



European  
Commission

# Revision of EU GPP criteria for Transport

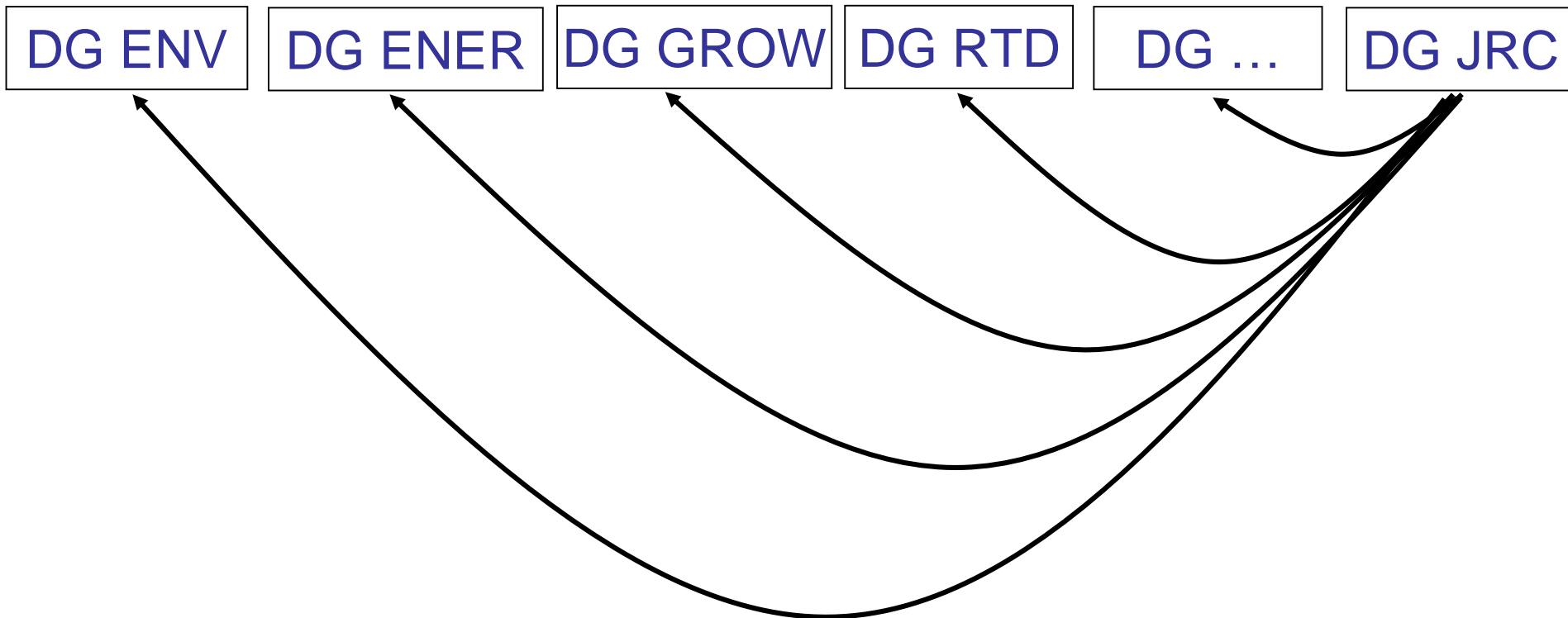
**1<sup>st</sup> Ad-hoc Working Group  
meeting  
Sevilla 23 November 2016**

**Joint Research Centre**  
the European Commission's  
in-house science service



**JRC Science Hub: [ec.europa.eu/jrc](http://ec.europa.eu/jrc)**

*Joint Research Centre in the context of the European Commission:*



# Activities in support of Product Policy

*JRC supports the development and implementation of **Sustainable Product Policies**, amongst them the EU Ecolabel Regulation, the Green Public Procurement Communication, the Ecodesign for Energy Related Products Directive and the Energy Labelling Directive.*

*The Product Bureau carries out the **analysis of a broad range of product groups and development of environmental criteria** with focus on techno-economic as well as environmental aspects.*



# EU Green Public Procurement (GPP) Policy

**European Commission**  
**Environment Directorate-General**  
**Robert Kaukewitsch**



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# EU Green Public Procurement Policy

## GPP Benefits

Decreasing GHG and hazardous substances, increasing resource and energy efficiency...

Social

Improving health and well-being...

Environmental

**GPP**

14% of GDP

Political

Increasing uptake of green technologies and products, supporting innovation...

Economic

Achieving environmental obligations, showing commitment to environment protection and sustainable consumption and production...

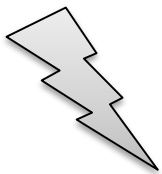


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# EU Green Public Procurement Policy

## Obstacles to GPP

- Lack of political support
- Green products are perceived to cost more
- Lack of knowledge on how to verify green criteria
- Lack of awareness of the benefits of green products
- Lack of professional workforce + time



**Commission support**

## Communication (2008)

### Public Procurement for a Better Environment

- Political **target**: **50%** of tendering procedures to be green by 2010
- Common **EU GPP criteria** for priority products and services
- Legal/operational **Guidance**
- GPP National Action Plans





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# EU Green Public Procurement Policy

## GPP is voluntary...with some exceptions

- **Energy Star Regulation (2008):** obligation to buy office equipment at least as efficient as the Energy Star standards
- **Clean Vehicles Directive (2009):** obligation to buy environmental friendly vehicles (taking at least CO<sub>2</sub>, PM10, NO<sub>x</sub> and NMHC), life cycle tool!







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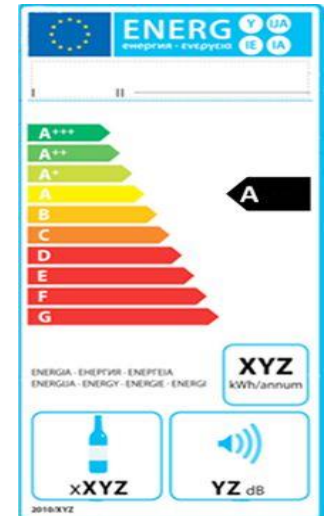
# EU Green Public Procurement Policy

## GPP is voluntary...with some exceptions

- **Energy Efficiency Directive (October 2012):**

"soft" obligation to purchase energy efficient buildings and equipment of the highest energy labelling class. ONLY FOR:

- *central government*
- *purchases above the value thresholds*
- *"insofar as this is consistent with cost- effectiveness, economic feasibility, wider sustainability, technical suitability, sufficient competition"*.





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# EU Green Public Procurement Policy

## GPP support tools

### ***GPP website of the European Commission:***

- *Full sets of EU GPP criteria and background reports in 20+ languages*
- *Buying Green Handbook **NEW!***
- *More than 100 GPP Examples*
- *News and upcoming events*

### ***HELP DESK:***

*In EN, FR, DE [gpp-helpdesk@iclei.org](mailto:gpp-helpdesk@iclei.org)*

***Newsletter (please sign up!)***





# Green Public Procurement in CE AP

- *Key role for circular economy acknowledged*
- *Special emphasis on circular economy aspects in criteria-setting*
- *Support a greater uptake of GPP criteria by public authorities, e.g. by training*
- *Commission to lead by example - in its own procurement, and by reinforcing the use of GPP in EU funding*



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# Reinforcing CE aspects in GPP criteria

## Examples

- *Replaceability and longer life-time of batteries in laptops*
- *Easy dismantling of monitors for recycling*
- *Easy repair of furniture, incl. spare part availability*
- *Encourage use of recycled materials in construction*



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# EU Green Public Procurement Policy

## 20+ EU GPP Criteria



Copying and graphic paper



Cleaning products and services



Computer and Monitors **NEW**



Office Buildings **NEW**



Transport



Furniture



Electricity



Food & Catering services



Textiles



Gardening products and services



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# EU Green Public Procurement Policy

## 20+ EU GPP Criteria



Wall panels



Water based heaters



Waste water infrastructures



Flushing Toilets &  
Urinals



Imaging Equipment



Roads **NEW**



Combined Heat &  
Power



Street lighting and traffic signals



Indoor lighting



Sanitary tapware



EEE Health care sector



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# EU Green Public Procurement Policy

## Criteria under development

- Street lighting
- Food and Catering
- Cleaning Services
- Furniture
- Textiles
- Transport
- Paints and Varnishes
- Data Centres





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# EU Green Public Procurement Policy

## Two levels of criteria

### Core criteria:

- Aim at addressing the key environmental impacts
- Require minimum additional verification effort or cost increases.

### Comprehensive criteria:

- Aim at purchasing the best environmental products available on the market
- possibly requiring additional verification efforts or a slight increase in  
cost compared to other products with the same functionality.



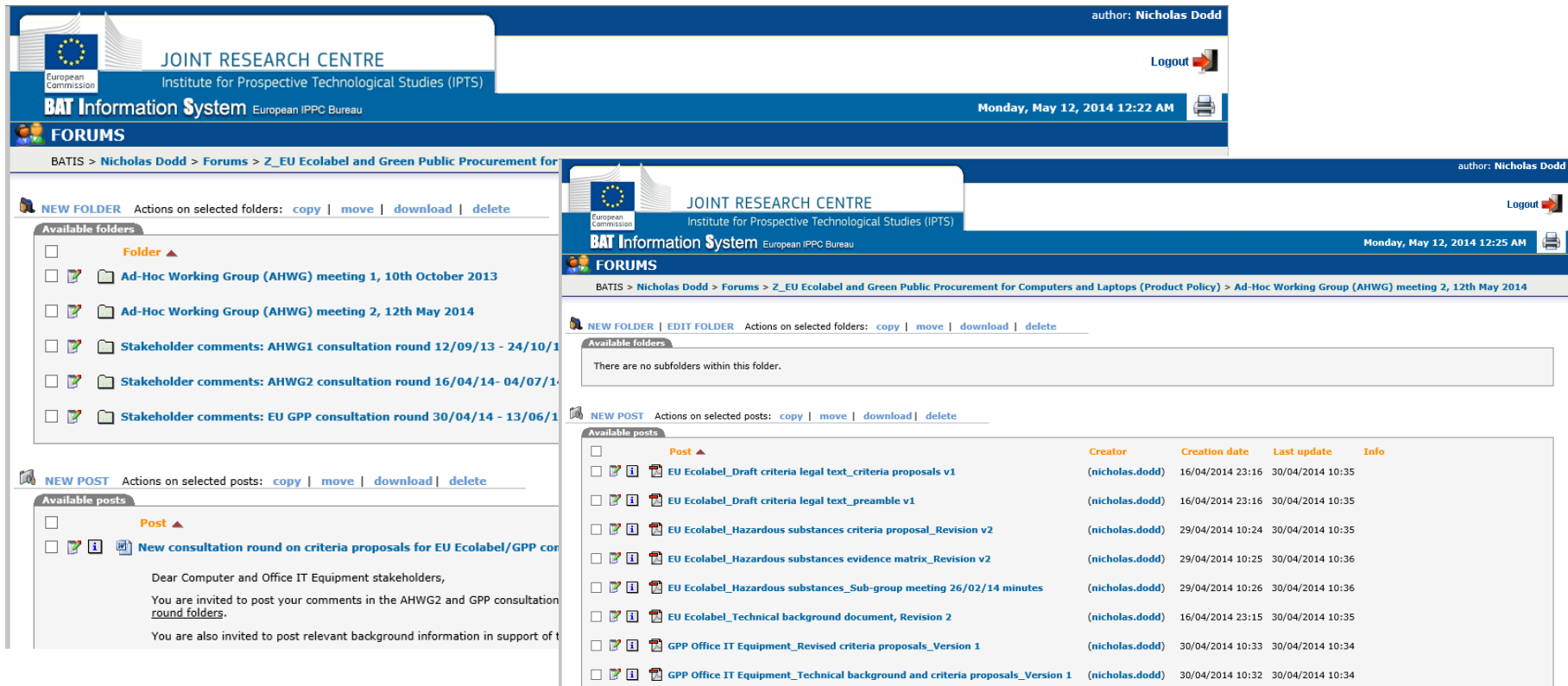
*GPP criteria are largely based on standard Type I ecolabels.  
It is however not allowed to ask for products to have  
a specific label.*





