

ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Supply of waste collection equipment – Lot 1 – Waste collection vehicle

Publication reference: < Wasterreact/5/Lot1 >

p 1 /...

Columns 1-2 should be completed by the contracting authority
Columns 3-4 should be completed by the tenderer
Column 5 is reserved for the evaluation committee

Annex III - the contractor's technical offer

The tenderers are requested to complete the template on the next pages:

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- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words 'compliant' or 'yes' are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

| 1. Item Number | 2. Specifications Required | 3. Specifications Offered | 4. Notes, remarks, ref to documentation | 5. Evaluation Committee's notes |
|----------------------|--|------------------------------|---|--|
| 1 | Rear- Loaded Compaction Vehicles RCV, 4 m ³ | | | |
| | Manufacturer's name: | | | |
| | Product type, model: | | | |
| | 1.1 Truck /Chassis | | | |
| | 1.1.1 Truck Type | | | |
| | 1.1.1.1 Truck type to be rigid truck with drive on rear axle.And GVW- minimum 5500kg | | | |
| | 1.1.1.2 Wheel configuration to be 6 wheels in 2 positions (i.e. 4 x 2). | | | |
| | 1.1.1.3 Minimum wheelbase to be 3.6 meters. | | | |
| | 1.1.1.4 Truck/chassis to be designed to carry a waste collection body (i.e. superstructure) with a minimum capacity of 4m ³ . | | | |
| | 1.1.1.5 Truck/chassis to have a maximum width of 2.05m. | | | |
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| | 1.1.2 Cabin | | | |
| | 1.1.2.1 Day cab to be provided with suspension for free access to engine for easy maintenance.. | | | |

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| Truck height- maximum 2330mm | | | | |
| 1.1.2.2 Three standard seats to be provided in the cabin – one separate ergonomic adjustable seat for the driver and seats for two operatives. Where bench seats are to be provided for the two operatives, these to be properly upholstered with ergonomic cushion and 3-point safety belts | | | | |
| 1.1.2.3 Air conditioning-and heating manually controlled. | | | | |
| 1.1.2.4 Rear-view side mirror, to be provided at each side of the cabin. | | | | |
| 1.1.2.5 Illuminated switches to be provided for central locking, power mirrors and mirror adjustment. | | | | |
| 1.1.2.6 Legible instrument cluster to be provided with information on the operating status of the vehicle, such as vehicle and trip data, fuel level, warning light for seat belts, and outside temperature. | | | | |
| 1.1.2.7 Adjustable sunblind to be provided on driver's side. | | | | |
| 1.1.2.8 | | | | |
| 1.1.2.9 Two windscreen wiper blades. | | | | |
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| 1.1.3 Chassis frame | | | | |
| 1.1.3.1 Chassis frame to be designed for operating in all types of road conditions. | | | | |

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| 1.1.3.2 Anti-corrosion paint protection. | | | |
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| 1.1.4 Engine | | | |
| 1.1.4.1 Diesel engine with 90 kW (122 HP) power output to be provided (i.e. per ECE R24-03/ISO 1585, 88/195 EEC to Directive 80/1269 EEC). | | | |
| 1.1.4.2 Exhaust emissions to be to EURO VI standard (according to Regulation (EC) No. 595/2009 of the European Parliament and of the Council of 18th June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information and amending Regulation (EC) No 715/2007 and Directive 2007/46/EC and repealing Directives 80/1269/EEC, 2005/55/EC and 2005/78/EC). | | | |
| 1.1.4.3 Exhaust pipe to be located on the left-hand-side of the body away from the working zones of the operatives at the rear of the vehicle. | | | |
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| 1.1.5 Gearbox | | | |

