



SUSTAINABLE PROCUREMENT GUIDELINES FOR MOTOR VEHICLES

PRODUCT SHEET



Sustainable Procurement Guidelines for Motor Vehicles
Product Sheet



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MESSAGES FROM THE UNITED NATIONS AND UNEP

"....I would like to make a public commitment. We are already moving towards making our Headquarters in New York climate-neutral and environmentally sustainable. I would like to see our renovated headquarters complex eventually become a globally acclaimed model of efficient use of energy and resources. Beyond New York, the initiative should include the other UN headquarters and offices around the globe.

We need to work on our operations too, by using energy more efficiently and eliminating wasteful practices. That is why, today, I am asking the heads of all UN agencies, funds and programmes to join me in this effort. And I am asking all staff members throughout the UN family to make common cause with me."



Ban Ki-Moon
UN Secretary General
New York, 5 June 2007
World Environment Day



Achim Steiner
Executive Director, UNEP
Geneva, 8 October 2007
117th Assembly of the
Inter-Parliamentary Union

"Ban Ki-Moon is determined to put global warming at the top of the global political agenda and determined to build the trust so urgently needed if we are to succeed in combating climate change. Under his leadership, the UN is also determined to demonstrate its 'sustainability credentials' by action on the ground and by good housekeeping at home.

Reviews are underway across all agencies and programmes to establish a strategy for a carbon neutral UN and to make the refurbishment of the UN headquarters in New York a model of eco-efficiency." *

UNEP is committed to take part in the fight for climate change and in showing leadership. We are committed to become carbon neutral by reducing our energy consumption and carbon footprint and by offsetting emissions.

INTRODUCTION TO THIS DOCUMENT

The “Sustainable procurement guidelines for vehicles - Product Sheet” provides example criteria that may be used by United Nations staff to purchase sustainable motor vehicles. This document forms part of a series of guidelines on sustainable procurement for use by UN agencies.

A Background Report is also available which presents the rationale behind the development of the criteria in this product sheet and provides additional guidance on implementing sustainable procurement in the United Nations.

SUSTAINABLE PROCUREMENT

Sustainable Procurement means buying products and services that have a high environmental relief potential and that have been produced in a socially-responsible way, e.g. respecting ILO core conventions. These products and services have a smaller ecological footprint. Sustainable procurement takes into account the costs and benefits that occur over the whole lifecycle of a product.

SCOPE OF THESE GUIDELINES

This Product Sheet can be used both by UN procurers and requisitioners for either identifying the most sustainable vehicles available on the market or for developing competitive tender documents. The following sustainability criteria in this Product Sheet are designed to achieve different levels of sustainability performance.

STRUCTURE OF THE GUIDELINES

Two sets of sustainability criteria are presented in the Sustainable Procurement guidelines

- Core (basic) sustainability criteria address the most significant environmental and social impacts, and are designed to be used with minimum additional verification effort or cost increases.
- Comprehensive (advanced) sustainability criteria are intended for use by procurers who seek to purchase the best environmental and socially-responsible products available on the market, and may require additional administrative effort or imply a certain cost increase as compared to other products fulfilling the same function.

The criteria are divided into the typical steps in a procurement action: tender subject matter, technical specifications, supplier qualification requirements, evaluation criteria, and contract clauses. For each criterion guidance is also provided on verifying compliance.

The criteria are also presented in the Annex in checklist form for use by requisitioners. An example weighting matrix is also provided in the Annex.

REGIONAL APPLICABILITY

It should be possible to use these criteria in all world regions. However it is advisable that the Core criteria are used to begin with. The Comprehensive criteria are more ambitious. In Europe, North America and Japan there will be sufficient supply on the market to ensure a competitive response. Elsewhere it is advisable to carry out some initial market research to assess price and availability.