# Using the BATIS system

## Please use it to provide comments!



The screenshot displays the BATIS system interface, which is part of the Joint Research Centre's Information System. The interface is divided into several sections:

- Header:** Includes the European Commission logo, the text "JOINT RESEARCH CENTRE Institute for Prospective Technological Studies (IPTS)", and the "BAT Information System European IPPC Bureau". The author is identified as "Nicholas Dodd" and the date is "Monday, May 12, 2014 12:22 AM".
- FORUMS:** A navigation bar showing the current path: "BATIS > Nicholas Dodd > Forums > Z\_EU Ecolabel and Green Public Procurement for Computers and Laptops (Product Policy) > Ad-Hoc Working Group (AHWG) meeting 2, 12th May 2014".
- Folder Management:** A section titled "Available folders" with a list of folders:
  - Folder
  - Ad-Hoc Working Group (AHWG) meeting 1, 10th October 2013
  - Ad-Hoc Working Group (AHWG) meeting 2, 12th May 2014
  - Stakeholder comments: AHWG1 consultation round 12/09/13 - 24/10/13
  - Stakeholder comments: AHWG2 consultation round 16/04/14 - 04/07/14
  - Stakeholder comments: EU GPP consultation round 30/04/14 - 13/06/14
- Post Management:** A section titled "Available posts" with a table of posts:
 

Post	Creator	Creation date	Last update	Info
EU Ecolabel_Draft criteria legal text_criteria proposals v1	(nicholas.dodd)	16/04/2014 23:16	30/04/2014 10:35	
EU Ecolabel_Draft criteria legal text_preamble v1	(nicholas.dodd)	16/04/2014 23:16	30/04/2014 10:35	
EU Ecolabel_Hazardous substances criteria proposal_Revision v2	(nicholas.dodd)	29/04/2014 10:24	30/04/2014 10:35	
EU Ecolabel_Hazardous substances evidence matrix_Revision v2	(nicholas.dodd)	29/04/2014 10:25	30/04/2014 10:36	
EU Ecolabel_Hazardous substances_Sub-group meeting 26/02/14 minutes	(nicholas.dodd)	29/04/2014 10:26	30/04/2014 10:36	
EU Ecolabel_Technical background document, Revision 2	(nicholas.dodd)	16/04/2014 23:15	30/04/2014 10:35	
GPP Office IT Equipment_Revised criteria proposals_Version 1	(nicholas.dodd)	30/04/2014 10:33	30/04/2014 10:34	
GPP Office IT Equipment_Technical background and criteria proposals_Version 1	(nicholas.dodd)	30/04/2014 10:32	30/04/2014 10:34	
- New Post:** A section titled "New consultation round on criteria proposals for EU Ecolabel/GPP computers and laptops" with a message:
 

Dear Computer and Office IT Equipment stakeholders,  
You are invited to post your comments in the AHWG2 and GPP consultation round folders.  
You are also invited to post relevant background information in support of the consultation round folders.

# Agenda - morning

	AGENDA	SCHEDULE
	<b>Start of the AHWG</b>	<b>09:30</b>
1.	Welcome and introduction Introduction to the objectives of the EU Green Public Procurement. Timeline.	
2.	Presentation of background information and scope proposal	10.00 – 10.15
4.	Criteria proposal on Category 1 purchase, lease or rental of cars, LCVs and L-category vehicles – Part 1: GHG emissions – Technical options to reduce GHG	10.15 – 11.00
	Coffee break	<b>11:00 – 11:15h</b>
4.	Criteria proposal on Category 1 purchase, lease or rental of cars, LCVs and L-category vehicles – Part 2: Air polluting emissions - noise emissions – vehicle manufacturing – EV Battery	11.15 – 12.30
5.	Criteria proposal on Category 3 and 5 purchase or lease of buses and waste collection vehicles Part 1 – GHG emissions – Air polluting emissions – technical options to reduce GHG	12.30 -13.30
	<b>Lunch break</b>	<b>13:30 – 14:30</b>

# Agenda - afternoon

	AGENDA	SCHEDULE
	<b>Lunch break</b>	<b>13:30 – 14:30</b>
6.	Criteria proposal on Category 3 and 5 purchase or lease of buses and waste collection vehicles Part 2: Exhaust gases - noise emissions – vehicle manufacturing – EV Battery	14.30 -15.10
7.	Criteria proposal on Category 2 Mobility services	15.10 – 16.00
	Coffee break	<b>16:00 – 16:15h</b>
8.	Criteria proposal on Category 4 and 6 bus and waste collection services	16.15 – 17.15
9.	Criteria proposal on Category 7 Post, courier and moving services	17.15 – 17.45
11.	Conclusions and outlook - Wrap of the meeting	17.45 – 18.00
	<b>Close of the WG meeting</b>	<b>18.00</b>

# BACKGROUND INFORMATION AND SCOPE PROPOSAL



## MARKET ANALYSIS

Vehicle/service	Size of the EU market (annual registrations / revenue) vehicles	Proportion of which is operated/purchased by the public sector (estimates)
Passenger cars	12.5 million (2014)	3.4% (420 000 vehicles)
Light commercial vehicles	1.5 million (2014)	2.8% (43 000 vehicles)
Buses	24 000 (2014)	<b>75%</b> (18 000 vehicles)
Waste collection trucks	4 500 (2013, estimated)	<b>Nearly 100%</b> (4500 vehicles)
Post and courier services	€91 billion (2011)	No more than 5% (postal) No more than 1% (courier)
Moving services	No data	No more than 2%

- Fleets are still dominated by vehicles:
  - Using diesel and petrol
  - Euro emissions standards of Euro 4/IV or earlier.



## TECHNICAL AND ENVIRONMENTAL ANALYSIS: ENVIRONMENTAL IMPACTS

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- Main environmental impacts are related to the use phase of the vehicles. The main impacts during the use phase are the **GHG emissions, air pollutant emissions and noise**.
- Environmental impacts related to the production of energy carriers (liquid or gaseous fuels or electricity). The main environmental issues of the supply chain of energy carriers are **GHG emissions and air polluting emissions**.
- Vehicle manufacturing, which is more relevant for electric vehicles where the **battery manufacturing** is the most impacting component.
- The reduction of the environmental impact of electric vehicles during the use phase, however, outweighs the negative environmental impacts of the additional emissions in the production phase



## Scope proposal

- Category 1: Purchase, lease and rental of cars, LCVS and L-category vehicles
- Category 2: Mobility services
- Category 3: Buses: purchasing and leasing
- Category 4: Bus services
- Category 5: Waste collection vehicles: purchasing and leasing
- Category 6: Waste collection services
- Category 7: Parcel and courier services and moving services





- **Category 1) 'Procurement, lease or rental of cars, LCVs and L-category vehicles'.**

*Definitions:*

- 'Cars and LCVs': M1 and N1 vehicles, as defined by Directive 2007/46
- 'L-category' vehicles: two- or three-wheel vehicles and quadricycles as defined by Regulation 168/2013.



- **Category 2) 'Mobility services' (New!)**

*Definitions*

- Category 1 definitions
- 'Taxi services' as covered by CPV\* code 60120000-5.
- 'Cycles': Bicycles (CPV codes 34430000-0 and 34431000-7), cycle trailers, electrically power assisted cycles (CPV code 34420000-7),
- 'Light electric vehicles and self-balancing vehicles' whose specific definitions are under development by CEN/TC 354

\* CPV = Common Procurement Vocabulary (as laid down in Regulation No 2195/2002) → terms used by contracting authorities to describe the subject matter of contracts



Other definitions that help understand the concept Mobility as a service:

- Simplified car ownership: it offers their customers to share the ownership of a car with other users.
- Peer transport services: it leverages the excess of capacity (empty seats during a trip) and shares it with users. The service provider does not own the vehicles, it only provides the platform for the pairing.
- Car sharing: the service provider owns the vehicles and the platform for the pairing. The users have access to the service for a fee.
- Combined mobility services (CMS): neutral third-party, commercial offer a wide range of combined mobility options and offer it to users based on subscription and unified invoicing
- Integrated public transport systems: they aim at designing public transport in a way that it can easily integrate other mobility offers (e.g. car sharing, bike sharing, taxis, etc.).



- **Category 3) 'Buses'**

*Definitions*

- 'M2 and M3 vehicles, as defined by Directive 2007/46.

- **Category 4) 'Buses services'**

*Definitions*

- CPV code 60112000-6 (Public road transport services)
- CPV code 60130000-8 (Special-purpose road passenger-transport services) and
- CPV code 60140000-1 (Non-scheduled passenger transport)



- **Category 5) 'Waste collection vehicles'**

*Definitions*

- Vehicles of category N2 and N3, as defined by Directive 2007/46, that are designed to provide services that fall into the CPV categories of 'Refuse collection services' (CPV code: 90511000-2), 'Refuse transport services' (90512000-9) and 'Refuse recycling services' (90514000-3).

- **Category 6) 'Waste collection services'**

*Definitions*

- CPV code 'Refuse collection services' (90511000-2),
- CPV code 'Refuse transport services' (90512000-9)
- CPV code 'Refuse recycling services' (90514000-3).



- **Category 7) 'Post, courier and moving services' (New!)**

*Definitions*

- CPV Group 641 Post and courier services, with the exception of rail, airmail and mail transport over water
- CPV code 79613000-4 Employee relocation services
- CPV code 63100000-0 Cargo handling and storage services
- CPV code 98392000-7 Relocation services



## **Discussion and consultation questions**

- 1) Do you agree with the categories proposed?
- 2) Are the definitions enough for new categories of services proposed?

# EU GPP CRITERIA SET PROPOSAL FOR **CATEGORY 1 PURCHASE, LEASE OR RENTAL OF CARS, LCVS AND L-CATEGORY VEHICLES**



# PURCHASE, LEASE OR RENTAL OF CARS, LCVS AND L-CATEGORY VEHICLES

<b>GHG emissions</b>	GHG emissions
	Lower GHG emissions
	Energy efficiency
<b>Technical options to reduce GHG emissions</b>	Vehicle specific eco-driving information
	Gear shift indicators (GSI)
	Tyre Pressure Monitoring Systems (TPMS)
	Energy consumption displays
	Low viscosity lubricants
	Vehicle tyres – rolling resistance
	Speed limiter
Traffic information and route optimisation	

<b>Air polluting emissions</b>	Air polluting emissions
	Improved air polluting emissions performance
	Zero tailpipe emissions
<b>Noise emissions</b>	Tyre noise
	Vehicle noise
<b>Vehicle manufacturing</b>	Vehicle materials
	Lubricant oils
<b>EV battery</b>	Battery warranty
	Reuse of battery



## GHG EMISSIONS

### Option 1

#### TS1: Type-approval CO2 value

**Core:** According to the vehicle's technical sheet, type approval CO2 emissions for vehicles shall not exceed the following values:

#### Small car

2018	85 CO2 g/km
2019	81
2020	77
2021	74

#### Large car

2018	106 CO2 g/km
2019	101
2020	96
2021	92

#### Mid-size car

2018	93 CO2 g/km
2019	89
2020	85
2021	81



## GHG EMISSIONS

### TS1: Type-approval CO2 value

#### Small LCV (N1 class I)

2018	102 CO2 g/km
2019	99
2020	97

#### Mid-size LCV (N1 class II)

2018	144 CO2 g/km
2019	141
2020	138

#### Large LCV (N1 class III)

2018	163 CO2 g/km
2019	159
2020	156

#### Comprehensive:

According to the vehicle technical sheet, type-approval CO2 emissions for vehicles shall not exceed 50 g/km.

