



COMPRO

COMMon PROcurement of collective and public service transport clean vehicles

Intelligent Energy – Europe (IEE)

D5.2- Draft of a Common European procurement tender

Type of document	Paper
Target groups	Local authorities; automotive industry; national Ministries; Environmental organisations
Lead participant	Nantes Metropole – Semitan - ISIS
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COMPRO Draft call for tender

Preliminary statement

This draft call for tender is an achievement of COMPRO project associating European local authorities and public transport operators with a view to stimulate, through the launch of common procurement, the European market in the field of clean urban vehicles. As no previous experience of trans-national bus procurement had been identified, Compro partners started from scratch, though using as much as possible existing trans-national and/or European recommendations or previous work. This is the case for the structure of the call for tender, following step by step UITP recommendations. The state of the art in terms of green criteria evaluation has also been collected from diverse on going works, projects or existing tools. The most achieved part of the draft call for tender concerns the technical specification section, which have been elaborated after a participatory, interactive and consensus process. From the theoretical exercise to the “final real life” document, a similar work would need to be developed for the other parts of the call for tender. And Compro partners strongly recommend to follow UITP works in this field which is already a preliminary consensual work including both the demand and the providers’ side.

Introduction

Why?

Cities, local authorities and transport operators who are getting together for this call for tender pursue the objective of

- renewing their urban bus fleet with vehicles the most efficient on the market in terms of energy consumption/CO² reduction (potentially up to 20/30% reduction), polluting emissions, noise and passenger comfort.
- giving a sufficient visibility to the bus manufacturers on the number and type of vehicles that would be purchased during the period.

How?

To achieve this, buyers have made efforts to make their demand as well as the technical specifications merge as much as possible. They have also convened to implement a dedicated call for tender structure and entrust _____ the duty to organise the call for tender in their name. However, each buyer would sign individual contracts with the winner of the tender.

The consortium agreement signed by the buyers should be joined to this call for tender

What?

	For CNG 12 meters buses (on shelf product)	For Hybrid DE (Diesel-electric) 18 meters bus
Objectives of the common procurement	Scale economies Mutualisation of competencies	Push innovation Obtain the best offer
Main characteristic of the tender	The present call for tender is conducted for the benefit of _____ (<i>names of cities and/or buyers</i>) who want to replace or expand their current CNG bus fleet. The buses will be used in urban conditions	The present call for tender is conducted for the benefit of _____ (<i>names of cities and/or buyers</i>) who joint their effort to experiment a new bus technology. The major objective is 20-30% fuel consumption reduction.
Number of vehicles concerned	Minimum : XX Maximum : XX	Minimum : XX Maximum : XX
Type of bus	urban categories I of the EU bus Directive 2001/85),	urban categories II of the EU bus Directive 2001/85

I Purchasers and contact persons (paragraph applicable for both types of vehicles)

Coordinator

The *Consortium* members have agreed to appoint XXXXXX as Coordinator of the Common Tender.
The Coordinator shall be responsible for the following missions

2.1 Collection of the needs

The coordinator shall collect the needs of the whole *Consortium*. Beforehand he shall support, where appropriated, the consortium members in the definition of their respective needs.

2.2 Organization of contractors' selection

The coordinator shall accomplish, in accordance with Directive No. 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors, amended by Commission Directive 2005/51/EC amending Annex XX to Directive 2004/17/EC and Annex VIII to Directive 2004/18/EC of the European Parliament and the Council on public procurement, all material and juridical acts necessary for the accomplishment of publicity, competition and awarding requirements pertaining to the selected procedure and requested for the fulfillment of the purpose of the Agreement as defined in article 1 of the present document.

The coordinator shall in particular (non exhaustive list):

- Develop, with respect to the needs identified, all purchasing documents;
- Be responsible for the redaction and the sending of call for competition and contract award notices;
- Fulfill the obligations related to electronic procedures and the diffusion of the Call for Expressions of Interest (CEI) to the interested candidates;
- *Be in charge of the secretariat of the Tender Committee;*
- Inform evicted candidates and produce for those requesting it the elements justifying the rejection of their bid;
- Be responsible for the contract award notice to the successful bidder;
- Submit when appropriated, the contract(s) or the framework agreement(s) to the control of legality.

During the procedure the coordinator shall keep the *Consortium* informed of the conduct of the procedure and the invitation to tender.

