

**DELHI TRANSPORT CORPORATION**  
**STRATEGIC BUSINESS UNIT, HAUZ KHAS BUS TERMINAL**  
**NEW DELHI-110 016 (INDIA)**

**REQUEST FOR PROPOSAL FOR SUPPLY OF FULLY BUILT 1000 SEMI LOW FLOOR (750 NON-AC & 250 AC)**  
**CNG PROPELLED CITY TYPE BUSES**

**GLOBAL RFP NUMBER CGM/SBU/846/2008**

**Date of Issue: 3<sup>rd</sup> March, 2008**

**PRE-BID CONFERENCE HELD AT 10.30 HOURS ON 17<sup>th</sup> March, 2008 AT ESSEX FARMS, AUROBINDO MARG, NEW DELHI-110016**

**ADDENDUM NUMBER 11                      DATED 12.06.2009**

**AMENDMENTS MADE BY DELHI TRANSPORT CORPORATION TO THE RFP DOCUMENT**

Sl. No	Section of the Bid Documents	Para/ Clause No.	Page No.	Existing Entry in the Bid Documents	Now Read as
1.	III	Bid Invitation Notice & Key Details	14	The Bidder must be well established and must have the experience of manufacturing and supply of CNG propelled bus Chassis and / or fully built CNG Buses during at least preceding three years ending on 31 <sup>th</sup> December, 2007.	The Bidder must be well established and must have the experience of manufacturing and supply of CNG propelled bus Chassis and / or fully built CNG Buses during at least preceding three years ending on 31 <sup>st</sup> March'2009.
2.	V	Instructions to Bidders Clause (C)-A-1.1: General	22	.....from established and reliable manufacturers having at least 3 years experience in manufacturing of CNG propelled Bus Chassis and/or fully built CNG Buses of at least preceding three years ending on 31 <sup>st</sup> December'2007.	....from established and reliable manufacturers having at least 3 years experience in manufacturing of CNG propelled Bus Chassis and/or fully built CNG Buses of at least preceding three years ending on 31 <sup>st</sup> March'2009.
3.	V	C-1.2 General	22	... The Bidders are required to quote comprehensive Annual Maintenance charges for consumables, spares/body parts, for carrying out repairs including accidental repairs, servicing and routine	... The Bidders are required to quote comprehensive Annual Maintenance charges for consumables, spares/body parts, for carrying out repairs including accidental repairs, servicing and routine body repairs etc. for complete bus (excluding servicing/ consumables/ spare parts etc covered in Warranty) during

				body repairs etc. for complete bus (excluding servicing/ consumables/ spare parts etc covered in Warranty) during warranty period as well as for carrying out preventive and accidental repairs, servicing and day to day body repairs etc. for complete bus (including supply of consumables, replacement & fitment of spare parts/ body parts/ aggregates/ assemblies/ sub assemblies etc) after warranty period for maintenance of the buses till 7,50,000 kilometres....	warranty period as well as for carrying out preventive and accidental repairs, servicing and day to day body repairs etc. for complete bus (including supply of consumables, replacement & fitment of spare parts/ body parts/ aggregates/ assemblies/ sub assemblies etc) after warranty period for maintenance of the buses till 7,50,000 kilometres. The labour cost on account of accidental repairs whether attributable to the Contractor or to the Purchaser, shall be borne by the Contractor. However, material cost will be borne by the Purchaser in case of the accidents attributable to the Purchaser....
4.	V	C-2.2: Eligibility	23	Manufacture and Supply of CNG Fuel Mode Bus chassis and/ or Fully-built CNG Propelled Buses with at least preceding three years experience ending on 31 <sup>st</sup> December'2007.	Manufacture and Supply of CNG Fuel Mode Bus chassis and/ or Fully-built CNG Propelled Buses with at least preceding three years experience ending on 31 <sup>st</sup> March'2009.
5.	V	C-13.1(b): Documents Establishing Bidder's Eligibility & Qualification	26	The Bidder should be a manufacturer of CNG propelled Bus chassis and/or complete CNG Buses with at least three years experience in line during at least preceding three years ending on 31 <sup>st</sup> December, 2007.	The Bidder should be a manufacturer of CNG propelled Bus chassis and/or complete CNG Buses with at least three years experience in line during at least preceding three years ending on 31 <sup>st</sup> March'2009.
6.	V	C-13.1(e): Documents Establishing Bidder's Eligibility & Qualification	26	....actual production during last three years and expansion / de-bottlenecking plan of Company, if any, ending on 31 <sup>st</sup> December, 2007	.....actual production during last three years and expansion / de-bottlenecking plan of Company, if any, ending on 31 <sup>st</sup> March'2009.
7.	V	C-33.5(ii): Evaluation & Comparison of Bids	36	... The Bidders are required to quote comprehensive Annual Maintenance charges for consumables, spares/body parts, for carrying out repairs including accidental repairs, servicing and routine body repairs etc. for complete bus (excluding servicing/ consumables/ spare parts etc covered in Warranty) during warranty period as well as for carrying out	... The Bidders are required to quote comprehensive Annual Maintenance charges for consumables, spares/body parts, for carrying out repairs including accidental repairs, servicing and routine body repairs etc. for complete bus (excluding servicing/ consumables/ spare parts etc covered in Warranty) during warranty period as well as for carrying out preventive and accidental repairs, tyre cut/ damage servicing broken lights and routine body repairs etc. for complete bus (including supply of consumables, replacement & fitment of spare parts/