L-category vehicles shall be electric.

#### Verification (both core and comprehensive):

The tenderer shall provide the technical sheet of the vehicle where the type approval CO2 emissions are stated.



## GHG EMISSIONS

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### **AC1. Lower CO2 emissions (core and compr.)**

Points will be awarded to vehicles presenting lower type approval CO2 emissions than those required in TS1, in proportion to the reduction achieved.

#### **Verification:**

See above TS1

### **AC2 Energy efficiency (compr.)**

For BEV, points will be awarded to those vehicles with higher energy efficiency expressed in kWh/100km NEDC test procedure

#### **Verification:**

The tenderer shall provide the technical sheet of the vehicle where the energy efficiency is stated.



## GHG EMISSIONS

### Option 2

#### TS1: WTW CO2 emissions

**Core:** WTW CO2 emissions of vehicles shall not exceed the following values:

#### Small car

2018: 101 CO2 g/km  
2019: 96  
2020: 88  
2021: 88

#### Large car

2018: 126 CO2 g/km  
2019: 120  
2020: 114  
2021: 109

#### Mid-size car

2018: 110 CO2 g/km  
2019: 106  
2020: 101  
2021: 96



## GHG EMISSIONS

### TS1: WTW CO2 emissions

#### Small LCV (N1 class I)

2018: 123 CO2 g/km  
2019: 120  
2020: 117

#### Mid-size LCV (N1 class II)

2018: 174 CO2 g/km  
2019: 171  
2020: 167

#### Large LCV (N1 class III)

2018: 197 CO2 g/km  
2019: 192  
2020: 189

#### Comprehensive:

WTW CO2 emissions of vehicles shall not exceed the following values:

Vehicle type	WTW CO2 g/km
Small	80
Mid-size	85
Large-size	90

L-category vehicles shall be electric.

#### Verification (both core and comprehensive):

The tenderer shall provide the technical sheet of the vehicle where the CO2 emissions and the energy consumption are stated.



## GHG EMISSIONS

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### **AC1. Lower WTW CO2 emissions (core and compr.)**

Points will be awarded to vehicles presenting lower WTW CO2 emissions than those required in TS1, in proportion to the reduction achieved.

#### **Verification:**

See above TS1



## GHG EMISSIONS

### WTW methodology

The WTW emissions will be calculated by multiplying the CO2 type approval by the following factors:

<b>Fuel / energy carrier</b>	<b>Factor*</b>	<b>Reference</b>
Petrol	1.188	JEC report
Diesel	1.210	JEC report
LPG	1.123	JEC report
CNG	1.066	JEC report
Electricity g CO2eq/Wh	0.384	MEErP
H2 from NG steam reforming gCO2eq/MJf	115.2	JEC report
H2 from electrolysis with EU electricity mix gCO2eq/MJf	254.4	JEC report

\* For petrol, diesel, LPG and CNG, the factor shall be applied to the type approval TTW CO2 emissions value; for electricity and hydrogen to the type approval energy consumption expressed in MJf or Wh for electricity.





## GHG EMISSIONS

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### **Rationale (1/2)**

- Annually declining CO<sub>2</sub> values to take account of the reduction path towards meeting the targets set by regulations
- Core levels are based on expected emission levels of the 5 (LCVs) or 10 (petrol cars) best in class models on the market
- For the comprehensive criteria, the CO<sub>2</sub> values are set at the level that can be met by PHEVs (plug-in hybrid electric vehicles) and REEVs (range extender electric vehicles).
- In the case of BEVs (battery electric vehicles) and fuel cell electric vehicles, tailpipe emissions are zero.
- Number of car and LCV segments has been limited to three which should be sufficient



## GHG EMISSIONS

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### **Rationale (2/2)**

- Thresholds are defined in terms of NEDC CO<sub>2</sub> values, based on CO<sub>2</sub> regulations and targets.
- Alternatively criteria could be translated into WTW emissions
- WTW emission values would then need to be set for each fuel/energy carrier at EU level, together with a formula to calculate the WTW emissions: more complex and not in line with CO<sub>2</sub> regulations.
- As an offset, it would provide a technology-neutral approach and set a level-playing field for all technologies
- ✓ **Option 1: tailpipe CO<sub>2</sub>**
  - **TS+AC: Type approval CO<sub>2</sub> emissions**
  - **AC: Energy efficiency of BEVs**
- ✓ **Option 2: WTW CO<sub>2</sub>**
  - **TS+AC: WTW CO<sub>2</sub> emissions**



## GHG EMISSIONS

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### Discussion and consultation questions

- 1) Should the CO<sub>2</sub> values in the core criteria distinguish petrol and diesel cars?
- 2) Should the vehicle sizes be better defined? Should the thresholds be made proportional to the mass, as for the CO<sub>2</sub> targets?
- 3) Are the values proposed under the core criterion sufficiently ambitious?
- 4) The comprehensive criterion aims to stimulate the purchase or lease of BEVs, PHEVs and REEVs, rather than having a separate criterion for 'alternative fuels'. Do you agree with this approach?
- 5) Do stakeholders see any need for and ways to incorporate WTW emissions in relation to the required verification of the use of alternative fuels without increasing administrative costs unacceptably?



## TECHNICAL OPTIONS TO REDUCE GHG EMISSIONS

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### **TS3 (core and compr): Vehicle specific eco-driving information**

Cars/LCVs shall be equipped with **information/ instructions on eco driving** relevant to the vehicle. (In case of hybrid and electric vehicles) They shall include information on the use of the **regenerative braking** in order to save energy. For Plug-in Hybrid Electric Vehicles and Range Extender Electric Vehicles, they shall provide **specific instructions** to maximize the kilometres driven electrically

*Note: the compr. criterion is specifically worded for electric and plug –in hybrid vehicles since the TS1 will select these technologies.*

### **TS4 (core): Gear shift indicators**

In case of LCVs, the vehicle offered shall be equipped with a gear shift indicator.

*Note: this criterion is not relevant for electric and plug-in hybrid vehicles, so it is not part of the core criterion.*

### **Verification:**

The tenderer shall provide the technical sheet of the vehicle where this information is stated.



## TECHNICAL OPTIONS TO REDUCE GHG EMISSIONS

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### **TS5 (core and compr.): Tyre Pressure Monitoring Systems (TPMS)**

In case of LCVs, the vehicle offered shall be equipped with tyre pressure monitoring systems (TPMS).

### **TS6 (core and compr.): Energy consumption display**

The vehicles shall be equipped with a mechanism to display to the driver fuel consumption figures.

### **TS7 (core and compr.): Low viscosity lubricant oils**

The vehicles shall use low viscosity engine lubricant oils (LVL). LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.

### **Verification:**

TS5/TS6: The tenderer shall provide the technical sheet of the vehicle where this information is stated.

TS7: The tenderer shall provide the technical sheet of the vehicle where the proposed lubricants are recommended.



## TECHNICAL OPTIONS TO REDUCE GHG EMISSIONS

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### **TS8 (core and compr.): Vehicle tyres/rolling resistance**

The **rolling resistance** for both new and retreaded tyres, expressed in kg/tonne shall comply with the **highest fuel energy efficiency class**, as defined by Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters. The rolling resistance of tyres shall be **tested according to the Annex I of Regulation (EC) No 1222/2009**. This requirement shall **not prevent** the public authority from purchasing tyres with the highest **wet grip class where justified by safety**.

#### **Verification:**

The tenderer shall provide the technical sheets of the tyres where this information is stated, together with the test reports according to Annex I of Regulation (EC) No 1222/2009.



## TECHNICAL OPTIONS TO REDUCE GHG EMISSIONS

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### **AC6 (core): Speed limiter**

Points will be awarded to those vehicles equipped with a speed limiting device.

### **TS9 (compr.): Speed limiter**

The vehicle shall be equipped with a speed limiting device.

### **AC5 (core and compr): Traffic information and route optimisation**

Points will be awarded to those vehicles equipped with **Traffic information and route optimisation systems** meant to interact with the driver providing pre-trip information services to help **avoiding congestion** and make other journey choices to **optimise the trip route**. The system shall be an **embedded system**, meaning a complete communication module, consisting of a modem and a Subscriber Identity Module (SIM), permanently integrated into the car.

**Verification:** The tenderer shall present the technical sheet of the vehicle where this information is stated



## TECHNICAL OPTIONS TO REDUCE GHG EMISSIONS

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### Rationale

- Measures that help drivers to improve their driving behaviour towards a more fuel-efficient driving style should be incentivised:
  - ➔ Vehicle specific eco-driving information
  - ➔ Gear shift indicators and tyre pressure monitoring systems
  - ➔ Energy consumption displays
  - ➔ Traffic information and route optimisation (**New!**): promote connectivity solutions embedded systems. Energy saving depends on each traffic situation → AC.
  - ➔ Speed limiters (**New!**): not as common as other on-board devices, speed limiters will be introduced as a comprehensive TS and core AC.
- Other improvement options rely on the use of specific tyres and lubricants: cost-effective measures.
- Criteria dropped:
  - ➔ GWP refrigerants: refrigerants compliant with MAC Directive perform very low GWP, no need of additional drivers.
  - ➔ Start-stop: promoted through the criteria on type approval CO2.





## TECHNICAL OPTIONS TO REDUCE GHG EMISSIONS

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### Discussion and consultation questions

- 1) To what extent can these measures be seen as core criteria and to what extent these measures should be classified as technical specifications rather than award criteria?
- 2) Do you agree with new criteria proposed?





## AIR POLLUTING EMISSIONS

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### **TS2: Air polluting emissions**

**Core:** From September 2019 onwards, all new diesel vehicles shall comply with an RDE emission performance which is at most 0.5 times higher than Euro 6 limit values (conformity factor of 1.5). Petrol vehicles need to be equipped with a Gasoline Particle Filter. From January 2021 onwards, all new diesel vehicles shall comply with an RDE emission performance which is at most 0.1 times higher than Euro 6 limit values.

**Compr.:** From September 2019 onwards, new (plug-in) diesel vehicles shall comply with an RDE emission performance which is at most 0.1 times higher than Euro 6 limit values. Petrol vehicles need to be equipped with a Gasoline Particle Filter

**Verification:**

The tenderer shall provide the technical sheet of the vehicle where this information is stated.



## AIR POLLUTING EMISSIONS

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### **AC3: Improved air polluting emissions performance**

**Core:** Points will be awarded to vehicles that have an RDE emission performance equivalent to Euro 6d (NOx conformity factor of 1.5 or lower). Points will be awarded to GDI (gasoline direct injection) vehicles that are equipped with a Gasoline Particle Filter.

### **AC4: Zero tailpipe emissions capability**

**Core:** Points will be awarded to those vehicles that can demonstrate at least 40 km of zero tailpipe emission capability, in proportion to the excess over this threshold.

*Note: this criterion would be only relevant as core criterion and not as comprehensive, since the comprehensive GHG emissions technical specification already selects zero emission capable technologies.*

**Verification:** The tenderer shall provide the technical sheet of the vehicle where this information is stated.



## AIR POLLUTING EMISSIONS

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### **Rationale**

- Euro 6c stage will be mandatory → thresholds proposed to go beyond and account for further reductions
  - For GDI cars → particulate filters
  - For diesel cars → Euro 6d RDE CF and lower
  
- A second option would be requiring zero emission capability. This is only relevant as core criterion, since the GHG emissions technical specification already selects these technologies.