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| 1.1.5.1 Automatic gearbox with minimum 6 gears or manual gearbox minimum 6 gears to be provided. | | | | |
| 1.1.5.2 Auxiliary drive to have power take off according to superstructure requirements. | | | | |
| 1.1.5.3 Gearbox input torque to comply with engine torque output. | | | | |
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| 1.1.6 Steering | | | | |
| 1.1.6.1 Steering to be left-hand-drive. | | | | |
| 1.1.6.2 Steering column to be adjustable in height and tilt. | | | | |
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| 1.1.7 Suspension | | | | |
| 1.1.7.1 Pneumatic or mechanical multi-leaf suspension springs or air suspension system to be used. | | | | |
| 1.1.7.2 Hydraulic shock absorbers or anti-roll bars to be provided (Not applicable in the case where air suspension system is proposed). | | | | |
| 1.1.7.3 Stabilizers to be provided on front and/or rear axles. | | | | |
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| 1.1.8 Axles | | | | |
| 1.1.8.1 Capacity of front axle to be specified, allowing weight distribution as per gross vehicle weight (GVW) of the vehicle. | | | | |
| 1.1.8.2 Capacity of rear axle to be specified allowing weight distribution as per gross vehicle weight (GVW) of the vehicle. | | | | |
| 1.1.8.3 Power drive to be on rear axle. | | | | |
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| 1.1.9 Brake System | | | | |
| 1.1.9.1 Brake system to be in accordance with UNECE Regulation ECE 13.09 or to Directive 71/320 EEC, as amended by Directive 98/12 EC. | | | | |
| 1.1.9.2 Braking system to include anti-lock braking system (ABS) and anti-slip regulation (ASR). | | | | |
| 1.1.9.3 Dual-circuit brake system to be provided . | | | | |
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| 1.1.9.5 Parking brake to be operated on the rear axle | | | | |
| 1.1.9.6 Lining to be Asbestos-free. | | | | |
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| 1.1.10 Wheels and Tires | | | |
| 1.1.10.1 Tires to be on steel disc rims | | | |
| 1.1.10.2 Spare wheel to be included, together with appropriate jack system. | | | |
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| 1.1.11 Electrical System | | | |
| 1.1.11.1 Voltage to be minimum 12-Volts. | | | |
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| 1.1.12 Other general Equipment | | | |
| 1.1.12.1 Front wipers and washers to be electro-powered. | | | |
| 1.1.12.2 Indicator for low engine oil pressure to be provided, with audible warning. | | | |
| 1.1.12.3 Audible warning indicator at reverse vehicle movement to be provided. | | | |
| 1.1.12.4 Standard fire extinguisher, to be provided and fitted safely in the cabin, Fire extinguisher to be minimum 2 kg dry powder type. | | | |
| 1.1.12.5 Fuel tank with 75 Liters capacity. | | | |
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| 1.1.12.7 Cabin to be lockable and fuel filling cap to be fitted with lock vandalism protection. | | | |
| 1.1.12.8 Standard first aid kit, to be provided and fitted safely in the cabin. | | | |
| 1.1.12.9 Reflectorised emergency stop sign/warning triangle to be provided. | | | |
| 1.1.12.10 Towing/pushing pins to be provided on the front bumper. | | | |
| 1.1.12.11 Noise emission level to be in accordance with Directive 92/97 EEC. | | | |
| 1.1.12.12 Vehicle, including superstructure, to be color coated. Color to be RAL-type color. | | | |
| 1.1.12.13 Two rotating orange/amber lights or two orange/amber LED flashing beacons to be provided on the roof of the vehicle. One of these lights/beacons be mounted at the rear end of the vehicle. | | | |
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| 1.2 Superstructure | | | |
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| 1.2.1 General | | | |
| 1.2.1.1 The dimensions and weights of the proposed chassis/ superstructure shall be appropriate for the safe and stable operation of the vehicle in all load situations. The Tenderer shall provide calculations and relevant drawings to show the distribution of the | | | |