2.3 Signature and contract award

The following requirements shall be done by every member of the *Consortium*:

- Contract award ;
- Contract adjustment ;
- Contact signature with respect to the needs of each *Consortium* member ;
- Potential transmission to control authorities (*control of legality for France*) ;
- Contract fulfillment;

II Purchasers

Legal entities for

- City of _____
- City of _____

- Public transport operator of _____
- Other entity _____

III Procedure:

	For CNG 12 meters buses (on shelf product)	For Diesel-electric Hybrid 18 meters bus
Type of procedure	Open (articles 57 - 59 public procurement) <input type="checkbox"/>	Open (articles 57 - 59 public procurement) <input type="checkbox"/>
	Restricted (articles 60 - 64 public procurement) <input type="checkbox"/>	Restricted (articles 60 - 64 public procurement) <input type="checkbox"/>
	Negotiated (articles 65 & 66) <input type="checkbox"/>	Negotiated (articles 65 & 66) <input type="checkbox"/>
	Competitive dialogue (article 67 & 68) <input type="checkbox"/>	Competitive dialogue (article 67 & 68) <input type="checkbox"/>

IV- Tender time table *(to be completed)*

Tender planning	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
publishing date														
candidature selection date														
documents dispatching to candidates														
last date for submitting offers														
opening date														
negotiation period														
decision date,														
awarding date,														
ordering date														
delivery schedule														

V- Legal Requirements and Standards

Specific vehicle and road regulations as well as other standards to apply in the tender outside the mandatory European law:

- Emission levels
- Roll over test ECE/36
- EU Directive 2001/85 ("Bus directive")
- Local road regulations, etc.

VI List of company-related information to be submitted *(to be discussed in future consortium)*

1. Requirements of legal documents and company information that might contain different items, such as:

Legal documents:

- Registration with Chamber of Commerce
- Certified declaration of solvency
- Declarations from Social security taxes and banks, etc.

Company

- Company information such as company brochures, product programme, etc.
- Quality assurance system
- Annual report and financial information
- Operator Reference lists
- Organisation diagram
- Environmental policy
- Training program

2. Company access threshold *(to be defined)*

VII Tender evaluation criteria

Most advantageous economical offer appreciated through the following criteria *(Weight values are given as examples. They should be defined together)*

Weight For « on the shelf »	For CNG 12 meters buses (on shelf product)		Weight For innovation	For Diesel-electric Hybrid 18 meters bus
35	Technical value		33	Technical Value
35	Price		25	Price
16	Operating cost		20	Operating cost
7	After sales service and technical assistance		15	After sales service and technical assistance
7	Delivery schedule		7	Delivery Schedule

- 1- Technical value will be evaluated through
 - Comments brought to the technical specification description
 - The technical memorandum
 - A potential presentation of the vehicle
- 2- Price will be evaluated according to elements of price given in the price note.
- 3- Operating costs will be evaluated according to a justificatory memorandum (to be defined by partners)
- 4- After sales service and technical assistance will be evaluated according to a justificatory memorandum (to be defined by partners)
- 5- Delivery schedule will be evaluated according to a note (to be defined by partners) with an emphasize on the capacity in being able to provide the buses in the respect of dates given in each purchase note.

VIII LCC *(to be defined: down under follows state of the art)*

The environmental impact of the vehicles must be assessed in the offer analysis, through one or more criteria.

Among all possible, the valorisation of external costs for vehicles will become a compulsory criteria for European calls for tender (EC Directive on clean vehicles). This evaluation consists in attributing figures to the volume of pollutants and GHG produced by a vehicle during its life cycle, and to valorise these emissions in € on the basis of fixed unit costs (price of the ton of CO₂, of NO_x of particulates, etc) .

The implementation remains difficult, because if the on costs have been defined, the measurement mode is not. Moreover, consumption and consequently emissions strongly depend on the operating mode of the vehicle (commercial speed, charge, topography, air cooling etc.)

By experience, it is also acknowledged that performances announced by manufacturers are often those -very theoretical- of the engine during the homologation phase, and that they are very different from the performances measured at the exhaust pipe, which very quickly degrade with time

Among existing methods COMPRO partners have identified:

SORT cycle for the identification on circuit of diesel consumption of a vehicle during 3 urban cycles. The advantages of this method lie within the definition of an operating reference fairly representative of the real use of urban buses. The reference could also be used to measure other performances such as GHG. Lastly, tests are done on a real vehicle. On the other side, the limits correspond to the cost of each test, the variation in the vehicle configuration (gear box, engine power etc.) and the lack of protocol for the consumption measurement for fuels others than diesel.

- STARBUS (Ademe) for the emission measurement on line. This method has for objective to associate values of pollutant emission values to the engine regime and the engine charge. This enable to modelise every operating conditions, on the basis of real emission values, starting from two engine

variables, easy to measure.. It also enables to estimate real emissions in real operating conditions. It allows to simulations of pollutant emission for each bus route. The limits of this method are linked to the availability of the vehicle to implement the test in situ, and the engine value measurement.