## AIR POLLUTING EMISSIONS

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### **Discussion and consultation questions**

- 1) Do you agree with the exceedance factor(s) proposed for the RDE for the core criteria?
- 2) Do you agree on the criteria proposed on the gasoline particle filters?
- 3) Do you agree with the zero emissions capabilities proposed? Is the threshold proposed appropriate?



## NOISE EMISSIONS

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### **TS10 (compr.): Tyre noise**

The vehicles shall be equipped with tyres with **external rolling noise emission levels 3dB below the maximum** established in Regulation (EC) No 661/2009 Annex II Part C. This is equivalent to the top category (of the three available) of the EU tyre label external rolling noise class. The external rolling noise emissions will be **tested according to the Annex I of Regulation (EC) No 1222/2009**.

### **AC7 (core): Tyre noise**

Points will be awarded to those vehicles equipped with tyres with **external rolling noise emission levels 3dB below the maximum** established in Regulation (EC) No 661/2009 Annex II Part C. This is equivalent to the top category (of the three available) of the EU tyre label external rolling noise class. The external rolling noise emissions will be tested according to the Annex I of Regulation (EC) No 1222/2009.

**Verification:** The tenderer shall provide the technical sheets or test reports of the tyres where the external rolling noise emissions are stated.



## NOISE EMISSIONS

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### **AC8: Vehicle noise (core and compr.)**

Noise emissions in line with the **Phase 3 limits** of Regulation (EC) No 540/2014. The noise emissions will be tested according to the Annex II of Regulation (EU) No 540/2014.

**Verification:** The tenderer shall provide the technical sheets or test reports of the tyres where the external rolling noise emissions are stated.



## NOISE EMISSIONS

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### Rationale

- Vehicle noise can have significant negative impacts on the health of residents, especially in case of traffic in or nearby residential areas. The market should therefore gradually reduce the noise levels of both the tyres and vehicle.
- Tyre noise: a criterion should be an additional incentive to Regulation (EC) No 661/2009 and Regulation (EC) No 1222/2009. Only the top category of the labelling Regulation (3dB below the maximum established in Regulation) can provide an additional incentive
- Vehicle noise: Phase 1 is already achieved by 90% of the vehicles on the market. In order to promote stricter noise emissions levels the award criteria proposed should be Phase 3 at core and comprehensive levels of Regulation (EU) No 540/2014.





## NOISE EMISSIONS

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### **Discussion and consultation questions**

→ Do you agree with the ambition level proposed for both core and comprehensive levels for noise?



## CAR MANUFACTURING

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### **AC9: Vehicle materials (core and compr.)**

Points will be awarded based on the percentage by weight of

- Secondary aluminum
- Recycled thermoplastic

#### **Verification:**

The tenderer shall provide the technical sheet of the material and/comment where the information on the process production and origin of the source must be described. The percentage of recycled materials claimed shall be third party verified. Products carrying a relevant Type I Ecolabel fulfilling the criterion will be deemed to comply. Other appropriate means of proof will be the technical dossier from an independent body or a third party certified LCA.



## CAR MANUFACTURING

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### **AC10: Lubricant oils, hydraulic fluids and grease (core and compr.)**

Points will be awarded to those vehicles that are able to use:

- Regenerated lubricant oils
- Hydraulic fluids and greases that 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).

**Verification:** The tenderer shall provide the technical sheet of the vehicle where the proposed lubricants are recommended.



## CAR MANUFACTURING

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### Rationale

- The use phase dominates the environmental impact of the life cycle of vehicles; however the manufacturing phase is also relevant. In case of vehicles whose use phase emissions are strongly reduced, the manufacture can become the most relevant stage.
- **Vehicle materials:** the criterion is proposed to be revised to cover only recycled materials: secondary aluminum and recycled thermoplastics and not renewable materials to avoid sustainability risks.
- **Lubricants:** It is proposed to follow the revision process of the EU Ecolabel criteria to update the criterion of lubricants accordingly.



## CAR MANUFACTURING

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### **Discussion and consultation questions**

- 1) Do you agree on the revision of the vehicle materials criterion?
- 2) Do you think the verification proposed is feasible?



## DURABILITY AND REUSE OF THE BATTERY

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### **TS11 (core / compr.): Minimum warranty**

The tenderer shall provide a minimum warranty of the battery of **60 / 90 months** or **100 000 / 150 000 km** against capacity loss below 70%.

### **AC11: Extended warranty (core and compr.)**

Points will be awarded to those tenders offering an extension of the warranty of the minimum set by the TS.

### **AC12: Reuse of the battery (core and compr.)**

Points will be awarded to those tenderers offering a take-back system to collect the EV batteries that are no longer suitable for vehicles, and to reuse them for other purposes that require lower performance of the battery.

### **Verification:**

TS11/AC11: The tenderers shall declare that they will provide a warranty for at least 60 months (core)/90 months (compr.).

AC12: The tenderer shall present a description of the take-back system and the agreements with the users of the reused batteries.



## DURABILITY AND REUSE OF THE BATTERY

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### **Rationale**

- The LCA literature review shows that BEVs reduce their environmental impact when less battery replacement is required.
- Batteries still retain some capacity at the EoL and thus can be reused on other applications. When re-using batteries, some of the manufacturing emissions should be allocated to the second-life application, which consequently lowers overall GHG emissions of a BEV.



## DURABILITY AND REUSE OF THE BATTERY

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### **Discussion and consultation questions**

- 1) What lifetime/mileage would provide an incentive to the market?
- 2) Could you share information about systems to reuse EV batteries in place?



# EU GPP CRITERIA SET PROPOSAL FOR CATEGORY **3 PURCHASE OR LEASE OF BUSES** AND CATEGORY **5 PURCHASE OR LEASE OF WASTE COLLECTION VEHICLES**

# PURCHASE OR LEASE OF BUSES AND PURCHASE OR LEASE OF WASTE COLLECTION VEHICLES

<b>GHG emissions</b>	GHG emissions
	Lower GHG emissions
<b>Air polluting emissions</b>	Zero tailpipe emissions
<b>Technical options to reduce GHG emissions</b>	Low viscosity lubricants
	Vehicle tyres – rolling resistance
	Tyre Pressure Monitoring Systems (TPMS)
	Air conditioning

<b>Exhaust gas emissions</b>	Exhaust pipe location and auxiliary units
<b>Noise emissions</b>	Tyre noise
	Vehicle noise
<b>Vehicle manufacturing</b>	Vehicle materials
	Lubricant oils
<b>EV battery</b>	Battery warranty
	Reuse of battery



## GHG EMISSIONS

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### TS1: GHG emissions – OPTION 1

**Core:** The **vehicle** shall demonstrate WTW GHG emissions reduction of

- BUSES: 15% compared to an equivalent EURO V/VI bus (for discussion).
- **Waste Coll TRUCKS: 10% compared to an equivalent EURO VI truck (\*)**

The WTW GHG emissions will be calculated multiplying the energy consumption by the GHG emission factors in Table 4.

The contracting authority will set in the call for tender:

- 1) the test method to be used to measure the energy consumption according to recognised and validated standards, and
- 2) the WTW GHG emissions of the **vehicle** to be used as reference.

(\*) there is an error in the technical report



## GHG EMISSIONS

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### **TS1: GHG emissions – OPTION 1**

**Compr.:** The **vehicle** demonstrate WTW GHG emissions reduction of BUSES: 25% compared to an equivalent EURO V/VI bus (for discussion).

**Waste Coll TRUCKS: 20% compared to an equivalent EURO VI truck (\*)**

The WTW GHG emissions will be calculated multiplying the energy consumption by the GHG emission factors in Table 4.

The contracting authority will set in the call for tender:

- 1) the test method to be used to measure the energy consumption according to recognised and validated standards, and
- 2) the WTW GHG emissions of the **vehicle** to be used as reference.



## GHG EMISSIONS

### Verification

The tenderer shall present the **test report according to the standard**, showing the results of **energy consumption** of the bus offered. The test shall be carried out or witnessed by technical services appointed by the type-approval authority.

The tenderer shall present a **declaration of the WTW GHG emissions** using the method set above.

In the case of the use of biofuels, the tenderer shall provide the composition of the blend, the **contract(s) with supplier(s)**, their **certificates, issued by one of the voluntaries certification schemes** approved by the European Commission (<https://ec.europa.eu/energy/en/topics/renewable-energy/biofuels/voluntary-schemes>), and the description of the **dedicated supply system** that avoids the mix with non-certificated suppliers.

In the case of the use of **biogas or hydrogen**, the tenderer shall provide the **contract(s) with supplier(s)** and the description and technical specifications of the production and the **dedicated supply system**. Hydrogen produced with 100% RES electricity shall demonstrate the **on-site production of RES electricity**.



## GHG EMISSIONS

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### **AC1 Lower GHG emissions – OPTION 1**

Points will be awarded to those tenders offering a **larger WTW GHG saving** than the TS in proportion to the extra saving.

In case of **100% biofuel vehicles**, points will be awarded to those tenders that provide the contract(s) with supplier(s) of **advanced biofuels**, i.e. produced from lignocellulosic feedstocks (i.e. agricultural and forestry residues, e.g. wheat straw/corn stover/bagasse, wood based biomass), non-food crops (i.e. grasses, miscanthus, algae), or industrial waste and residue streams.

**Verification:** same as TS



## GHG EMISSIONS

### **TS1 Use of technological improvement options – OPTION 2**

The **vehicle** shall be equipped with one of the following technologies demonstrating WTW GHG emissions reduction

#### **BUSES Core:**

- Hybrid bus both diesel and natural gas.
- Full Electric and Plug-in Hybrid Electric bus
- Fuel Cell Electric bus, for specific hydrogen pathways.
- Biogas bus
- 100% Biofuel bus, provided the biofuels comply with the requirements set by the RES Directive

#### **WASTE COLL TRUCKS Core and compr.:**

- Dedicated natural gas vehicles
- Hybrid trucks, both diesel and NG
- Biogas vehicles
- 100% biofuels vehicles, provided the biofuels comply with the requirements set by the RES Directive
- Full Electric trucks
- Fuel Cell Electric trucks.



## GHG EMISSIONS

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### **TS1 Use of technological improvement options – OPTION 2**

#### **Bus Compr:**

The bus shall be equipped with one of the following technologies demonstrating WTW GHG emissions reduction

- Full Electric and Plug-in Hybrid Electric bus
- Fuel Cell Electric bus, for specific hydrogen pathways.
- Biogas bus
- 100% Biofuel bus, provided the biofuels comply with the requirements set by the RES Directive

#### **Verification:**

Same as Option 1, but without test report for energy consumption





## GHG EMISSIONS

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### AC1 Use of technological improvement options – OPTION 2

Points will be awarded to those tenders that provide the contract(s) with supplier(s) of:

- Electricity from 100% renewable electricity
- Hydrogen from 100% renewable electricity
- Biogas from municipal organic waste or manure.
- Advanced biofuels, i.e. produced from lignocellulosic feedstocks (i.e. agricultural and forestry residues, e.g. wheat straw/corn stover/bagasse, wood based biomass), non-food crops (i.e. grasses, miscanthus, algae), or industrial waste and residue streams.

