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product group **clean vehicles**

Presented by



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Overview

- ⦿ Environmental impacts
- ⦿ Legal Background
- ⦿ Recommended GPP criteria
- ⦿ Good practise example
- ⦿ Useful Links



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Products with high environmental leverage



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Environmental Impacts by vehicles



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- ⊙ Contribution to climate change through the emission of greenhouse gases
- ⊙ Depletion of resources (especially non renewable fuels)
- ⊙ Air pollution through the emission of other exhaust gases that can cause:
 - Local health (especially respiratory) and regional problems
 - Damage to the environment, buildings and monuments
- ⊙ Noise pollution
- ⊙ Generation of waste lubricant, oils and tyres
- ⊙ Generation of waste parts and materials at end of vehicle life

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GPP criteria to approach environmental impacts

- ⊙ Procurement of low emission vehicles (GHG, other exhaust gases and noise)
- ⊙ Reduce fuel consumption through eco-driving, tyre pressure monitoring systems and gear shift indicators
- ⊙ Reduce fuel consumption by using low viscosity lubricants and low rolling resistance tyres
- ⊙ Procurement of vehicles with air-conditioning systems with low GWP (Global Warming Potential) coolers
- ⊙ Procurement of environmentally friendly tyres and regenerated lubricant oils
- ⊙ Ensure the correct collection and management of used lubricant oils and tyres
- ⊙ Encourage vehicles made with recycled/bio-materials

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Directive 2009/33/EC on the promotion of clean and energy efficient road transport vehicles

Directive 2009/33/EC (The Clean Vehicles Directive - CVD) obliges all public authorities and public transport operators to take into account:

- ⦿ Fuel consumption
- ⦿ CO2 emissions
- ⦿ Harmful local emissions (Nox, PM, NMHC)



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Recommendations: Life-Cycle-Costs

Life-cycle cost (LCC) of vehicles

- ⊙ energy consumption
- ⊙ disposal costs
- ⊙ purchase price

LCC cost elements of vehicles:

- ⊙ investment costs
- ⊙ annual motor vehicle 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;
- ⊙ end of life costs or revenues

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Recommendations: Subject Matter

- ⦿ Including sustainability aspects within the subject matter

Example: Framework agreement for procurement or lease of low emission cars (,GPP Training Toolkit‘)

- ⦿ Attention: When mentioning specific car brands be aware of non-discrimination principle

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Recommendations: Technical Specifications I

Maximum fuel consumption could be defined:

1. **CO₂ emissions** max. 110g/km (see extensive criteria in ,GPP Training Toolkit‘)
2. **Eco driving:**
Cars/vans are provided with information/
instructions on eco driving relevant to the vehicle.

Verification: Tenderer provides documentation containing the required information

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Recommendations: Technical Specifications II

3. **Gear Shift Indicator, GSI**

The vehicle offered is equipped with a gear shift indicator.

Verification: The tenderer must present the technical sheet of the vehicle where this information is displayed.

4. **Fuel consumption display**

The vehicles offered are equipped with a mechanism to display to the driver fuel consumption figures.

Verification: The tenderer must present the technical sheet of the vehicle where this information is displayed.

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Recommendations: Technical Specifications III

5. **Air conditioning gases**

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) ≤ 150 (related to CO₂ and a time horizon of 100 years).

Verification: 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 with a specific formular.

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Recommendations: Technical Specifications IV

6. **Exhaust gas emissions**

Vehicles must comply with the EURO 6 standard.

Verification:

The tenderer must present the technical sheet of the vehicle where this information is displayed.

7. **Tyre pressure monitoring systems (TPMS)**

The vehicle offered is equipped with tyre pressure monitoring systems (TPMS)

Verification:

The tenderer must present the technical sheet of the vehicle where this information is displayed

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Recommendations: Technical Specifications V

8. **Vehicle tyres - noise**

The vehicles must be equipped with tyres with noise emission levels below the maximum established in Regulation 661/2009.

Verification:

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 the duration of the contract to use these products.

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Recommendations: Technical Specifications VI

9. **Vehicle tyres - rolling resistance**

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.

Verification:

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.

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Recommendations: Technical Specifications VII

10. Lubricant oils

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.

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Recommendations: Award Criteria

Award will go to “Most economically advantageous tender (MEAT)”



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Recommendations: Award Criteria II

Additional points will be awarded for:

1. Use of alternative fuels

Vehicle is designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems).

Verification: The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed

2. Noise emission levels

Noise emissions lower than those established by law.

Verification: The tenderer must present the technical sheet of the vehicle where this information is displayed, or the test results.

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Recommendations: Award Criteria III

Additional points will be awarded for:

3. Lower CO2 emissions

Lower CO2 emissions than those required in the specifications (1).

Verification: The tenderer must provide the technical sheet of the vehicle where the CO2 emissions are stated.

4. Start and Stop

The vehicle is fitted with a start and stop system.

Verification: The tenderer must present the technical sheet of the vehicle where this information is displayed.

