as vegetable oils, palm oil and rapeseed. Bioethanol can be derived from crops such as sugar cane and corn. Biogas is formed from biodegrading materials such as sewage, municipal wastes and plant matter.

**Type I or ISO 14024 ecolabels:** The Type I or ISO 14024 ecolabels are those where the underlying criteria are set by an independent body and which are monitored by a certification and auditing process. As such they are a highly transparent, reliable and an independent source of information. These labels have to meet the following conditions:

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**Proof of compliances:** Where the verification for the criteria states that other appropriate means of proof can be used, this could include a technical dossier from the manufacturer, a test report from a recognised body, or other relevant evidence. The contracting authority will have to satisfy itself on a case by case basis, from a technical/legal perspective, whether the submitted proof can be considered appropriate.

Core criteria	Comprehensive criteria
<b>3.4 EU GPP criteria for Waste Collection Trucks</b>	
<b>SUBJECT MATTER</b>	<b>SUBJECT MATTER</b>
Purchase or lease of low-emission waste collection trucks.	Purchase or lease of low-emission waste collection trucks.
<b>TECHNICAL SPECIFICATIONS</b>	<b>TECHNICAL SPECIFICATIONS</b>
<p><b>1. Exhaust gas emissions</b></p> <p>Vehicle engines must be certified as meeting the EEV standard for emissions.</p> <p><b>Verification:</b> The tenderer must provide the technical documents of the vehicle where it states that it meets the standard.</p>	<p><b>1. Exhaust gas emissions</b></p> <p>Vehicle engines must be certified as meeting the EURO VI standard for emissions.</p> <p><b>Verification:</b> The tenderer must provide the technical documents of the vehicle where it states that it meets the standard.</p>
<p><b>2. Noise emission levels</b></p> <p>Noise emissions for the vehicle, including any compaction equipment are below 102 dB (A) measured according to Directive 2000/14/EC.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed, or the test results.</p>	<p><b>2. Noise emission levels</b></p> <p>Noise emissions for the vehicle, including any compaction equipment are below 102 dB (A) measured according to Directive 2000/14/EC.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed, or the test results.</p>
	<p><b>3. Pollutant emissions</b></p>

The vehicle's emissions from the separate engines for auxiliary units meet the exhaust emission limits below according to Directive 97/68/EEC, level IIIa (constant rpm):

<b>Engine power P(kW)</b>	<b>CO (g/kWh)</b>	<b>HC + NO<sub>x</sub> (g/kWh)</b>	<b>PM (g/kWh)</b>
H: 130kW ≤ P ≤ 560kW	3.5	4	0.2
I: 75kW ≤ P < 130kW	5	4	0.3
J: 37kW ≤ P < 75kW	5	4.7	0.4
K: 19kW ≤ P < 37kW	5.5	7.5	0.6

**Verification:** The tenderer must provide either a type approval certificate, a certificate of the manufacturer, or a test certificate of another testing institute. Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.

#### **4. Lubricant oils**

**a.** Vehicles must use low viscosity engine lubricant oils (LVL) or regenerated lubricant oils, with a minimum of 25% regenerated base oils, in vehicle maintenance. LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.

**b.** Hydraulic fluids and greases should have no Health or Environmental Hazard statement or R-phrase at the time of application (Lowest classification limit in Regulation (EC) No. 1272/2008 or Council Directive 99/45/EC).

**c.** No derogation from the exclusion in Article 6(6) of Regulation (EC) No. 66/2010 may be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No. 1907/2006, when present in mixtures, in concentrations higher than 0.010% (w/w).

**d.** Carbon content should be  $\geq 45\%$  derived from renewable raw materials.

**e.** The cumulative mass percentage of substances present that are both non-biodegradable and bioaccumulative shall not be more than 0.1% (w/w).

**Verification:** The tenderer must provide the technical sheet of the proposed lubricants. Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof such as a technical dossier or a test report from an independent body will also be accepted.

**5. Tyres**

The vehicles must be fitted with tyres with rolling noise values less than the limit values in Regulation 661/2009 Annex II Part C. (see Annex I) This is equivalent to the top two categories (of the three available) of the EU tyre label for external rolling noise class.