**Verification:** same as TS. 100% RES electricity shall demonstrate the on-site production of RES electricity



## GHG EMISSIONS

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### **Rationale (1/8)**

- Lack of robust and comparable data and harmonised standard on energy consumption of buses
- The VECTO tool is aimed at measuring and reporting CO<sub>2</sub> emissions from heavy vehicles, and this would be used also for buses, but expected to be finished at a later stage
- UITP (International Association of Public Transport) standards: SORT, SORT for hybrid and SORT-E (for electric buses, which is still on-going) → especially designed for buses.
- SORT has been designed by UITP to measure fuel consumption in buses in a comparable way and therefore can be used in a call for tender to compare different buses



## GHG EMISSIONS

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### **Rationale (2/8)**

- Given this situation, two options are proposed:
  - Option 1 technology-neutral approach: the criterion is proposed to be based on the WTW GHG emissions, using default WTT factors for the different fuels and energy carriers.
  - Option 2 technology-specific approach: the criterion is proposed to promote directly the technologies that have been identified as improvement options in the Preliminary report.



## GHG EMISSIONS

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### **Rationale (3/8)**

#### ***Option 1: where it comes from***

- Low Emission Buses of DfT's Office of Low Emission Vehicles (OLEV) sets up a subsidies scheme to help reduce greenhouse gas (GHG) emissions from UK bus fleets
- Low Emission Bus (LEB) = one producing 15% less Well-to-Wheel (WTW) emissions compared with an equivalent Euro V diesel bus, based on a methodology developed by the LowCVP



## GHG EMISSIONS

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### **Rationale (4/8)**

#### ***Option 1: thresholds***

##### Buses

- The results on performance of the buses studied suggest that a threshold of 15% WTW GHG savings will select hybrid buses. Some hybridisation packages are quite costly, but other ones have payback periods up to 1.5 years → core level
- A threshold above 24% would choose alternative fuel powertrains and a more complex level of hybridisation → comprehensive.

##### Waste collection trucks

- The results on performance of the trucks studied suggest that a threshold of 10% WTW GHG savings will select hybrid trucks and best CNG trucks → core criterion.
- A threshold above 20% would choose full electric trucks and biogas and renewable hydrogen → comprehensive level.



## GHG EMISSIONS

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### **Rationale (5/8)**

#### ***Option 1: reference***

- Reference bus is crucial to formulate the criterion in Option 1, and based on the market data and the current rolling stock → EURO V bus of the same characteristics (same as used by LowCVP)
- For buses there must be also data from SORT and other standards to measure fuel consumption
- But coming regulations aimed at measuring and reporting CO<sub>2</sub> emissions of heavy duty vehicles will apply to new vehicles placed in the market, i.e. EURO VI vehicles, and thus, data of these buses and trucks will be available.
- For waste collection trucks: nothing similar to SORT → new truck



## GHG EMISSIONS

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### **Rationale (6/8)**

#### **Option 1: WTT factors**

- Factors are based on the joint work of JRC, EUCAR and Concawe (JEC - Joint Research Centre-EUCAR-CONCAWE collaboration, 2014), which is the most relevant reference in this field.
- Biofuels → the default value set by RES Directive as fossil fuel comparator, multiplied by 0.5, in line with the 50% saving requirement that will be in force in January 2017.
- Certificates → biofuel complies with the provisions of the RES Directive and lists the input materials used for its production.
- Electricity → the average carbon intensity over the period 2010 - 2020 recommended by the Methodology for Ecodesign of Energy-related Products (COWI; VHK, 2011).



## GHG EMISSIONS

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### **Rationale (7/8)**

#### ***Option 2: technology-specific approach***

- Direct selection technologies with lower WTW GHG emissions, according to literature review
- For fuel cell vehicles, WTW GHG saving potential heavily depends on the pathway to produce the hydrogen.
  - NG steam reforming raises some doubts: some studies show savings other ones, no.
- It is therefore proposed a provision to promote the use of renewable energy in the form of an award criterion.





## GHG EMISSIONS

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### **Rationale (8/8)**

#### ***Advanced biofuels***

- Advanced biofuels, such as those made from wastes and algae, provide GHG savings with a low risk of causing indirect land-use change, and do not compete directly for agricultural land for the food and feed markets.
- Directive (EU) 2015/1513 limits the share of biofuels from crops grown on agricultural land that can be counted towards the 2020 renewable energy targets to 7%
- IEA data (IEA, 2012) show that waste and advanced biofuels represent ~2.4 % of the total worldwide biofuels production.
- Given that the ILUC emissions are not yet quantifiable and the low market availability of advanced biofuels, it is proposed to promote the use of advanced biofuels by means of an award criterion.



## GHG EMISSIONS

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### **Discussion and consultation questions**

- 1) Which option do you think is most suitable to promote better performing technologies?
- 2) For Option 1: do you agree with the thresholds proposed? Which baseline would be more appropriate?
- 3) For Option 2: do you agree with the technologies proposed?
- 4) Which issues could hinder the use of this criteria proposal? (verification, complexity of calculation, new technology developments)



## AIR POLLUTING EMISSIONS

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### **AC2: Zero tailpipe emissions capability**

#### **Core:**

Points will be awarded to those vehicles that can demonstrate at least **2.5** km of zero emission capability, in proportion to the excess over this threshold.

#### **Comprehensive:**

Points will be awarded to those vehicles that can demonstrate at least **5** km of zero emission capability, in proportion to the excess over this threshold.

#### **Verification:**

The tenderer shall present the technical sheet of the vehicle where this information is stated



## AIR POLLUTING EMISSIONS

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### Rationale

- EURO VI ambition level is already quite difficult to beat, and only electric and hydrogen buses can reduce the emissions further, to zero tail pipe emissions.
- It is proposed to set an award criterion to promote those vehicles able to travel without emitting any air pollutant, i.e. zero tailpipe emission capable. This definition would include plug-in hybrid, pure electric and hydrogen vehicles.
- Threshold is based on the LowCVP initiative, which gives additional funding to zero tailpipe emission buses



## AIR POLLUTING EMISSIONS

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### **Discussion and consultation questions**

- 1) Do you agree with the thresholds proposed?
- 2) Are they suitable for waste collection vehicles?
- 3) Which issues could hinder the use of this criteria proposal?





## TECHNICAL OPTIONS TO REDUCE GHG

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### **TS3 (core and compr.): Lubricant oils**

Vehicles shall use low viscosity engine lubricant oils (LVL). LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.

Verification:

The tenderer shall provide the technical sheet of the vehicle where the proposed lubricants are recommended..

**Verification:** The tenderer shall provide the technical sheet of the vehicle where the proposed lubricants are recommended.



## TECHNICAL OPTIONS TO REDUCE GHG

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### **TS4 (core and compr.): Vehicle tyres – rolling resistance**

The **rolling resistance** (for both new and retreaded tyres), expressed in kg/tonne shall comply with the **highest fuel energy efficiency class**, as defined by Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters. This requirement shall not prevent the public authority from purchasing tyres with the highest wet grip class where justified by safety.

#### **Verification:**

The tenderer shall provide the technical sheets of the tyres where this information is stated, together with the test reports according to Annex I of Regulation (EC) No 1222/2009.



## CRITERION TS3/TS4/TS5/AC3 TECHNICAL OPTIONS TO REDUCE GHG

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### **TS5 (core and compr.): Tyre Pressure Monitoring Systems (TPMS)**

Vehicles equipped with tyre pressure monitoring systems (TPMS), or with sensors that enable the monitoring at the bus operator site.

#### **Verification:**

The tenderer shall provide the technical sheet of the vehicle where this information is stated.





## CRITERION TS3/TS4/TS5/AC3 TECHNICAL OPTIONS TO REDUCE GHG

### AC3. Air conditioning gases

Points will be awarded to those vehicles equipped with an air conditioning system that use a refrigerant with a **global warming potential (GWP)**, related to CO<sub>2</sub> and a time horizon of 100 years, **< 150**.

#### Verification:

The tenderer shall 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:

$$\text{GWP} = \Sigma(\text{Substance X1 \%} \times \text{GWP(X1)}) + (\text{Substance X2 \%} \times \text{GWP(X2)}) + \dots \\ (\text{Substance Xn \%} \times \text{GWP(Xn)})$$

where % is the contribution by weight with a weight tolerance of +/- 1 %.

Information on the GWP of gases can be found at:

[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)



## CRITERION TS3/TS4/TS5/AC3 TECHNICAL OPTIONS TO REDUCE GHG

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### Rationale

- **Lubricant oils:** same as for passenger cars/LCVs
- **TPMS:** A cost-effective measures with negative abatement costs and therefore proposed as core criterion.
- **Tyres – rolling resistance:** similar to passenger cars/LCVs
- **Air conditioning gases**
  - Buses, coaches and trucks are excluded from the MAC Directive but HFCs used in these systems are affected by the phase-down put in place by the F-gas Regulation → regulatory driver in place that favours the use of low GWP
  - It is proposed to lower the GWP (100 years) value from 2500 to 150 as award criterion at both core and comprehensive levels
- **Start and stop:** deleted, because already promoted through GHG emissions criteria



## TECHNICAL OPTIONS TO REDUCE GHG

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### **Discussion and consultation questions**

→ Do you agree on the wording and level of ambition of the proposal?



# Agenda - afternoon

	AGENDA	SCHEDULE
	<b>Lunch break</b>	<b>13:30 – 14:30</b>
6.	Criteria proposal on Category 3 and 5 purchase or lease of buses and waste collection vehicles Part 2: Exhaust gases - noise emissions – vehicle manufacturing – EV Battery	14.30 -15.10
7.	Criteria proposal on Category 2 Mobility services	15.10 – 16.00
	Coffee break	<b>16:00 – 16:15h</b>
8.	Criteria proposal on Category 4 and 6 bus and waste collection services	16.15 – 17.15
9.	Criteria proposal on Category 7 Post, courier and moving services	17.15 – 17.45
11.	Conclusions and outlook - Wrap of the meeting	17.45 – 18.00
	<b>Close of the WG meeting</b>	<b>18.00</b>



## EXHAUST PIPE LOCATION - BUSES

### **TS2 (core and compr.): Exhaust pipe location**

Vehicles' exhaust pipes shall not be located on the same side as the passenger door.

#### **Verification:**

The tenderer shall provide the technical sheet of the vehicle.

## **Rationale**

- The stakeholder consultation showed that there is enough support to keep this criterion. The only update proposed is including this requirement as both a core criterion and comprehensive criterion.



## AUXILIARY UNITS – WASTE COLLECTION VEHICLES

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### **TS2. (core and compr.) Pollutant emissions**

The vehicle's emissions from the separate engines for auxiliary units meet the exhaust emission limits according to Regulation (EU) No 2016/1628, Stage V.

#### **Verification:**

The tenderer shall present either a type approval certificate, or a test report from an independent laboratory according to the Regulation (EU) No 2016/1628

### **AC2. (compr.) Electrification of auxiliary engines**

Points will be awarded to those vehicles equipped with electric auxiliary units, in order to reduce noise and air polluting emissions during stationary processes.

#### **Verification:**

The tenderer shall present the technical sheet of the vehicle where this information is stated.



## AUXILIARY UNITS WASTE COLLECTION VEHICLES

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### Rationale

- The new NRMM (non-road mobile machinery) Regulation shall apply as of 1 January 2017. The NRMM Regulation defines emission limits for NRMM engines for different power ranges and applications.
- It also lays down the procedures engine manufacturers have to follow in order to obtain type-approval of their engines, but not for all models placed in the market.
- Electrification of the stationary phases of operation could reduce the need to turn on the main engine significantly and thus reduce emissions. Therefore a comprehensive criterion is added.

### Discussion and consultation questions

→ Do you agree with the proposal?



## NOISE EMISSIONS

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### **AC4 (core): Tyre noise**

Points will be awarded to those vehicles equipped with tyres with **external rolling noise emission levels 3dB below the maximum** established in Regulation (EC) No 661/2009 Annex II Part C. This is equivalent to the top category (of the three available) of the EU tyre label external rolling noise class. The external rolling noise emissions will be tested according to the Annex I of Regulation (EC) No 1222/2009.