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| weight over the axles and to demonstrate that the truck/chassis frame and configuration of axles are compatible with the maximum weight to be carried (i.e. total dead weight of superstructure and superstructure + payload). The drawings and the calculations to show the maximum load on each axle and the amount of rear over-hang of the superstructure and the centre of gravity of the vehicle, in the unloaded and fully-loaded situations, in order to demonstrate that the rear axle is not over-loaded. | | | | |
| 1.2.1.2 The powered hydraulic elevator shall be able for collection of household waste and bulky waste and for handling standard containers of 1.1 m ³ capacity and standard wheel bins of 120-litre 240-litre and 360 litre capacity. | | | | |
| 1.2.1.3 Greasing points shall be provided on all main bolts and main shafts of lifting device. | | | | |
| 1.2.1.4 The net capacity of the superstructure body to be a minimum of 4m ³ . | | | | |
| 1.2.1.5 A leak-proof device with tap for the drainage of leachate from the superstructure to be provided. | | | | |
| 1.2.1.6 Superstructure to have a maximum width of 2.1m. | | | | |
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| <p>1.2.2 Construction</p> | | | |
| <p>1.2.2.1 The superstructure to be constructed of high tensile, abrasion and corrosion resistant steel of minimum grade $R_m > 1,200 \text{ N/mm}^2$. All surfaces of the superstructure body to be minimum 2mm thick 'Hardox' steel or equivalent, minimum 400 - 450 HB grade.</p> | | | |
| <p>1.2.2.2 Continuous welding to be applied throughout the body to avoid the formation of rust.</p> | | | |
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| <p>1.2.3 Compaction Mechanism</p> | | | |
| <p>1.2.3.1 Compaction system to be electrically-controlled or hydraulically-controlled discontinuous cycle system.</p> | | | |
| <p>1.2.3.2 The minimum compaction ratio for domestic waste in the superstructure body to be 5:1.</p> | | | |
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| <p>1.2.4 Tailgate/ Hopper</p> | | | |

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| 1.2.4.1 No tailgate/hopper to be incorporated in the superstructure. | | | |
| <p style="text-align: center;">1.2.5 Hydraulics</p> | | | |
| 1.2.5.1 The minimum operating pressure of the hydraulic system to be 20 MPa (200 bar). | | | |
| 1.2.5.2 All hydraulic circuits to be protected against overload by means of a pressure relief valve. | | | |
| 1.2.5.3 One central pressure relief valve to be in the main line. | | | |
| 1.2.5.4 System to be equipped with one return filter with visual dirt indicator. | | | |
| 1.2.5.5 Hydraulic cylinders to be double acting. | | | |
| 1.2.5.6 Double pump to be incorporated to enable independent operation of the compaction mechanism and the container loading device. | | | |
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| 1.2.6 Electrics | | | | |
| 1.2.6.1 The voltage to be minimum 12-volt electrical system. | | | | |
| 1.2.6.2 In order to facilitate trouble shooting and repair, the electrical circuits to be provided with color or number coding on the cable looms and wiring as well as on the various connector strips. | | | | |
| 1.2.6.3 Electric relays to be used. | | | | |
| 1.2.6.4 Two auxiliary LED working lights to be provided at the rear of the superstructure, one of which to be adjustable in direction. | | | | |
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| 1.2.7 Operations and Controls | | | | |
| 1.2.7.1 Driver's cabin to be equipped with main switch with warning light to stop all operation of superstructure for safety reasons. | | | | |
| 1.2.7.2 Engine to operate at maximum torque during lifting and/or emptying of bins and containers. | | | | |

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| 1.2.7.3 Engine revs to increase automatically during operation of the superstructure. | | | |
| 1.2.7.4 All functions to be electro-hydraulically controlled, except for the lift device – to be manually operated. | | | |
| 1.2.7.5 The function of all controls at the rear or side of the superstructure to be clearly indicated either by text in Macedonian language or by internationally-accepted symbols. | | | |
| 1.2.7.6 “Hold to Run” type controls to be used | | | |
| 1.2.7.7 Red emergency stop buttons to be provided at both sides at the rear. | | | |
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| 1.3 Loading Devices | | | |
| 1.3.1 Loading Devices for 1,1 m³ capacity containers and for 120-litre, 240-litre and 360 litre wheel bins | | | |
| 1.3.1.1 The lifting capacity to be between 440 kg and 550 kg for lifting | | | |
| 1.3.1.2 The lift and loading device shall be in compliance with EN 840 – 1; EN 840 – 2 and EN 840 – 3, and to be suitable for handling standard waste containers of 1.1 m ³ capacity (i.e. with pick up at lateral trunnions via | | | |