The tenderer must have a commitment to using low rolling resistance tyres. The rolling resistance (for both new and retreaded tyres), expressed as kg/tonne must not exceed the following limit values, according to ISO 28580 or equivalent:

Tyre class	Max rolling resistance (kg/tonne)	rolling value	Tyre label fuel efficiency class
C2	9.2		E

	<table border="1" data-bbox="1128 197 1944 239"> <tr> <td data-bbox="1128 197 1397 239">C3</td> <td data-bbox="1397 197 1666 239">7</td> <td data-bbox="1666 197 1944 239">D</td> </tr> </table> <p data-bbox="1128 277 2042 373">These are the figures for driven wheels and wheels with other special functions. Free rolling tyres used should have a lower rolling resistance than those used for drive or special functions.</p> <p data-bbox="1128 411 2042 510"><b>Verification:</b> Tenderer must present a list of the tyres that will be used in maintenance tasks together with the relevant test results (according to ISO 28580 or equivalent).</p> <p data-bbox="1128 549 2042 647">Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.</p>	C3	7	D
C3	7	D		
<b>AWARD CRITERIA</b>	<b>AWARD CRITERIA</b>			
<p data-bbox="188 734 636 762">Additional points will be awarded for:</p> <p data-bbox="188 801 524 829"><b>1. Use of alternative fuels</b></p> <p data-bbox="188 868 1016 935">Vehicle is designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p data-bbox="188 970 1102 1037"><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>	<p data-bbox="1128 734 1576 762">Additional points will be awarded for:</p> <p data-bbox="1128 801 1464 829"><b>1. Use of alternative fuels</b></p> <p data-bbox="1128 868 1957 935">Vehicle is designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p data-bbox="1128 970 2042 1037"><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>			
<p data-bbox="188 1082 515 1110"><b>2. Exhaust gas emissions</b></p> <p data-bbox="188 1149 1102 1216">The vehicle is certified as meeting the Euro VI standard for emissions (where applicable).</p> <p data-bbox="188 1251 1102 1318"><b>Verification:</b> The tenderer must provide the technical documents of the vehicle where it states that it meets the standard.</p>	<p data-bbox="1128 1082 1603 1110"><b>2. Tyre pressure monitoring systems</b></p> <p data-bbox="1128 1149 1971 1177">The vehicle is equipped with TPMS (Tyre pressure monitoring system).</p> <p data-bbox="1128 1216 2042 1283"><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>			
	<b>3. Vehicle materials</b>			

	<p>Extra points are awarded based on the percentage by weight of the vehicle that is from recycled or renewable materials. Renewable materials include, for example, bioplastics derived from such sources as vegetable oil or corn starch.</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
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**Explanatory notes**

**Exhaust gas emissions:** In December 2007, the Commission has published a proposal for EURO VI standards. The new emission limits, comparable in stringency to the US 2010 standards, would become effective from 2013/2014 (more information at: <http://ec.europa.eu/environment/air/transport/road.htm>). The EURO V standards are effective for new type approvals as from October 2008 and will be applicable for type approvals of existing vehicles as from October 2009. When new EURO standards are approved, reference should be made to them.

**Award criteria:** Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least 15 % of the total points available. Where the award criterion is formulated in terms of “better performance as compared to the minimum requirements included in the technical specifications”, points will be awarded in proportion to the improved performance.

**Alternative fuels:** Vehicle is able to be powered by non fossil fuel technology. This includes hybrid systems. Where possible alternative fuels should be derived from renewable energy sources. Renewable energy sources for transport include electricity and hydrogen produced from renewable sources and biofuels. Renewable sources for electricity and hydrogen generation include: solar, wind, biomass, hydropower and geothermal. For more information see the EU GPP criteria for electricity. Biofuels include biodiesel, bioethanol and biogas. Biodiesel is created from oils such as vegetable oils, palm oil and rapeseed. Bioethanol can be derived from crops such as sugar cane and corn. Biogas is formed from biodegrading materials such as sewage, municipal wastes and plant matter.