### **TS6 (compr.): Tyre noise**

The vehicles shall be equipped with tyres with external rolling noise emission levels 3dB below the maximum established in Regulation (EC) No 661/2009 Annex II Part C. This is equivalent to the top category (of the three available) of the EU tyre label external rolling noise class.

The external rolling noise emissions will be tested according to the Annex I of Regulation (EC) No 1222/2009.

**Verification:** The tenderer shall provide the technical sheets or test results of the tyres where the external rolling noise emissions are stated,.





## NOISE EMISSIONS

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### **AC8: Vehicle noise (core and compr.)**

Noise emissions in line with the **Phase 3 limits** of Regulation (EC) No 540/2014. The noise emissions will be tested according to the Annex II of Regulation (EU) No 540/2014.

**Verification:** The tenderer shall provide the technical sheets or test reports of the tyres where the external rolling noise emissions are stated.



## CRITERION TS6/AC4/AC5 NOISE EMISSIONS

### **Rationale**

- **Tyre noise:** same rationale can be followed as for these light duty vehicles: allowing only the top class of the Tyre Labelling Directive of 3 dB less than prescribed by Regulation 661/2009.
- **Vehicle noise:** the same rationale as for cars and LCVs would apply. Phase 3 limits: commercially available according to market information



## CRITERION TS6/AC4/AC5 NOISE EMISSIONS

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### **Discussion and consultation questions**

→ Do you agree with the ambition level proposed for both core and comprehensive levels?



## VEHICLE MANUFACTURING

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### **AC6 (core and compr.): Vehicle materials**

Points will be awarded based on the percentage by weight of

- Secondary aluminum
- Recycled thermoplastic

#### **Verification:**

The tenderer shall provide the technical sheet of the material and/comment where the information on the process production and origin of the source must be described. The percentage of recycled materials claimed shall be third party verified. Products carrying a relevant Type I Ecolabel fulfilling the criterion will be deemed to comply. Other appropriate means of proof such as a technical dossier from an independent body or a third party certified LCA



## VEHICLE MANUFACTURING

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### **AC7 (core and compr.) Lubricant oils, hydraulic fluids and grease**

Points will be awarded to those vehicles that use:

- Regenerated lubricant oils
- Hydraulic fluids and greases that 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).

**Verification:** The tenderer shall provide the technical sheet of the vehicle where the proposed lubricants are recommended.



## VEHICLE MANUFACTURING

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### **Rationale**

- The same rationale as for the category 1 would apply, however, no information specific for buses has been found to properly support the proposal.
- It could be assumed that bus/trucks manufacturers, some of them also car manufacturers, do not make big distinctions between the manufacturing processes of the different products



## VEHICLE MANUFACTURING

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### **Discussion and consultation questions**

- 1) Do you agree with this proposal?
- 2) Do you know whether it should be bespoke for buses/waste collection trucks?  
In this case, what do you recommend for a tailored criterion?



## DURABILITY AND REUSE OF THE BATTERY

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### **TS7 (core /compr.) Minimum warranty**

The tenderer shall provide a minimum warranty of the battery of xx months or XX0 000km / X000 cycles within Y years. (different for core and compr.)

**Verification:** The tenderers shall declare that they will provide a warranty including the conditions set above.

### **AC8 Extended warranty**

Points will be awarded to those tenders offering an extension of the warranty of minimum set by the TS.

**Verification:** Same as TS





## DURABILITY AND REUSE OF THE BATTERY

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### **AC9 (core and compr.) Reuse of the battery**

Points will be awarded to those tenderers offering a take-back system to collect the EV batteries that are no longer suitable for vehicles, and to reuse them for other purposes that require lower performance of the battery.

#### **Verification:**

The tenderer shall present a description of the take-back system and the agreements with the users of the reused batteries.



## DURABILITY AND REUSE OF THE BATTERY

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### **Rationale**

- The same rationale as for the category 1 would apply, however, little or no information for buses has been found to properly support the proposal.
- The lifetime and mileage of buses and waste collection vehicles differ from cars and LCV, batteries are bigger and duty cycles are different, and this criterion proposal definitely needs to be adapted to buses and waste collection vehicles.



## CRITERION TS7/AC8/AC9 DURABILITY AND REUSE OF THE BATTERY

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### **Discussion and consultation questions**

- 1) Which warranty terms could be requested to the batteries used in electric buses and waste collection trucks?
- 2) Could you share information about systems to reuse EV batteries in place?

# EU GPP CRITERIA SET PROPOSAL FOR **CATEGORY 2 MOBILITY SERVICES**

# MOBILITY SERVICES

<b>Optimised vehicle use</b>	Staff training on ecodriving and environmental management
	Emission reduction plan and GHG emissions monitoring
<b>GHG emissions</b>	GHG emissions
	Lower GHG emissions
<b>Air polluting emissions</b>	Air polluting emissions
	Zero tailpipe emissions

<b>Technical measures</b>	Technical options to reduce GHG
	Noise emissions
	Vehicle manufacturing
	EV Battery
<b>Combined mobility services</b>	



## OPTIMIZED VEHICLE USE

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### **SC1 (core and compr.): Staff training on ecodriving and environmental management**

Tenderers shall have in place a **training program**, including formal written procedures, ensuring that relevant staff is sufficiently trained to provide the service **according to the environmental provisions** included in the tender.

The **management staff** involved in carrying out the service for the duration of the contract period shall:

- Be trained to **identify and evaluate** the available technologies and measures to **reduce the WTW GHG emissions and air pollutants emissions**;
- Be trained in the **monitoring and reporting procedures** of the WTW GHG emissions.



## OPTIMIZED VEHICLE USE

All **drivers** involved in carrying out the service for the duration of the contract period shall:

- be trained in a recognised institution **on environmentally-conscious driving** on a regular basis to increase fuel efficiency;
- receive **regularly information** on their fuel efficiency **performance** (at least once per month).

Adequate training, with a **minimum duration of 16 hours**, shall be provided to all **new staff** working under the contract within four weeks of starting employment and an **update** on the above points, with a minimum duration of **8 hours**, for all other staff at least **once a year**.

### **Verification:**

The tenderer shall present records of these training measures.

### **CPC1 (core and compr.) Staff training**

The service provider shall **document and report** yearly the amount (hours) and subject of training provided to each member of staff working on the contract to the contracting authority.

The yearly staff training records shall be **made available** to the contracting authority for verification purposes. The contracting authority shall foresee rules for penalties for non-compliance.



## OPTIMIZED VEHICLE USE

### **TS1 (core and compr.) Emission reduction plan and GHG emissions monitoring**

The tenderer shall provide an **emission reduction plan** with measures aimed at reducing the **WTW GHG emissions and air pollutants emissions** during the contract period. They will also provide the procedures to monitor and report progress of these measures and their impacts. The indicator used shall be **GHG emissions of the service** (applying a WTW approach), both in **total** per year and per **passenger-kilometer** or another unit that reflects the performance of the service.

**Verification:** The tenderer will present the emission reduction plan and the GHG emissions monitoring and reporting procedure applying a WTW approach.

### **CPC2 Emission reduction plan and GHG emissions monitoring**

The contractor shall implement the measures included in the emission reduction plan and monitor and report the WTW GHG emissions according to the procedure presented in their offer.

The contractor will keep records which shall be made available to the contracting authority. The contracting authority shall foresee rules for penalties for non-compliance.





## OPTIMIZED VEHICLE USE

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### Rationale

- Fuel consumption reduction in the usage phase can be limited by optimizing vehicle use by stimulating **eco-driving** and by a **critical examination of the services** to be carried out in terms of vehicles used and kilometres driven.
- The criterion for an **emission reduction plan and GHG emissions monitoring** makes that an overall emission reduction and monitoring is set up and promotes **continuous improvement**.



## CRITERION SC1/CPC1/TS1/CPC2 – OPTIMIZED VEHICLE USE

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### **Discussion and consultation questions**

- 1) Do you agree with the training proposed for both management staff and drivers?
- 2) Do you find suitable the training hours proposed?
- 3) Do you agree with the criterion on the emission reduction plan and GHG emissions monitoring?



## GHG EMISSIONS

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### **TS2: GHG emissions (core)**

#### **Cars and LCVs**

12% of the fleet to be used under the contract shall be vehicles that comply with the core TS1 of Category 1.

#### **L-category vehicles**

12% of the fleet shall be electric vehicles.

#### **Verification:**

Same as TS1 of Category 1 together with the list and technical sheets of the whole fleet.



## GHG EMISSIONS

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### **TS2: GHG emissions (compr.)**

#### **Cars and LCV**

12% of the fleet to be used under the contract shall be vehicles that comply with the comprehensive TS1 of Category 1

25% of the fleet shall be vehicles that comply with the core TS1 of Category 1.

#### **L-category vehicles**

25% of the fleet shall be electric vehicles.

#### **Verification:**

Same as TS1 of Category 1 together with the list and technical sheets of the whole fleet.



## GHG EMISSIONS

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### **AC1: Lower GHG emissions**

Points will be awarded to those tenders offering a higher percentage than the one set by the TS2 for the fleet to be used under the contract, in proportion to the excess over the TS2.

**Verification:** see TS2



## GHG EMISSIONS

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### Rationale

- Mobility services tend to use better performing cars than the average fleets.
- Based on these facts, it seems feasible to set a share of top-10 of the most fuel efficient ICEVs as defined in the core TS1 of category 1 to mobility services.
- It is proposed that 12% of the fleet complies with the core TS1 for category 1 at core level, and 25% at comprehensive level.
- The comprehensive TS of category 1 is proposed as part of the comprehensive technical specification.



## GHG EMISSIONS

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### **Discussion and consultation questions**

- 1) Do you think it is feasible to set minimum requirements on the fleet composition to ensure a proportion of low WTW GHG emissions vehicles?
- 2) Do you agree with the percentages proposed?



## AIR POLLUTING EMISSIONS

### **TS3: Air polluting emissions - Core**

#### **Option 1**

All cars and LCV used in carrying out the service shall meet at least EURO 5.

40% of cars and LCV shall meet at least EURO 6.

All L-category vehicles used in carrying out the service shall meet at least EURO 3.

25% L-category vehicles shall meet EURO 4.

### **TS3: Air polluting emissions - Core**

#### **Option 2**

The vehicles shall not be older than 4 years.

**Verification:** The tenderer shall provide the technical sheets of the vehicles to be used in carrying out the service where emission standards are defined.





## AIR POLLUTING EMISSIONS

### **TS3: Air polluting emissions - Comprehensive**

#### **Option1**

All cars and LCV used in carrying out the service shall meet meeting at least EURO 5.

60% of cars and LCV shall meet at least EURO 6.

10% of cars and LCV shall meet at least the Euro 6d-TEMP standard.

All L-category vehicles used in carrying out the service shall meet at least EURO 3. 50% L-category vehicles shall meet EURO 4.

### **TS3: Air polluting emissions - Comprehensive**

#### **Option 2**

The vehicles shall not be older than 2 years

**Verification:** The tenderer shall provide the technical sheets of the vehicles to be used in carrying out the service where emission standards are defined.



## AIR POLLUTING EMISSIONS

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### **AC2 (core and compr.): Air polluting emissions**

Points will be awarded to those tenders offering a higher percentage than the one set by the TS3 for the fleet to be used under the contract, in proportion to the excess over the TS3.

**Verification:** See above TS3

### **AC3 (core): Zero emission capability**

Points will be awarded to tenders offering a service fleet with at least 12% of vehicles that can demonstrate at least 40 km of zero tailpipe emission capability, in proportion to the excess over this threshold.