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1. SUSTAINABILITY CRITERIA FOR VEHICLES

Sustainability criteria	Verification	Basic	Advanced
Materials used for the products			
<p><u>Metal parts</u> Part of the aluminium and/or steel used for the production of the aluminium and/or steel shall be recycled (second fusion).</p>	<p>Any means of proof demonstrating that the criteria are met will be accepted, such as a technical dossier from the manufacturer, a test report from a recognised body showing compliance, or a declaration from the manufacturer.</p> <p>The manufacturer should be able to provide information as to what percentage of the metal content in their vehicles is recycled. This will vary by plant/ country, but an average can be provided. This figure should at least be 25 %, but is typically much higher in the automotive industry.</p>		•
<p><u>Warranty and Durability</u> Minimum years of guarantee and availability of replacement parts for the vehicle.</p>	<p>Bidders must provide appropriate documentation to indicate period the complete vehicle is under warranty; further guarantee on parts (such as engine and drive train) need be stated.</p>	•	•
General functional aspects and supply of the products			
<p><u>Quality, reparability, fitness for use and ergonomics</u> Vehicles and parts must meet national, international quality standard or equivalent regarding serviceability (e.g. safety, ergonomics).</p>	<p>Bidders must provide the appropriate documentation to demonstrate compliance with these standards.</p>	•	
<p><u>Maintenance</u> Vehicles need to have detailed operation and maintenance instructions.</p>	<p>Bidders must provide information regarding operation and maintenance. They must also identify affiliated institutions in the country of intended operation that can perform maintenance to standard and keep vehicle warranty intact.</p>	•	•
<p><u>Recycling and re-use</u> Vehicles and their parts are to be recyclable or adequate for reuse. The components must be made of materials that can be easily separated for recycling purposes.</p>	<p>Bidders must provide appropriate documentation to demonstrate recycling, refurbishment and reuse strategies in place.</p>	•	•

Sustainability criteria	Verification	Basic	Advanced
<p><u>Vehicle Air Conditioning (ac)</u> Refrigerants used in vehicle ac units are a potential source of ozone depleting substances and also very high Global Warming Potential (GWP) fluids. Fugitive emissions from these ac units are hard to control, but the choice of a more ozone and climate friendly working fluid for an ac is available.</p>	<p>Bidders must state the type of refrigerant used in the ac unit supplied. CFCs are banned , HCFCs are a better option of refrigerant and HFOs are even better. Some manufacturers have started using compressed CO₂, this is by far the most benign option.</p>	<p align="center">•</p>	<p align="center">•</p>
Fuel type and economy			
<p><u>Clean Fuels</u> Vehicles purchased are to use clean fuels and fuels that meet the engine requirements (e.g. octane and cetane standards and % bio fuel content)</p>	<p>Most modern vehicles require clean fuels to operate. These include low-sulphur diesel and unleaded gasoline. Bidders to ascertain that their vehicles are compatible with clean fuels and bio fuels. Octane and cetane standards for proper engine function need to be outlined by bidders. All gasoline vehicles should be able to cope with 10 % bio ethanol. The use of bio diesel up to 100 % mix should also be verified</p>	<p align="center">•</p>	<p align="center">•</p>
<p><u>Fuel Economy</u></p>	<p>Bidders should provide information on the efficiency of their vehicles, also known as fuel economy. This is expressed as kilometres per litre, or litres per 100 kilometres or even as miles per gallon. Fuel efficiency figures should be given for both city and highway driving. Checking this information against independent testers of the vehicle such as the US EPA or the FIA Foundation is a good idea.</p>	<p align="center">•</p>	<p align="center">•</p>

Sustainability criteria	Verification	Basic	Advanced
Tail-pipe emissions			
<p><u>Emission Control Technology Gasoline Vehicles</u></p> <p>For gasoline vehicles, a catalytic converter is more or less standard; catalytic converters are only removed for shipment to countries where leaded gasoline is used</p>	<p>Bidders should state what sort of emission control technology are pre-fitted on their vehicles. Note that emission control devices have a life span and require clean fuels (such as low-sulphur diesel and unleaded gasoline) to operate. Bidders should outline the fuel specifications needed for specific devices. Emission tests can be carried out to determine if the emission control device is functioning properly.</p>		•
<p><u>Emission Control Technology Diesel Vehicles</u></p> <p>For diesel vehicles aftertreatment technology is not always supplied. Where possible Fleet managers should insist on emission control technology.</p>	<p>Bidders should state what sort of emission control technology are pre-fitted on their vehicles. Note that emission control devices have a life span and require clean fuels (such as low-sulphur diesel) to operate. Bidders should outline the fuel specifications needed for specific devices. Emission tests can be carried out to determine if the emission control device is functioning properly.</p>	•	•
<p><u>Vehicle Emission Profiles</u></p> <p>Tail-pipe emissions of various gaseous pollutants should be expressed by individual pollutant and/or as meeting certain available standards.</p>	<p>Bidders shall indicate the tail-pipe emissions for vehicle models or the equivalent standard met (e.g. Euro IV, of US Tier 2...)</p> <p>Emissions of gaseous pollutants are generally expressed as grams/ km driven.</p>	•	•