**Type I or ISO 14024 ecolabels:** The Type I or ISO 14024 ecolabels are those where the underlying criteria are set by an independent body and which are monitored by a certification and auditing process. As such they are a highly transparent, reliable and an independent source of information. These labels have to meet the following conditions:

- The requirements for the label are based on scientific evidence
- The ecolabels are adopted with the participation of all stakeholders, such as government bodies, consumers, manufacturers, distributors and environmental organisations
- They are accessible to all interested parties.

In public procurement, procurers may require that the criteria underpinning a certain ecolabel must be met, and that the ecolabel may be used as one form of proof of compliance. They are however not allowed to request that a product carries an ecolabel. Moreover, procurers may only use ecolabel criteria which refer to characteristics of the product or service itself or production processes, not those relating to the general management of the company.

**Proof of compliances:** Where the verification for the criteria states that other appropriate means of proof can be used, this could include a technical dossier from the manufacturer, a test report from a recognised body, or other relevant evidence. The contracting authority will have to satisfy itself on a case by case basis, from a technical/legal perspective, whether the submitted proof can be considered appropriate.

### Cost considerations

For waste collection trucks no cost data could be identified. Life-cycle costs need to include monetised values for of CO<sub>2</sub> and pollutant emissions as described in Directive 2009/33/EC to be included within the purchasing decision.

Core criteria	Comprehensive criteria
<b>3.5 EU GPP criteria for Waste Collection Services</b>	
<b>SUBJECT MATTER</b>	<b>SUBJECT MATTER</b>
Contract for the provision of waste collection services in an environmentally friendly manner.	Contract for the provision of waste collection services in an environmentally friendly manner.
<b>TECHNICAL SPECIFICATIONS</b>	<b>TECHNICAL SPECIFICATIONS</b>
<b>1. Exhaust gas emissions</b>  All vehicles used in carrying out the service must have engines meeting EURO IV standards. Where vehicles are not certified as EURO IV, but technical after-treatment has achieved the same standard, this should be documented in the tender application.	<b>1. Exhaust gas emissions</b>  All vehicles used in carrying out the service must have engines meeting EURO V standards. Where vehicles are not certified as EURO V, but technical after-treatment has achieved the same standard, this should be documented in the tender application.

<p><b>Verification:</b> The tenderer must present the technical sheets of the vehicles where emission standards are defined. For those vehicles where technical upgrade has achieved EURO IV standard the measures must be documented and included in the tender application, and this must be approved by an independent third party.</p>	<p><b>Verification:</b> The tenderer must present the technical sheets of the vehicles where emission standards are defined. For those vehicles where technical upgrade has achieved EURO V standard the measures must be documented and included in the tender application, and this must be approved by an independent third party.</p>																				
<p><b>2. Noise emissions</b></p> <p>Noise level of the vehicles to be used in carrying out the service shall be below 102 dB (A) measured according to Directive 2000/14/EC.</p> <p><b>Verification:</b> The tenderer must provide a list of vehicles that will be used to carry out the service with the noise levels for each one and the average noise emissions. After awarding the contract, the contracting authority reserves the right to ask for the appropriate documents to check the information.</p>	<p><b>2. Noise emissions</b></p> <p>Noise level of the vehicles to be used in carrying out the service shall be below 102 dB (A) measured according to Directive 2000/14/EC.</p> <p><b>Verification:</b> The tenderer must provide a list of vehicles that will be used to carry out the service with the noise levels for each one and the average noise emissions. After awarding the contract, the contracting authority reserves the right to ask for the appropriate documents to check the information.</p>																				
	<p><b>3. Pollutant emissions</b></p> <p>Percentage of vehicles to be used in carrying out the service that meet the pollutant emissions of the separate engines according to Directive 97/68/EEC, level IIIa (constant rpm):</p> <table border="1" data-bbox="1128 991 2038 1342"> <thead> <tr> <th>Engine power P (kW)</th> <th>CO (g/kWh)</th> <th>HC + NO<sub>x</sub> (g/kWh)</th> <th>PM (g/kWh)</th> </tr> </thead> <tbody> <tr> <td>H: 130kW ≤ P ≤ 560kW</td> <td>3.5</td> <td>4</td> <td>0.2</td> </tr> <tr> <td>I: 75kW ≤ P &lt; 130kW</td> <td>5</td> <td>4</td> <td>0.3</td> </tr> <tr> <td>J: 37kW ≤ P &lt; 75kW</td> <td>5</td> <td>4.7</td> <td>0.4</td> </tr> <tr> <td>K: 19kW ≤ P &lt; 37kW</td> <td>5.5</td> <td>7.5</td> <td>0.6</td> </tr> </tbody> </table>	Engine power P (kW)	CO (g/kWh)	HC + NO <sub>x</sub> (g/kWh)	PM (g/kWh)	H: 130kW ≤ P ≤ 560kW	3.5	4	0.2	I: 75kW ≤ P < 130kW	5	4	0.3	J: 37kW ≤ P < 75kW	5	4.7	0.4	K: 19kW ≤ P < 37kW	5.5	7.5	0.6
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H: 130kW ≤ P ≤ 560kW	3.5	4	0.2																		
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K: 19kW ≤ P < 37kW	5.5	7.5	0.6																		