*Note: this criterion would be only relevant as core criterion and not as comprehensive, since the comprehensive GHG emissions technical specification already selects zero emission capable technologies.*

**Verification:** The tenderer shall present the specifications of the service fleet



## AIR POLLUTING EMISSIONS

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### Rationale

- Setting a minimum proportion of EURO 6 and EURO 5 might entail an increase of the replacement rate, and therefore a larger investment. Only 10% of the total fleet is below 2 years.
- However, and as said before, the average age of professional fleets are usually lower than the private ones.
- Based on market data, and given the market induced replacement of cars,
  - ➔ Option 1: a minimum percentage of 40% for core and 60% for comprehensive level.
  - ➔ Option 2: a maximum age of the fleet of 4 years for core and 2 years for comprehensive level
- An award criterion for zero emissions vehicles is proposed in line with the category 1.



## AIR POLLUTING EMISSIONS

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### **Discussion and consultation questions**

- 1) Do you think it is feasible to set minimum requirements on the fleet composition to ensure a proportion of EURO 6 and minimum EURO 5 compliance for the fleet?
- 2) Do you agree with the percentages proposed? Are they suitable for fleets used in mobility services such as car-sharing?
- 3) Do you think the option based on the fleet age is more appropriate? In this case, which thresholds do you recommend?



## CRITERIA TECHNICAL MEASURES

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### **Rationale**

- Many of the technical measures for Category 1:
  - ➔ to reduce GHG emissions, noise, vehicle manufacturing and battery-related measures
- can also be applied in mobility services, but the verification process can be burdensome.
- Therefore, it is proposed that the public procurer can choose which criteria to request from the Category 1, adapted to the service, the fleet dimensions, the duration of the contract, etc.

### **Discussion and consultation questions**

- ➔ Do you agree on the proposal to apply these sets of criteria based on the needs of the service?



## COMBINED MOBILITY SERVICES

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### **AC14: Combined mobility services**

**Option 1:** Points will be awarded to those tenders that provide ad hoc solutions to each mobility need requested within the distance specified in the call for tender, taking into account the travel distance, the number of travelers, the purpose of the trip, the available infrastructures, and any other circumstance relevant to optimize the mobility solution.

**Option 2:** Points will be awarded to those tenders that provide mobility packages adapted to the different travel categories included in the call for tender.

#### **Both options:**

- 1) The tenderer shall ensure the prioritization of the non-motorised vehicles and public transport modes in the planning of the mobility solutions.
- 2) The tenderer shall offer a sufficient level of multi and intermodality to ensure 1). This will include bikes, e-bikes, public transport, ride-sharing, car sharing, taxi services, L-category vehicles.

If part of the call for tender, the tenderer shall fulfil the provisions of the staff travel plan



## COMBINED MOBILITY SERVICES

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### **AC14: Combined mobility services**

#### **Verification:**

**Option 1:** the tenderer shall present a description of the planning and decision-making process to optimise the ad hoc solutions to different travel scenarios.

**Option 2:** the tenderer shall present a description of the mobility packages offered.

Both options: The tenderer will present the contracts of the different suppliers and the partnership agreements with public transport operators and other fleet operators.



## CRITERION AC14 – COMBINED MOBILITY SERVICES

### Rationale

- The combined mobility services (CMS) offer a wide range of combined mobility options which might include public transport and bikes rental. This could be used as a way to promote the **modal shift** towards non-motorised and public means of transport.
- The mobility solutions should be designed to **reduce the ratio energy consumed per distance and travel**, prioritising the non-motorised vehicles and public transport modes.
- The level of **multi and intermodality** is a crucial element to meet the travel demand in the most efficient way





## CRITERION AC14 – COMBINED MOBILITY SERVICES

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### **Discussion and consultation questions**

- 1) Since these mobility solutions are not so common, do you agree with the definition of this award criterion to be part of mobility service criteria set?
- 2) Do you agree with the approach for stimulating the modal shift?



# EU GPP CRITERIA SET PROPOSAL FOR CATEGORY 4 **BUS SERVICES** AND CATEGORY 6 **WASTE COLLECTION SERVICES**

# BUS SERVICES AND WASTE COLLECTION SERVICES

<b>Optimised vehicle use</b>	Staff training on ecodriving and environmental management
	Emission reduction plan and GHG emissions monitoring
<b>GHG emissions</b>	GHG emissions
	Lower GHG emissions
<b>Air polluting emissions</b>	Air polluting emissions
	Zero tailpipe emissions

<b>Technical measures</b>	Technical options to reduce GHG
	Noise emissions
	Vehicle manufacturing
	EV Battery
<b>Integrated public transport system</b>	
<b>Route optimisation</b>	



## OPTIMIZED VEHICLE USE

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### **SC1 (core and compr.): Staff training on ecodriving and environmental management**

Tenderers shall have in place a **training program**, including formal written procedures, ensuring that relevant staff is sufficiently trained to provide the service according to **the environmental provisions** included in the tender.

The management staff involved in carrying out the service for the duration of the contract period shall:

- Be trained to identify and evaluate the available technologies and measures to reduce the WTW GHG emissions and air pollutants emissions;
- Be trained in the monitoring and reporting procedures of the WTW GHG emissions.



## OPTIMIZED VEHICLE USE

All drivers involved in carrying out the service for the duration of the contract period shall:

- be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency;
- receive regularly information on their fuel efficiency performance (at least once per month).

Adequate training, with a minimum duration of 16 hours, shall be provided to all new staff working under the contract within four weeks of starting employment and an update on the above points, with a minimum duration of 8 hours, for all other staff at least once a year.

### **Verification:**

The tenderer shall present records of these training measures.

### **CPC1 (core and compr.) Staff training**

The service provider shall document and report yearly the amount (hours) and subject of training provided to each member of staff working on the contract to the contracting authority.

The yearly staff training records shall be made available to the contracting authority for verification purposes. The contracting authority shall foresee rules for penalties for non-compliance.



## OPTIMIZED VEHICLE USE

### **TS1 (core and compr.) Emission reduction plan and GHG emissions monitoring**

The tenderer shall provide an emission reduction plan with measures aimed at reducing the WTW GHG emissions and air pollutants emissions during the contract period. They will also provide the procedures to monitor and report progress of these measures and their impacts. The indicator used shall be GHG emissions of the service (applying a WTW approach), both in total per year and per passenger/tonne-kilometer or another unit that reflects the performance of the service.

**Verification:** The tenderer will present the emission reduction plan and the GHG emissions monitoring and reporting procedure applying a WTW approach.

### **CPC2 Emission reduction plan and GHG emissions monitoring**

The contractor shall implement the measures included in the emission reduction plan and monitor and report the WTW GHG emissions according to the procedure presented in their offer.

The contractor will keep records which shall be made available to the contracting authority. The contracting authority shall foresee rules for penalties for non-compliance.



## OPTIMIZED VEHICLE USE

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### Rationale

→ The same rationale applies to all services.

### Discussion and consultation questions

- 1) Do you agree with the training proposed for both management staff and drivers?
- 2) Do you find suitable the training hours proposed?
- 3) Are there any specific characteristic of bus/waste collection service that requires a tailored wording of these criteria proposal?



## GHG EMISSIONS

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### **TS2 (core and compr.) GHG emissions**

Core: 12% of the fleet to be used under the contract shall be vehicles that comply with the core TS1 of category 3.

Compr. 25% of the fleet to be used under the contract shall be vehicles that comply with the core TS1 of category 3.

**Verification:** same as TS1 of category 3 together with the list and technical sheets of the whole fleet.

### **AC1. GHG emissions**

Points will be awarded to the fleet to be used under the contract with proportion of vehicles (%) larger than TS2, in proportion to the excess over the TS2.

**Verification:**

See above TS2





## GHG EMISSIONS

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### Rationale

- The Preliminary report showed that the hybrid technologies are all commercially available and should be seen as a first stage of electrification of the EU fleet, with payback times up to 1.5 years,
- The alternative fuels powertrains are more costly, but could lead to larger GHG emissions savings.
- The criteria proposal should reflect the market situation, setting higher ambitions at the comprehensive level.



## GHG EMISSIONS

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### **Discussion and consultation questions**

- 1) Do you think it is technically and economically feasible to set minimum requirements on the fleet composition to ensure a proportion of environmentally better performing technologies?
- 2) Would it be more appropriate to set a minimum GHG saving on the average GHG emissions of the fleet?



## AIR POLLUTING EMISSIONS

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### **TS3 (core and compr.) Air Polluting Emissions**

**Core:** All vehicles used in carrying out the service shall meet at least EURO V. 40% of vehicles shall meet EURO VI.

Where vehicles are not certified as meeting EURO V or higher, but technical after-treatment has achieved the same standard, this should be documented in the tender.

**Compr.:** All vehicles used in carrying out the service shall meet at least EURO V. 60% of vehicles shall meet EURO VI.

Where vehicles are not certified as meeting EURO V or higher, but technical after-treatment has achieved the same standard, this should be documented in the tender.

**Verification:** The tenderer shall provide the technical sheets of the vehicles where emission standards are defined. For those vehicles where technical upgrade has achieved above mentioned standard the measures must be documented and included in the tender, and this must be approved by an independent third party.



## AIR POLLUTING EMISSIONS

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### **AC2. Air polluting emissions**

Points will be awarded to the fleet to be used under the contract with proportion of vehicles used in carrying out the service (%) larger than TS3, in proportion to the excess over the TS3.

#### **Verification:**

See above TS3



## AIR POLLUTING EMISSIONS

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### Rationale

- Similarly to the GHG emission criteria, the criteria on air polluting emissions and EURO compliance should be set as a proportion of the fleet.
- Euro VI heavy duty vehicles in the current fleets is 8%
- 15% complies with Euro V.
- 11% with Euro IV
- More than 60% of the heavy duty vehicles using diesel is still equipped with Euro III
- Based on these facts, a minimum percentage of 40% of EURO VI is proposed for core and 60% for comprehensive level.
- This will stimulate the acceleration of the replacement rate to increase the share of Euro 6 buses.



## AIR POLLUTING EMISSIONS

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### **Discussion and consultation questions**

- 1) Do you think it is feasible to set minimum requirements on the fleet composition to ensure a proportion of EURO VI and minimum EURO V compliance for the fleet?
- 2) Do you agree with the percentages proposed? Are they affordable?



## CRITERIA TECHNICAL MEASURES

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### Rationale

- **Technical measures to reduce GHG and noise:** In general, many of the fuel and noise reducing measures are available on the market at low or no additional cost. In case of higher investment cost, this cost is easily compensated by the fuel savings reached.
- **Vehicle-manufacturing measures:** they could be requested to the fleet, awarding points based on the proportion of fleet complying with the award criteria.
- **EV battery related measures,** they could also be requested to the electric vehicles included in the offer.
- Verification process could be burdensome. Therefore it is proposed to let the public procurer choose which criteria to request.
- BUT for the **outsourcing of public transport services,** it is recommended to use the measures to **reduce GHG emissions and noise**



## NEW VEHICLES

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### **CPC3 (core and compr.). New vehicles**

The purchase of new vehicle shall contribute to keep or increase the percentage of vehicles complying with TS WTW GHG emissions and with TS air pollutant emissions offered in the tender.

The contractor will keep records which shall be made available to the contracting authority for verification purposes. The contracting authority shall foresee rules for penalties for non-compliance.





## NEW VEHICLES

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### **Rationale**

- A fleet can change over the duration of the contract. In order to maintain the level of environmental performance of the fleet or even continuously improving this environmental performance over time a CPC can lay down the requirements for new vehicles.

### **Discussion and consultation questions**

- Do you agree with this proposal?