Sustainability criteria	Verification	Basic	Advanced
Social criteria: Production according to international labour standards			
<p><u>Production of the product according to international labour standards, self-declaration</u></p> <p>The bidder shall provide proof that the producers and manufacturers of the vehicle pieces comply with the international working standards (ILO Core Conventions) listed below throughout the whole supply chain. The supply chain includes producers and manufacturers of all vehicles and parts that are the subject of this contract. Furthermore it includes contracted labour (contract manufacturers) that may design, market, manufacture and/or provide goods and services that are used to manufacture and supply the final product.</p> <ul style="list-style-type: none"> ▪ Freedom of Association and Protection of the Right to Organise (No. 87) ▪ Right to Organise and Collective Bargaining (No. 98) ▪ Forced Labour (No. 29) ▪ Abolition of Forced Labour (No. 105) ▪ Discrimination (Employment and Occupation) (No. 111) ▪ Equal Remuneration (No. 100) ▪ Minimum Age (No. 138) ▪ Worst Forms of Child Labour (No. 182) 	<p>The bidder is required to submit appropriate proof that these requirements have been met, such as a written <u>self-commitment/declaration</u> (such as a current industry code of conduct declaration</p>	<p>•</p>	

Sustainability criteria	Verification	Basic	Advanced
<p><u>Production according to international labour standards, independent third party certified</u></p> <p>The bidder shall provide proof from an independent third party certification body that the manufacturer of the product complies with the international working standards (ILO Core Conventions) throughout the whole supply chain listed below. The supply chain includes producers and manufacturers of all vehicle pieces that are the subject of this contract. Furthermore it includes contracted labour (contract manufacturers) that may design, market, manufacture and/or provide goods and services that are used to manufacture and supply the final product.</p> <ul style="list-style-type: none"> ▪ Freedom of Association and Protection of the Right to Organise (No. 87) ▪ Right to Organise and Collective Bargaining (No. 98) ▪ Forced Labour (No. 29) ▪ Abolition of Forced Labour (No. 105) ▪ Discrimination (Employment and Occupation) (No. 111) ▪ Equal Remuneration (No. 100) ▪ Minimum Age (No. 138) ▪ Worst Forms of Child Labour (No. 182) 	<p>The bidder is required to submit independent third party verification that the requirements are met.</p>		<p align="center">•</p>
Written corporate environmental policy			
<p>The bidder and the manufacturer of the final product(s) are required to demonstrate the existence and public availability of a written corporate environmental policy, consistent with ISO 14001 (International Organisation for Standardisation), or equivalent.</p>	<p>Proof of compliance is the written corporate environmental policy, consistent with ISO 14001 (International Organisation for Standardisation), or equivalent.</p>	<p align="center">•</p>	



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Sustainability criteria	Verification	Basic	Advanced
Operational, third-party certified, environmental management system			
<p>The bidder shall provide certificates from the manufacturer(s) that they and all companies throughout the whole product supply chain engaged in the design or manufacture of the product have an operational, third-party certified, environmental management system such as ISO 14001, European EMAS, U.S. EPA Performance Track or equivalent.</p>	<p>The bidder is required to provide certificates for all the companies in the supply chain of the third-party certified environmental management system such as ISO 14001, European EMAS, U.S. EPA Performance Track or equivalent .</p>		<ul style="list-style-type: none"> •