	<p><b>Verification:</b> The tenderer must provide a list of all the vehicles to be used in carrying out the service identifying those that comply with the criteria, attaching also either a type approval certificate, a certificate of the manufacturer, or a test certificate of another testing institute.</p> <p>Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.</p>
	<p><b>4. Lubricant oils</b></p> <p>Vehicles must use low viscosity engine lubricant oils (LVL) or regenerated lubricant oils, with a minimum of 25% regenerated base oils, in vehicle maintenance. LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.</p> <p>Hydraulic fluids and greases should have no Health or Environmental Hazard statement or R-phrase at the time of application (Lowest classification limit in Regulation (EC) No. 1272/2008 or Council Directive 99/45/EC).</p> <p>No derogation from the exclusion in Article 6(6) of Regulation (EC) No. 66/2010 may be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No. 1907/2006, when present in mixtures, in concentrations higher than 0.010% (w/w).</p> <p>Carbon content should be <math>\geq 45\%</math> derived from renewable raw materials.</p> <p>The cumulative mass percentage of substances present that are both non-biodegradable and bioaccumulative shall not be more than 0.1% (w/w).</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the proposed lubricants. Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof such as a technical dossier or a test report from an independent body will also be</p>

	accepted.									
	<p><b>5. Tyres</b></p> <p>The tenderer must use tyres with rolling noise values less than the limit values in Regulation 661/2009 Annex II Part C. (see Annex I). This is equivalent to the top two categories (of the three available) of the EU tyre label for external rolling noise class.</p> <p>The tenderer must have a commitment to using low rolling resistance tyres. The rolling resistance (for both new and retreaded tyres), expressed as kg/tonne must comply be at least following limit values or below, according to ISO 28580 or equivalent:</p> <table border="1" data-bbox="1128 679 1944 852"> <thead> <tr> <th data-bbox="1128 679 1397 783">Tyre class</th> <th data-bbox="1397 679 1671 783">Max rolling resistance value (kg/tonne)</th> <th data-bbox="1671 679 1944 783">Tyre label fuel efficiency class</th> </tr> </thead> <tbody> <tr> <td data-bbox="1128 783 1397 815">C2</td> <td data-bbox="1397 783 1671 815">9.2</td> <td data-bbox="1671 783 1944 815">E</td> </tr> <tr> <td data-bbox="1128 815 1397 852">C3</td> <td data-bbox="1397 815 1671 852">7</td> <td data-bbox="1671 815 1944 852">D</td> </tr> </tbody> </table> <p>These are the figures for driven wheels and wheels with other special functions. Free rolling tyres used should have a lower rolling resistance than those used for drive or special functions.</p> <p><b>Verification:</b> the tenderer must present a list of the tyres that will be used in maintenance tasks together with the relevant test results (according to ISO 28580 or equivalent).</p>	Tyre class	Max rolling resistance value (kg/tonne)	Tyre label fuel efficiency class	C2	9.2	E	C3	7	D
Tyre class	Max rolling resistance value (kg/tonne)	Tyre label fuel efficiency class								
C2	9.2	E								
C3	7	D								
<b>AWARD CRITERIA</b>	<b>AWARD CRITERIA</b>									