## INTEGRATED PUBLIC TRANSPORT SYSTEMS – BUS SERVICES

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### **AC11 (core and compr.) Integrated public transport systems**

Points will be awarded to those offers that include the provisions needed to integrate the bus service into a mobility platform. The mobility platform shall prioritise non-motorised vehicles and public transport modes.

#### **Verification:**

The tenderer shall present a description of the mobility platform, the decision-making process to prioritise non-motorised and public transport modes, together with the partnership agreement to participate in the platform.



## INTEGRATED PUBLIC TRANSPORT SYSTEMS - BUS SERVICES

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### Rationale

- Based on the outcomes of SMILE, the bus service should be part of a mobility platform integrating various means of transport and combining them with routing information and user data to provide individual mobility offers.
- Since the experiences that inspire this proposal are still pilot projects, the criterion is recommended to be an award criterion.



## INTEGRATED PUBLIC TRANSPORT SYSTEMS – BUS SERVICES

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### **Discussion and consultation questions**

- 1) Do you agree with this criterion proposal? Is there any barrier that could hinder its application?
- 2) Is there any information available that could improve the wording of this criterion proposal?



## ROUTE OPTIMISATION – WASTE COLLECTION SERVICES

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### **AC11 (core and comprehensive). Route optimisation**

Points will be awarded to those tenders offering route optimization systems incorporating Computerised Vehicle Routing and Scheduling (CVRS) technology. The route optimization shall comply with the minimum collection frequency required by the type of waste (e.g. bio-waste).

#### **Verification:**

the tenderer shall present a description of the system, including the way to collect the data to feed the model.



## ROUTE OPTIMISATION - WASTE COLLECTION SERVICES

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### **Rationale**

- There are commercially available software tools incorporating Computerised Vehicle Routing and Scheduling (CVRS) technology that could improve the modelling and optimisation of collection operations.
- This type of route optimization system will be promoted, which will need an additional investment, but the energy savings could make it cost-effective.
- Some systems need to go beyond the fleet and the fleet operation, installing level sensors inside the bins.



## ROUTE OPTIMISATION WASTE COLLECTION SERVICES

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### **Discussion and consultation questions**

- 1) Do you think these systems are worthy to reduce the fuel consumption?
- 2) Is it possible to include criteria for the collection system, going beyond the boundaries of the fleet operation?

# EU GPP CRITERIA SET PROPOSAL FOR **CATEGORY 7 POST, COURIER AND MOVING SERVICES**



# POST, COURIER AND MOVING SERVICES

<b>Optimised vehicle use</b>	Staff training on ecodriving and environmental management
	Emission reduction plan and GHG emissions monitoring
<b>GHG emissions</b>	GHG emissions
	Lower GHG emissions
<b>Air polluting emissions</b>	Air polluting emissions
	Zero tailpipe emissions



## OPTIMIZED VEHICLE USE

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### **SC1 (core and compr.): Staff training on ecodriving and environmental management**

Tenderers shall have in place a training program, including formal written procedures, ensuring that relevant staff is sufficiently trained to provide the service according to the environmental provisions included in the tender.

The management staff involved in carrying out the service for the duration of the contract period shall:

- Be trained to identify and evaluate the available technologies and measures to reduce the WTW GHG emissions and air pollutants emissions (except for those operators using a fleet 100% non-motorised, i.e. cyclelogistics);
- Be trained in the monitoring and reporting procedures of the WTW GHG emissions.



## OPTIMIZED VEHICLE USE

All drivers involved in carrying out the service for the duration of the contract period shall:

- be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency;
- receive regularly information on their fuel efficiency performance (at least once per month).

Adequate training, with a minimum duration of 16 hours, shall be provided to all new staff working under the contract within four weeks of starting employment and an update on the above points, with a minimum duration of 8 hours, for all other staff at least once a year.

### **Verification:**

The tenderer shall present records of these training measures.

### **CPC1 (core and compr.) Staff training**

The service provider shall document and report yearly the amount (hours) and subject of training provided to each member of staff working on the contract to the contracting authority.

The yearly staff training records shall be made available to the contracting authority for verification purposes. The contracting authority shall foresee rules for penalties for non-compliance.



## OPTIMIZED VEHICLE USE

### **TS1 (core and compr.) Emission reduction plan and GHG emissions monitoring**

The tenderer shall provide an emission reduction plan with measures aimed at reducing the WTW GHG emissions and air pollutants emissions during the contract period. They will also provide the procedures to monitor and report progress of these measures and their impacts. The indicator used shall be GHG emissions of the service (applying a WTW approach), both in total per year and per tonne-kilometer or another unit that reflects the performance of the service.

**Verification:** The tenderer will present the emission reduction plan and the GHG emissions monitoring and reporting procedure applying a WTW approach.

### **CPC2 Emission reduction plan and GHG emissions monitoring**

The contractor shall implement the measures included in the emission reduction plan and monitor and report the WTW GHG emissions according to the procedure presented in their offer.

The contractor will keep records which shall be made available to the contracting authority. The contracting authority shall foresee rules for penalties for non-compliance.



## OPTIMIZED VEHICLES USE

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### Rationale

→ The same rationale applies to all service categories.

### Discussion and consultation questions

- 1) Do you agree with the training proposed for both management staff and drivers?
- 2) Do you find suitable the training hours proposed?
- 3) Are there any specific characteristic of the postal, courier and moving services that requires a tailored wording of these criteria proposal?



## GHG EMISSIONS

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### **TS2. GHG emissions (core)**

This TS will apply to vehicles used in urban deliveries.

**LCV:** 12% of the fleet to be used under the contract shall be vehicles that comply with the core TS1 of category 1.

**L-category vehicles:** 12% of the fleet to be used under the contract shall be electric vehicles.

This criterion may be fulfilled by means of a partnership with an urban consolidation center whose fleet complies with the TS2

**Verification:** same as core TS1 of category 1 together with the list and technical sheets of the whole fleet.



## GHG EMISSIONS

### **TS2. GHG emissions (compr.)**

This TS will apply to vehicles used in urban deliveries.

**LCV:** 12% of the fleet to be used under the contract shall be vehicles that comply with the comprehensive TS1 of category 1.

25% of the fleet shall be vehicles that comply with the core TS1 of category 1.

**L-category vehicles:** 25% of the fleet to be used under the contract shall be electric vehicles.

### **AC1. (core and compr.) GHG Emissions**

Points will be awarded to those tenders offering a fleet to be used under the contract with an a percentage higher than the TS2, in proportion to the excess over the TS2

This criterion may be fulfilled by means of a partnership with an urban consolidation center whose fleet complies with the TS2

**Verification:** same as core TS1 of category 1 together with the list and technical sheets of the whole fleet.



## GHG EMISSIONS

### **TS2. GHG emissions Cyclelogistics (compr.)**

This TS will apply to vehicles used in urban deliveries.

In those cities where **the topography and the urban infrastructure are suitable**, and **there are sufficient cyclelogistics operators**, the tenderer shall offer a **service fleet composed of cycles and cycle trailers**, which may include electrically power assisted cycles.

### **AC2. (core and compr.) Cyclelogistics**

This AC will apply to vehicles used in urban deliveries in postal and courier services.

In those cities **where the topography and the urban infrastructure are suitable**, points will be awarded to tenders offering a **service fleet composed of cycles and cycle trailers**, which may include electrically power assisted cycles.

This criterion may be fulfilled by means of a partnership with an **urban consolidation center** whose fleet is composed by bikes and cargo bikes.

**Verification:** The tenderer will present the specifications of the service fleet





## GHG EMISSIONS

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### Rationale

- The rationale for this criterion proposal can be extracted from the different sections addressing LCV and L-category vehicles.
- Cyclelogistics has demonstrated its capability to operate in urban deliveries.
- In the case of the Urban Consolidation Centres, they are identified as an essential system to increase the penetration of cycle logistics and electric vehicles in urban areas.
- It is proposed to be included as a valid way for tenderers to comply with the criteria. This means that the service provider might outsource the urban delivery to an urban consolidation centre that fulfils the criteria.



## CRITERION TS2/AC1/AC2 GHG EMISSIONS

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### **Discussion and consultation questions**

- 1) Do you think it is economically feasible to set minimum requirements on the fleet composition to ensure a proportion of low GHG emission vehicles?
- 2) Would it be more suitable to set an average of GHG emissions of the fleet?
- 3) Do you agree with the percentages proposed?
- 4) Do you agree on the criteria proposed to promote cyclelogistics? Would it be feasible to be required as comprehensive TS in those cities equipped with appropriate infrastructure and sufficient number of cyclelogistics operators?



## AIR POLLUTING EMISSIONS

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### **TS3. Air polluting emissions**

#### **Core:**

- All HDV used in carrying out the service shall meet at least EURO V.
- 40% of HDV shall meet at least EURO VI. Where vehicles are not certified as meeting EURO V or higher, but technical after-treatment has achieved the same standard, this should be documented in the tender.
- All LCV used in carrying out the service shall meet at least EURO V.
- 40% of LCV shall meet EURO VI. All L-category vehicles used in carrying out the service shall meet at least EURO 3.
- 25% L-category vehicles shall comply with EURO 4.

**Verification:** The tenderer shall provide the technical sheets of the vehicles where emission standards are defined. For those vehicles where technical upgrade has achieved above mentioned standard the measures must be documented and included in the tender, and this must be approved by an independent third party.



## AIR POLLUTING EMISSIONS

---

### **TS3. Air polluting emissions**

#### **Comprehensive**

- All HDV used in carrying out the service shall meet at least EURO V.
- 60% of HDV shall meet at least EURO VI.
- Where vehicles are not certified as meeting EURO V or higher, but technical after-treatment has achieved the same standard, this should be documented in the tender.
- All LCV used in carrying out the service shall meet at least EURO V.
- 60% of LCV shall meet EURO 6.
- 10% of LCV shall comply with the Euro 6d-TEMP standard.
- All L-category vehicles used in carrying out the service shall meet at least EURO 3.
- 50% L-category vehicles shall comply with EURO 4.



## AIR POLLUTING EMISSIONS

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**Verification:** The tenderer shall provide the technical sheets of the vehicles where emission standards are defined. For those vehicles where technical upgrade has achieved above mentioned standard the measures must be documented and included in the tender, and this must be approved by an independent third party.

### **AC3. (core and compr.) Air Polluting Emissions**

Points will be awarded to those tenders offering a fleet to be used under the contract with an a percentage higher than the TS3, in proportion to the excess over the TS3

#### **Verification:**

See above TS3



## AIR POLLUTING EMISSIONS

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### **AC4. (core) Zero emission capability**

Points will be awarded to tenders offering a service fleet with at least 12% of vehicles that can demonstrate at least 40 km of zero tailpipe emission capability, in proportion to the excess over this threshold.

This criterion may be fulfilled by means of a partnership with an urban consolidation center whose fleet complies with zero emission capability

*Note: this criterion would be only relevant as core criterion and not as comprehensive, since the comprehensive GHG emissions technical specification already selects zero emission capable technologies.*

**Verification:** See above TS3



## AIR POLLUTING EMISSIONS

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### Rationale

→ The rationale for this criterion proposal can be extracted from the different sections addressing LCV, HDV and L-category vehicles.

### Discussion and consultation questions

- 1) Do you think it is economically feasible to set minimum requirements on the fleet composition to ensure a proportion of EURO VI/6 and minimum EURO V/5 compliance for the fleet?
- 2) Do you agree with the percentages proposed?



## 6. CONCLUSIONS, NEXT STEPS AND CLOSURE OF THE 1<sup>ST</sup> AHWG

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Next steps?

### Following on from this AHWG meeting:

- **Meeting minutes and presentation** will be circulated
- Deadlines for **written comments into the html file in BATIS:**

**23 January 2017**



# Thank you very much

## *Stay in touch*

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