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| | folding arms) and also standard 120-litre and 240-litre and 360 litre wheel bins. | | | |
| | 1.3.1.3 Lift devices to be in accordance with EN1501-5: 2011 "Refuse Collection Vehicles: General Requirements and safety requirements. Lifting devices for refuse collection vehicles". | | | |
| | 1.3.1.4 The controls for the lifting and lowering movements to be at the rear or side of the vehicle. | | | |
| | 1.3.1.5 The Maximum cycle time (up and down) for handling of the containers and/or bins to be 15 seconds | | | |
| | 1.3.1.6 A pneumatically adjusted or automatic lid opener to be incorporated in the loading device for the waste containers of 1.1 m3 capacity. | | | |
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| | 1.3.2 General | | | |
| | 1.3.2.1 The superstructure to be waterproofed to avoid any liquids falling on the road or leakage during compaction and transportation. | | | |
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| | 1.3.3 Unloading of Vehicle | | | |
| | 1.3.3.1 Vehicle shall be capable of readily discharging its load into the 16m3 and 22m3-capacity rear-loaded compaction vehicles (RCVs). Tenderer to submit statement | | | |

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| <p>confirming the compatibility of the vehicles in question (i.e. the 4m³ capacity RCV and the 16m³ and 22m³ capacity RCV), together with maximum reloading time in this regard.</p> <p>1.3.3.2 Hydraulic supporting legs (stabilizers) to be provided for safe operation of unloading of the vehicle into the 16m³ and 22m³-capacity rear-loaded compaction vehicles.</p> | | | | |
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ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Supply of waste collection equipment – Lot 2 - Recycling Bins 340lt

Publication reference: < Wasterreact/5/Lot2 >

p 1 /...

Columns 1-2 should be completed by the contracting authority

Columns 3-4 should be completed by the tenderer

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|----------------------|--|--|--|---------------------------------------|
| 1 | Recycling Bins 340 Lt | | | |
| | | | | |
| | ISO 9001 Quality Management Systems | ISO 9001 Quality Management Systems | | |
| | ISO 14001 Environmental Management Systems | ISO 14001 Environmental Management Systems | | |
| | Manufactured according to AS4123 | Manufactured according to AS4123 | | |
| | Injection Moulded HDPE | Injection Moulded HDPE | | |
| | UV Stabilized | UV Stabilized | | |
| | Chemical and odour resistant | Chemical and odour resistant | | |
| | Heat and frost resistant | Heat and frost resistant | | |
| | Solid rubber tyred wheels | Solid rubber tyred wheels | | |
| | Heavy duty nickel plated steel axle | Heavy duty nickel plated steel axle | | |
| | Maximum Normal Load 144kg | Maximum Normal Load 144kg | | |
| | Maximum Mass 161kg | Maximum Mass 161kg | | |
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ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Supply of waste collection equipment – Lot 3 – Press machine

Publication reference: < Wasterreact/5/Lot3 >

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|-----------------------|---------------------------------------|------------------------------|---|---------------------------------------|
| 1 | Hydraulical Press | 300 kn | | |
| | -compression force | 5.5kw | | |
| | -motor 400v | sec | | |
| | -comp time including return stroke | 1200x800x1550 | | |
| | -box size | 1090x570 | | |
| | -loading aperture | 110 | | |
| | -loading height | 300-400kg | | |
| | -bale size | 4v | | |
| | -binding | 1620x1250x295 0 | | |
| | -overall dimensions lxwxh | 1600kg | | |
| | -total weight | | | |
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| ITEM NUMBER | QUANTITY | SPECIFICATIONS OFFERED (INCL. BRAND/MODEL) | UNIT COSTS WITH DELIVERY [DAP]1 <PLACE OF ACCEPTANCE> [EUR] | TOTAL [EUR] |
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