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Recommendations: Further ideas

- ⊙ Combination of vehicle fleet with Carsharing/ Cooperation with Church institutions in relation to Carsharing spaces
- ⊙ Joint procurement to realise lower procurement costs and less administrative work (e.g. Stockholm)
- ⊙ Production of biogas from waster/water sources in communities (e.g. Lille, Stockholm, Graz...)
- ⊙ Exchange of best practises with other communities through networks like Procura+ (e.g. Vienna with regard to construction machines, tractors, trucks, fire extinguishing substances)
- ⊙ Training of driving staff

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Example: Tender Overview

- ⊙ **Subject Matter:** Purchase of low emission vehicles (passenger cars)
- ⊙ **Technical specifications:** Vehicle Type Compact 110g Co2/km
Verification: The tenderer must provide the technical sheet of the vehicle where the CO2 emissions are stated
- ⊙ **Award criteria:** Lower CO2 emissions than those required in the specifications.
Verification: The tenderer must provide the technical sheet of the vehicle where the CO2 emissions are stated.
- ⊙ Award will go to most economically advantageous tender (MEAT)

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Existing Standards, Ecolabels and other criteria sources

- ⊙ Label on fuel consumption and CO2 emissions (only passenger cars) from fuel-labelling Directive 1999/94EC
- ⊙ Blue Angle Ecolabel for low-noise and low-pollutant municipal vehicles and buses
- ⊙ Bra Miljöval (Swedish): Criteria for passenger transportation.
- ⊙ Nordic Ecolabel and the Blue Angel label have criteria for vehicle tyres
- ⊙ EU Ecolabel on lubricants on excluding/limiting hazardous substances and mixtures, aquatic toxicity requirements, biodegradability and bioaccumulation potential and renewable material content

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Best practise examples

Introduction

- ⊙ Berlin Police Force procures a variety of vehicles every year (approx. 200) considering life cycle costs in the procurement



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Technical Specifications

- ⊙ Meeting German 4 standard for particle emissions – this allows the vehicle to be driven in German inner-city environmental zones ('Umweltzone')
- ⊙ Carbon particulate filter (for diesel engines)
- ⊙ Meeting the Euro 5 European Emission Standard (the most demanding standard at the time of tendering)

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Best practise examples



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Award Criteria

- ⦿ Assessment of technical aspects (40% of total points) and LCC (60% of total points), which includes financial and environmental costs. A maximum of 40,000 points could be awarded.
- ⦿ The highest scoring bid from step 1, along with the bids which scored up to 10% less points, were then compared purely on the basis of their purchase price, awarding the tender then to the lowest bid.

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Best practise examples



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Results

- ⦿ No problems encountered with bidders being unable to conform or meet the tender requirements
- ⦿ The total number of bids received did not differ to the number received from previous tenders
- ⦿ Due to the strict focus and the consideration of the various costs during the products lifetime, the tender was awarded to the bidder who successfully complied with the predetermined environmental criteria and also satisfied the financial requirements imposed

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Tools: Top Ten Cars environmental scoring list (VCD)

- ⊙ Recommended retail price (Euro) : 12.950
- ⊙ Performance (kW/PS) : 50/68
- ⊙ Cubic capacity (ccm) : 999
- ⊙ Fuel: G
- ⊙ Total consumption NEFZ (l/100 km): 3,6/2,5
- ⊙ CO2 (g/km): 79
- ⊙ Noise emissions [dB(A)]: 69
- ⊙ Emission class: Euro 5

Platz 1: Volkswagen Eco-up



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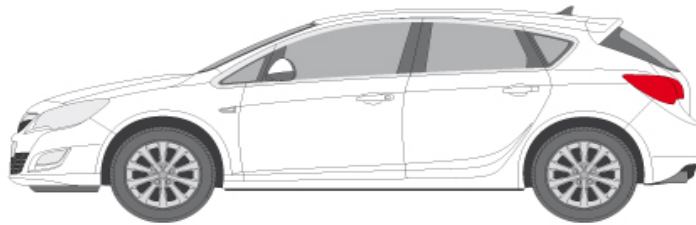
Tools: Clean Vehicle (by the EC)

- ⊙ Access to Europe's biggest vehicle database
- ⊙ Calculation of the total lifetime costs, in accordance with the "Directive on the promotion of clean and energy efficient road transport vehicles (2009/33/EC)
- ⊙ Interactive features for joint procurement in order to promote a dynamic market development
- ⊙ EU-wide information on existing procurement rules and promotion plans for clean vehicles
- ⊙ EU-wide market share information of clean vehicles
- ⊙ Powerful and easy to use web application
- ⊙ Individual data output and calculations for each country within the EU

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Example lifetime cost (Clean Vehicle)

Opel Astra (J) SPORTS TOURER



Lifetime Cost

Data & Features

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Total Operational Lifetime Cost:

5.752,94 €*

Fuel Consumption:

5.136,19 €

CO₂ - Cost:

582,00 €

Pollutant Emission Cost:

34,75 €

* Diesel-driven

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Further resources

- ⦿ Procura+ criteria on buses
http://www.procuraplus.org/fileadmin/files/Manuals/English_manual/Procura_Manual_Chapter6a_-_buses.pdf
- ⦿ GPP criteria
http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm
- ⦿ GPP Training Toolkit on Transport
http://ec.europa.eu/environment/gpp/toolkit_en.htm
- ⦿ Clean Fleets: www.clean-fleets.org