Sustainability criteria	Verification	Basic	Advanced
Fundamental labour standards (For systems contracts only)			
<p><u>Production of the product according to international labour standards, self-declaration</u></p> <p>The contractor shall ensure that the producers and manufacturers of the vehicle pieces comply with the international working standards (ILO Core Conventions) listed below throughout the whole supply chain during the term of the contract. The supply chain includes producers and manufacturers of all vehicle pieces that are the subject of this contract. Furthermore it includes contracted labour (contract manufacturers) that may design, market, manufacture and/or provide goods and services that are used to manufacture and supply the final product.</p> <ul style="list-style-type: none"> ▪ Freedom of Association and Protection of the Right to Organise (No. 87) ▪ Right to Organise and Collective Bargaining (No. 98) ▪ Forced Labour (No. 29) ▪ Abolition of Forced Labour (No. 105) ▪ Discrimination (Employment and Occupation) (No. 111) ▪ Equal Remuneration (No. 100) ▪ Minimum Age (No. 138) ▪ Worst Forms of Child Labour (No. 182) 	<p>Upon demand the contractor is required to submit appropriate proof that these requirements have been met. A <u>self-commitment/declaration</u> that the requirements are met together with documentary support of the implementation and monitoring of measures will deem to comply.</p>	<p align="center">•</p>	
Transport (For systems contracts only)			
<p>The contractor shall calculate annually the amount of CO₂ emissions caused directly by the transportation of products supplied for the contract, and report this information to the contracting organisation.</p> <p>By the end of the contract, the contractor shall demonstrate the efforts made of trying to reduce the emissions of CO₂ through transportation of products.</p>	<p>Report shall be provided annually by the contractor calculating the CO₂ emissions from transportation of products for the contract. A final report indicating reduction measures undertaken shall be submitted before the end of the contract.</p>	<p align="center">•</p>	

Sustainability criteria	Verification	Basic	Advanced
Exclusion criteria ¹			
<p><u>Exclusion Criteria</u></p> <p>Bidders shall be excluded from taking part in a contract if they:</p> <ul style="list-style-type: none"> ▪ Have been found guilty of grave professional misconduct, including non-compliance with environmental legislation, proven by any means which the contracting authorities can demonstrate; or ▪ Have not fulfilled obligations relating to the payment of social security contributions in accordance with the legal provisions of the country in which he/she is established or with those of the country of the contracting authority. 	<p>Bidders must provide a declaration that they meet this criterion. Upon request, they may be asked to provide documentary proof to support this declaration.</p> <p>N.B. The exclusion criteria are not meant to supersede UN procurement guidelines. They are to supplement and help the procurer in identifying a suitable supplier. As such, the exclusion criteria here are only to provide ease of analysis to choose between the many automobile companies and manufacturers</p>	•	•

1.1. IMPLEMENTATION NOTES

1. Materials used for the products. Recycled metal can typically account for up to 90% of a new vehicle metal content, especially if its aluminium. Typically up to 82 % of material in a vehicle (by weight) is recycled.
2. General functional aspects and supply of the products. Quality standards that either refer to or are line with international or European standards such as ISO and EN standards are usually in place at the national/federal level of each country.
3. Fuel type and economy. Clean Fuels: Fuel adulteration is a common problem in developing countries. Apart from leading to issues with vehicle operation, the use of the wrong fuel may also lead to the redundancy of the vehicle warranty. Some old refineries in developing countries produce gasoline and diesel that do not meet the minimum octane/cetane standards for today's vehicles. Please note that although the emission amounts of carbon dioxide per kilometre drive (stated as g/km) is not listed explicitly as a criterion, it is implied and is inversely proportional to the fuel efficiency (stated as km/litre) of the vehicle; essentially, the better the vehicle fuel economy, the less carbon dioxide (a Green House Gas) it emits per kilometre driven.

¹ See 1.1 *Implementation Notes* for more information on how to use this criteria

4. Exclusion criteria. Where appropriate, the contracting authorities should ask bidders to supply relevant documents and, where they have doubts concerning the personal situation of a bidder, they may seek the cooperation of the competent authorities in the particular country. The exclusion of such economic operators should take place as soon as the contracting authority has knowledge of a judgement concerning such offences. If national law contains provisions to this effect, non-compliance with environmental legislation or legislation on unlawful agreements in public contracts which has been the subject of a final judgement or a decision having equivalent effect may be considered an offence concerning the professional conduct of the economic operator concerned or grave misconduct.
5. Contract review and award: contract clauses. Disposal: A take-back system is an effective way to guarantee the recycling of products, however its effectiveness would depend on the recycling options available to suppliers regionally. Therefore, it is recommended that the purchaser make an assessment prior to beginning the purchasing or tendering process to obtain information from potential suppliers about take-back schemes.