- ICLEI through PROCURA manual proposes global evaluation criteria (§VI-A bus procurement example). However, Procura also refers broadly to UITP works and EU norms (EEV) in this field.
- PriceWaterhouseCoopers – Final report Sept 2007 also proposes scenarios for comparison and advices for the procurement of clean vehicles.
- In 2009, the British Government also developed a method to encourage the purchasing of clean vehicle from a global perspective .The LowCVP (low carbon vehicle partnership) definition of a LCEB (low carbon emission bus) was developed from that proposed by British Government in the Powering Future Vehicles Strategy and is as follows: “A Low Carbon Bus produces at least 30% fewer Greenhouse Gas Emissions than a current Euro 3 equivalent diesel bus of the same total passenger capacity. The Greenhouse Gas (GHG) emissions will be expressed in grams of carbon dioxide equivalent measured over a standard test, and will cover “Well-to-Wheel” (WTW) performance, thereby taking into account both the production of the fuel and its consumption on board”. For full details on the proposed method of accreditation and testing procedures for low carbon buses please refer to the following LowCVP documents:
 - BWG-P-05-03 The accreditation of Low Carbon Buses - update note
 - BWG-P-05-04 Low Carbon Bus Vehicle Accreditation v2.0
 - BWG-P-05-05 Annex A2 test CSH 270205

These are available from the Low Carbon Vehicle Partnership on request jonathan.murray@lowcvp.org.uk or can be download from the website www.lowcvp.org.uk.

IX Financial conditions

IX.1 Payment conditions

Buyer AAA (extreme example: progress payment)

Payment time table :

x % when at the start of the manufacturing process, providing justification of procured components (gear box etc..)

x pro rata delivered vehicles

x% pro rata of accepted vehicles

x% at reception of the last delivered bus..

Buyer BBBB (extreme example: full payment)

30 days after acceptance is full and without restrictions.

Buyer CCCC

IX.2 Financial Guarantee
(to be defined)

IX.3 Penalties
(to be defined)

X Vehicle Warranty
(to be defined)

XI Vehicle Availability / Unavailability
(to be defined)

XII Acceptance procedure
(to be defined)

XIII Specification of the vehicle

XIII.1 Summary

(This section has been filled further to the exercise made by COMPRO on the agreement over the technical specifications of the vehicles to be jointly purchased. In case of real common tender, some of the specifications should be additionally clarified (in particular the ones classified as "Different but easy and cheap to adapt by the manufacturer"). Some of the comments made during the exercise have been left for clarification)

A specification is classified as:

- Common for all buyers
- Common for all buyers after compromise
- Different but easy and cheap to adapt by the manufacturer
- Different and need an over cost option

Electronic equipments are not included in the tender: these equipments will be installed by each operator separately

Classified as "Common for all buyers"

- Elements respecting the directive EC-EU/2001/85

- Manufacturers standards – state of the art (vehicle size, body structure, noise emission, door security, road holding, ...)
- Pollutants emissions: EEV
- Manoeuvrability (24m between walls)
- Range: 400 km minimum

Classified as “Common for all buyers after compromise”

- Doors: number (3) and type (movement in)
- Wheelchair spaces: 2
- Driver cabin: VDV standard
- Glazing: single, tinted and athermal
- Floor covering: neutral grey colour, yellow near doors

Classified as “Different but easy and cheap to adapt by the manufacturer”

- Elements respecting local regulations (emergency exits, hammers, marking, ...)
- Driver cabin: ticket selling system
- Pre-wiring for electronic equipments
- Power of the heating system
- Tyre brand
- Security cameras: position and integration
- Biofuel compatibility.

Classified as “Different and need an over cost option”

- Ramp: manual or electric
- Driver cabin: full closure system or not
- Air conditioning system: none, driver or full vehicle
- Customisation:
 - passenger seats (number, lay-out, material, colour)
 - bars and handrails (shape, lay-out, material, colour)
 - external painting.

XIII.2 Technical and functional common specifications

XIII 2.1 Accessibility → Conformity with directive EC-EU/2001/85

Common specifications (buyers compromise):

- 3 double doors per bus, movement in;
- Pre-disposition for internal and external command button;
- Position of the button, outside : on the door, inside : integrated in handrails;

- Position of the button for disabled passengers at door 2, outside same than for other passengers, inside: 1 button at each space for disabled passengers;
- Step height is 320-350 for everybody, kneeling can be activated or not;
- 2 dedicated spaces for wheelchairs near door 2 and 4 seat priority for disabled passengers close to doors (conformity EC-EU/2001/85);
- Emergency button at height 1m20.