<p>Additional points will be awarded for:</p> <p><b>1. Exhaust gas emissions</b></p> <p>Proportion of vehicles to be used in carrying out the service complying with stricter EURO standards (EURO V, EEV and EURO VI where applicable).</p> <p><b>Verification:</b> The tenderer must present a list of all the vehicles to be used in the service with their standard and their respective technical sheets where emission standards are defined.</p>	<p>Additional points will be awarded for:</p> <p><b>1. Exhaust gas emissions</b></p> <p>Proportion of vehicles to be used in carrying out the service complying with stricter EURO standards (EEV and EURO VI where applicable).</p> <p><b>Verification:</b> The tenderer must present a list of all the vehicles to be used in the service with their standard and their respective technical sheets where emission standards are defined.</p>
<p><b>2. Use of alternative fuels</b></p> <p>Proportion of vehicles designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.</p>	<p><b>2. Use of alternative fuels</b></p> <p>Proportion of vehicles designed to be powered by alternative fuel types or systems. (e.g. biofuels, electric, hydrogen or hybrid systems)</p> <p><b>Verification:</b> The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed</p>
	<p><b>3. Tyre pressure monitoring systems</b></p> <p>Proportion of vehicles equipped with TPMS (Tyre pressure monitoring system).</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
	<p><b>4. Vehicle materials</b></p> <p>Extra points awarded based on percentage of vehicle that is from recycled or bio-content</p> <p><b>Verification:</b> The tenderer must present the technical sheet of the vehicle</p>

	where this information is displayed.
<b>CONTRACT PERFORMANCE CLAUSES</b>	<b>CONTRACT PERFORMANCE CLAUSES</b>
<p><b>1. New vehicles</b></p> <p>All vehicles purchased from new after the award of the contract and used in carrying out the service during the contract period must comply with the EEV standard (where applicable) and be fitted with TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the passenger door.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>	<p><b>1. New vehicles</b></p> <p>All vehicles purchased from new after the award of the contract and used in carrying out the service during the contract period must comply with the EURO VI standard (where applicable) and be fitted with TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the passenger door.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>
<p><b>2. Fuel consumption data</b></p> <p>The contractor must provide data to the authority stating the amount of fuel consumed over a set period in carrying out the service (petrol, diesel, biofuels, CNG, electricity...). Contractors must also implement and report on measures that will improve this fuel consumption over time.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>	<p><b>2. Fuel consumption data</b></p> <p>The contractor must provide data to the authority stating the amount of fuel consumed over a set period in carrying out the service (petrol, diesel, biofuels, CNG, electricity...). Contractors must also implement and report on measures that will improve this fuel consumption over time.</p> <p><b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.</p>
<p><b>3. Training of drivers</b></p> <p>All drivers involved in carrying out the service for the duration of the contract period must be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.</p> <p><b>Verification:</b> The contractor will provide a list of the drivers who have carried out the service and their certificates of eco-driving training.</p>	<p><b>3. Training of drivers</b></p> <p>All drivers involved in carrying out the service for the duration of the contract period must be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.</p> <p><b>Verification:</b> The contractor will provide a list of the drivers who have carried out the service and their certificates of eco-driving training.</p>

<p><b>4. Disposal of lubricant oils and tyres</b></p> <p>The contractor has provisions in place for the duration of the contract period to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.</p> <p><b>Verification:</b> Contractor has contract with one or several authorised waste managers for the contract period, or can provide proof of provisions used for collection and disposal of used lubricants oils and tyres.</p>	<p><b>4. Disposal of lubricant oils and tyres</b></p> <p>The contractor has provisions in place for the duration of the contract period to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.</p> <p><b>Verification:</b> Contractor has contract with one or several authorised waste managers for the contract period, or can provide proof of provisions used for collection and disposal of used lubricants oils and tyres.</p>
	<p><b>5. Wash bays</b></p> <p>Where trucks are washed during the contract period, they shall be in a wash bay that has at least a sludge and oil separator.</p> <p><b>Verification:</b> Certificate that the wash bay used has sludge and oil separator before outlet to general sewage/purification plant or excerpt from self-monitoring program.</p>

### Explanatory notes

**Exhaust gas emissions:** In December 2007, the Commission has published a proposal for EURO VI standards. The new emission limits, comparable in stringency to the US 2010 standards, will become effective from 2013/2014 (more information at: <http://ec.europa.eu/environment/air/transport/road.htm>). The EURO V standards have been effective for new type approvals as from October 2008 and have been applicable for type approvals of existing vehicles from October 2009.

