Specification of requirements

(Heavy Vehicles for Sustainable City Transport - HECTOR)

An international procurement consortium for purchasing of heavy ethanol vehicles

1. Background

The functional requirements described here are intended as a supplement to the regular procurement procedure of the members of the consortium. The purpose is to functionally describe an ethanol-based power train in a way that does not affect either the vehicle manufacturers' choice of technical solutions or the consortium members' requirements on vehicles and traffic.

This document is an appendix to "Letter of Intent – HECTOR".

2. Specification of requirements and procurement support

2.1 Accessibility

The ethanol bus should have the accessibility of an equivalent diesel or methane powered bus, both in terms of capacity and reliability.

2.2 Economy

The total cost (purchase price, life span and operating costs) for the ethanol buses should not significantly differ from the corresponding costs for diesel or methane powered buses.

2.3 Fuel/Technology

The main requirement is that the bus should be operational on a fuel that is, or has the potential to be, a standardized fuel and that mainly consists of ethanol. The fuel should be functional in combination with commonly used engine lubricants.

Power and torque should match the requirements placed on an equivalent diesel or methane powered bus.

2.4 Service/Maintenance

The vehicle manufacturer should provide instructions for service and maintenance. Warranties from the vehicle manufacturer should equal those given for diesel or methane powered buses. The vehicle supplier should be committed to provide spare parts for at least twelve years after the date of purchase.

2.5 Emissions performance

Emission requirements should meet demands set for EU EEV.

(Appendix: Report concerning emission test on an existing ethanol engine, "A CLEAN ETHANOL FUELLED COMPRESSION IGNITION BUS ENGINE", 2004, KARL-ERIK EGEBÄCK)