Options

- Automatic or manual ramp at door 2 (except case of Bremen which needs a lift at door 1 and of Tirana which doesn't need anything)
- Installing or not an internal or external button (if not, commanded by the driver)

XIII 2.2 Driver post

Most of the specifications about the driver post can be common. The necessary standardisation to reach a common procurement implies the renouncement of some specific network arrangements. The VDV standard could be a good compromise for the driver post.

Common specifications:

- Adjustable *driver's seat full option* with a safety belt (compulsory in Sweden).
- *Driver's compartment layout* and the *dashboard* should follow the VDV standard.
- For the *ticketing equipments*, nothing is needed in a common bus, except in Bremen (Option for this city ?)
- For the *personal security*, video surveillance for driver and passengers is wished for by all.
- For the *security glazing* and the *emergency button* (to cut off the energy supply in case of emergency), the systems come from the regulation.

Options

- In Bremen a touch mobil can be implemented. This optional ticketing machine can have an impact on the bus conception (to be checked with the manufacturers).
- An open cabin is wished for. An optional glass closure system can be added to protect the driver in case of aggression or in night services.
- For the *commercial functions*, there are not standard specifications. They can have a variable impact on the definition of the vehicle. Their impact must be evaluated by the manufacturers.
- For the *communication systems* each network has its own specification but those elements are often installed directly by the network. Only the interfaces (pre-wiring) are necessary, but they could be different. Their impact on the bus conception must be evaluated by the manufacturers.

XIII 2.3 Life onboard

On this topic it seems difficult to find an agreement on all items.

On the one hand common specifications can be found without problems on:

- Lighting (no particular specifications).
- Single glazing, (tinted or not?).

- Multi-bar handrails (except need for supporting handles or not).
- Wheelchair position, that must be in accordance with the 2001/85 directive, i.e. back to the road with safety belts in option.
- Common floor covering, that must be in accordance with CEE 2001/85 directive, with neutral grey colour and yellow for entry and exit.
- Norms of noise.
- Heating and ventilation with automatic activation and manual switch off.

On the other hand, air conditioning will have to be an option: due to climate differences, it is needed by some and not by others especially regarding the cost of maintenance and fuel consumption linked to air conditioning.

Even if the needs are different, we can find some practical agreements on:

- Outside advertising equipment: everyone has different requests but it does not have to be included in the specifications (can be added after).
- Validation equipment: the number required is different, but we can agree that each door will be pre-wired, used or not.

Options:

- Quantity of seats and, of course, number of standing passengers.
- Seats themselves: plastic or cloth.
- etc.: everyone has different expectations. If we add the constant evolution in the technology, it seems quite impossible to standardize those specifications.

XIII 2.4 Environment (exterior)

Common specifications:

- Emissions (pollution and noise) spec could be EEV, waiting for future Euro 6.
- The issue of end of life recycling must be in conformity with international standards, without any other spec.
- Prevention of liquid loss needs no spec.
- The common spec for manoeuvrability could be a 24m circle between walls.

XIII 2.5 Safety

Common specifications:

- Doors have to be equipped of sensitive edges, infrared sensors, light signals and acoustic signals. Door 1 is manual
- Driver alarm thanks to an emergency button or pedal
- Security cameras for passengers and driver's potential attacker (Nb of cameras : 3 to 6)
- Possible compromise on the position of emergency exits on doors and glazing
- No safety belt
- No specs for collision and rollover protection

Options :

- Visual control of doors by mirror or camera monitoring
- Automatic extinguish system in the engine compartment or not

Final Options:

Variable position of the hammers to break windows, first aid kit or not in driver's area, acoustic signal when reversing.

XIII 2.6 General characteristics

Common specifications:

- The general dimensions could be 2m55 maximum width and 3m40 maximum height ; the maximum length depends on the vehicle class chosen for the common procurement between 2 axles-12m, 3 axles-15m, 3axles-18m, 4 axles-20m or 4 axles-24m, according to the European regulation.
- The body structure must be made in protected steel or/and stainless steel or/and aluminium.
- The spec needed for performance characteristics required are:
 - Max speed = 80km/h (adjustable by the operator)
 - Min acceleration on the first meters = 30m in less than 8 s
 - Max acceleration allowed on drive = 1,5 m/s² (adjustable by operator)
 - Fuel consumption values according to SORT cycles, for comparison
- Specific design: the floor should be a common spec for the material and the colour (dark grey), also for inner surfaces –walls and ceiling- for the colour (light grey?).
- The inside lightning level must be EC standard; in addition, a common spec could be having 3 settings (0-50%-100%).
- Various : the biofuel compatibility in engines need an answer for evaluation

Options :

- Specific design: all the items in relation with the operator's identity are difficult to define in a common spec. Material and colour of seats, handrails and bars, external painting ...

XIV After Sales *(To be defined)*

XV Training *(to be defined)*