**Award criteria:** Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least 15 % of the total points available.

Where the award criterion is formulated in terms of “better performance as compared to the minimum requirements included in the technical specifications”, points will be awarded in proportion to the improved performance.

**Alternative fuels:** Vehicle is able to be powered by non fossil fuel technology. This includes hybrid systems. Where possible alternative fuels should be derived from renewable energy sources. Renewable energy sources for transport include electricity and hydrogen produced from renewable sources and biofuels. Renewable sources for electricity and hydrogen generation include: solar, wind, biomass, hydropower and geothermal. For more information see the EU GPP criteria for electricity. Biofuels include biodiesel, bioethanol and biogas. Biodiesel is created from oils such as vegetable oils, palm oil and rapeseed. Bioethanol can be derived from crops such as sugar cane and corn. Biogas is formed from biodegrading materials such as sewage, municipal wastes and plant matter.

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**Proof of compliances:** Where the verification for the criteria states that other appropriate means of proof can be used, this could include a technical dossier from the manufacturer, a test report from a recognised body, or other relevant evidence. The contracting authority will have to satisfy itself on a case by case basis, from a technical/legal perspective, whether the submitted proof can be considered appropriate.

## Annex I: Noise level limits for vehicles

The noise level measured according to Directive 2007/34/EC shall not exceed the following limits:

Vehicle categories	Engine power	dB (A)
Vehicles intended for the carriage of passengers, and comprising not more than nine seats including the driver's seat (M1):		74 (1)(3)
Vehicles intended for the carriage of passengers and equipped with more than nine seats, including the driver's seat; and	< 150kW	78

having a maximum permissible mass > 3,5 t and (M2 and M3):	150 kW	80 (2)
Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat (M2) and vehicles intended for the carriage of goods (N1) with a maximum permissible mass < 2 t:		76 (1)
Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat (M2) and vehicles intended for the carriage of goods (N1) with a maximum permissible mass $2 \geq t < 3,5$ :		77 (2)
Vehicles intended for the carriage of goods and having a maximum permissible mass > 3,5 t (N2 and N3):	< 75 kW	77 (2)
	$75 \geq kW < 150$	78 (2)
	$\geq 150$	80 (2)

However:

- (1) The limit values are increased by 1 dB (A) if they are equipped with a direct injection diesel engine.
- (2) For vehicles with a maximum permissible mass of over two tonnes designed for off-road use, the limit values are increased by 1 dB (A) if their engine power is less than 150 kW and 2 dB (A) if their engine power is 150 kW or more.
- (3) Vehicles equipped with a manually operated gear box having more than four forward gears and with an engine developing a maximum power exceeding 140 kW/t and whose permissible maximum power/maximum mass ratio exceeds 75 kW/t, the limit values are increased by 1 dB (A) if the speed at which the rear of the vehicle passes the line BB& prime in third gear is greater than 61 km/h.

## Annex II: Noise level limits for tyres

According to Regulation 661/2009 Annex II Part C rolling noise levels shall not exceed the following limits (to be phased in from 1<sup>st</sup> November 2012):

Class C1 tyres for passenger cars, with nominal section width of the tyre that has been tested:

Tyre class	Nominal section width (mm)	Limit values in dB(A)
C1a	$\leq 185$	70
C1b	$> 185 \leq 215$	71
C1c	$> 215 \leq 245$	71
C1d	$> 245 \leq 275$	72
C1e	$> 275$	74

For snow tyre, extra loads or reinforced tyre, or any combination of these classifications, the above limits shall be increased by a dB(A)

Class C2 and C3 tyres, with reference to the category of use of the range of tyres:

<b>Tyre class</b>	<b>Category of use</b>	<b>Limit value expressed in dB(A)</b>
C2	Normal tyres	72
C3	Normal tyres	73
	Traction tyres	75

For special use tyres, the above limits shall be increased by 2 dB (A). An additional 2 dB (A) shall be allowed for snow tyres in the C2 traction tyre category. For all other categories of C2 and C3 tyres, an additional 1 dB (A) shall be allowed for snow tyres.