2. INFORMATION SOURCES

- Automotive Life Cycle Economics and Replacement Intervals, David V. Spitzley, Darby E. Grande, Timothy Gruhl, Gregory A. Keoleian and James C. Bean, Center for Sustainable Systems, 2004
- Life Cycle Assessment of Vehicle Fuels and Technologies, Ben Lane, Ecolane Transport Consultancy, London Borough of Camden, March, 2006
- The Health Effects Institute, <http://www.healtheffects.org/>
- Opening the Door to Cleaner Vehicles in Developing and Transition Countries: The Role of Lower Sulphur Fuels, Report of the Sulphur Working Group of the Partnership for Clean Fuels and Vehicles (PCFV), 2007
- United States Environment Protection Agency (US EPA) <http://www.epa.gov/air/urbanair/>
- Detailed Assessment of Air Quality in Salford, Salford City Council, 2001
- Vehicle Emission Factors, Danish Environmental Protection Agency, <http://www2.mst.dk/>
- World Wide Emission Standards, Passenger Cars and Light Duty Trucks, Delphi, 2009
- UNEP/TNT Toolkit for Clean Fleet Strategy Development, Partnership for Clean Fuels and Vehicles, <http://www.unep.org/tnt-unep/toolkit/>
- A Balanced Approach to Octane Replacement, L. Khean, Asian Clean Fuels Association, May 2006
- Worldwide Fuel Charter, 4th Edition, Engine Manufacturers Association (EMA), Alliance for Automobile Manufacturers, Japanese Automobile Manufacturers Association (JAMA), European Automobile Manufacturers Association (ACEA), 2006
- Wikipedia, European emission standards
http://en.wikipedia.org/wiki/European_emission_standards



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- Internet sources
 - www.autoalliance.org/recycling_facts.htm
 - Ford Motor Corp.
 - www.ford.com/en/goodWorks/environment/recycling/vehicleRecycling.htm

3. ANNEX

This Annex provides additional information to assist procurers in addressing sustainability aspects in both competitive tendering and selection of products.

It includes:

- An example weighting matrix for the evaluation of competing bids, and the final awarding of the contract taking into account sustainability criteria
- A checklist for pre-assessment of vehicles.

3.1. EXAMPLE WEIGHTING MATRIX

In the evaluation of bids complying with the technical specifications, the sustainability criteria outlined above should be given a weighting of at least 20%.

*[This text should be included as an annex in tender documents. Please note that only the comprehensive evaluation criteria are included as an example below.]*²

SUSTAINABILITY OF THE OFFERED PRODUCTS & SERVICES
(BONUS POINTS/ WEIGHTING OF CRITERIA)

Sustainability evaluation criteria for Vehicles	Bonus points (max. 20)	Product Scoring
1. Recycled materials Percentage by weight of recycled content of in vehicle.	Maximum 10 points Over 80%: 10 points 60-80%: 8 points 40-59%: 6 points 20-39%: 4 points 1-19%: 2 points 0% recycled materials: no points	
2. Vehicle Emission Profile Bidders shall indicate the emission standard the vehicle meets or surpasses.	Maximum 10 points Euro V: 10 points Euro IV: 8 points Euro III: 6 points Euro II: 4 points Euro I: 2 points	
3. Vehicle Fuel Efficiency Bidders shall indicate the average fuel economy of the vehicle in litres per 100 kilometres driven	Maximum 10 points 5litres: 10 points 6 litres: 8 points 7 litres : 6 points 8 litres: 4 points 10 litres : 2 points Above 10 litres per 100 Km: 0 points	
SUM		

² The following evaluation criteria should be considered alongside other evaluation criteria such as price and quality.

3.2. CHECKLIST FOR SELECTION OF SUSTAINABLE VEHICLES

The following checklist is designed to help UN requisitioners in the preparation of product or service criteria and UN procurers when selecting potential contractors and products. It is recommended to first read the Product Sheet and the Background Report “Sustainable procurement guidelines for vehicles” as these documents explain each criterion more comprehensively.

CHECKLIST FOR SELECTION OF PRODUCTS THAT MEET SUSTAINABILITY STANDARDS

Sustainability criteria	Product scoring
A – Materials used for the products	
B - General functional aspects and supply of the products	
C - Fuel type and economy	
E - Fundamental labour standards (For systems contracts only)	