				preventive and accidental repairs, tyre cut/ damage servicing broken lights and routine body repairs etc. for complete bus (including supply of consumables, replacement & fitment of spare parts/ body parts/ aggregates/ assemblies/ sub assemblies etc) after warranty period for maintenance of the buses till 7,50,000 kilometres....	body parts/ aggregates/ assemblies/ sub assemblies etc) after warranty period for maintenance of the buses till 7,50,000 kilometres. The labour cost on account of accidental repairs whether attributable to the Contractor or to the Purchaser, shall be borne by the Contractor. However, material cost will be borne by the Purchaser in case of the accidents attributable to the Purchaser....
8.	VI	C-36: Training	60	....Orientation training orientation training at New Delhi for two days for 250 drivers in batches of 25 (total 500 man days)....	....Orientation training orientation training at New Delhi for 250 Bus Crew- five days for Drivers and two days for Conductors in batches of 25 (total 500 man days) with emphasis on safety related issues to deal with the emergencies....
9.	VI	C-46: AMC	61	The Contractor shall be required to submit their comprehensive AMC offer for maintenance of bus up to 7,50,000 kilometers for complete bus system inclusive of consumables, spare parts, replacement of assemblies/ subassemblies, systems etc. taking into account preventive/docking maintenance, normal wear & tear, major repairs/ over-hauling and break downs as well as accidental repairs (mechanical & body), tyre cut/damage, broken lights and routine body repairs etc. inclusive of labour cost to ensure 95% availability during warranty period and 92% availability after warranty period....	The Contractor shall be required to submit their comprehensive AMC offer for maintenance of bus up to 7,50,000 kilometers for complete bus system inclusive of consumables, spare parts, replacement of assemblies/ subassemblies, systems etc. taking into account preventive/docking maintenance, normal wear & tear, major repairs/ over-hauling and break downs as well as accidental repairs (mechanical & body), tyre cut/damage, broken lights and routine body repairs etc. inclusive of labour cost to ensure 95% availability during warranty period and 92% availability after warranty period. The labour cost on account of accidental repairs whether attributable to the Contractor or to the Purchaser, shall be borne by the Contractor. However, material cost will be borne by the Purchaser in case of the accidents attributable to the Purchaser ....
10.	VI	C-46.2:AMC	62	...A bus made available for morning out shedding latest by 8AM shall be considered available for the morning shift. Similarly a bus made available for evening out shedding latest by 5 PM shall be considered available for the evening shift. It implies that each bus should be available for 95/92% of the shifts taken on six monthly basis. If the bus fails to go	A bus made available for morning out shedding latest by 8AM shall be considered available for the morning shift. Similarly a bus made available for evening out shedding latest by 5 PM shall be considered available for the evening shift. It implies that each bus should be available for 95/92% of the shifts taken on six monthly basis. If the bus fails to go on scheduled duty because of some maintenance defects/ breakdown but leaves the depot after 8 AM/ 5 PM i.e. late, it will not be considered available for that shift. However, the schedule out

				on scheduled duty because of some maintenance defects/ breakdown but leaves the depot after 8 AM/ 5 PM i.e. late, it will not be considered available for that shift....	shedding timings will be provided by the concerned Operating Depot and the same will be applicable for the above purpose instead of 8 AM & 5 PM....
11.	VI	C-46.24: AMC	65	The latest time by which the bus has to be made available by the Contractor for use by the Purchaser has been stated as 8 AM, 5 PM and 11 PM for the morning, evening and night shift respectively. However, the Purchaser reserves his right to alter time after giving at least two weeks notice to the Contractor.	The latest time by which the bus has to be made available by the Contractor for use by the Purchaser has been stated as 8 AM, 5 PM and 11 PM for the morning, evening and night shift respectively. However, the schedule out shedding timings will be provided by the concerned Operating Depot and the same will be applicable for the above purpose. The Purchaser reserves his right to alter time after giving at least two weeks notice to the Contractor.
12.	VIII	8.1: Braking System	79	The braking system shall be full pneumatic type with fail-safe dual circuit having four-way protection valve, auto slack adjuster, disc type (front wheels), drum brake (rear wheels) with non-asbestos brake lining etc....	The braking system shall be full pneumatic type with fail-safe dual circuit having four-way protection valve, auto slack adjuster, drum type brakes (both at front & rear wheels) with non-asbestos brake lining etc....
13.	VIII	13.3: Anti Rust Treatment	81	The comprehensive multi-stage anti-rust treatment by way of Hot Phosphating/ Galvanising shall be provided to bus flooring, sides, roof, under-structure, as per BIS 3618 Class-A2/ relevant BIS for Galvanising of MS structural Members for resistance corrosion or deterioration from atmospheric conditions & road salts so as to enable them & frame to last for at least 12 years or 7, 50,000 Kms whichever is later....	The comprehensive multi-stage anti-rust treatment by way of Hot Phosphating/ Galvanising of 120 gsm shall be provided to bus flooring, sides, roof, under-structure, Hot Phosphating of MS structural Members as per BIS 3618 Class-A2/ Galvanising of MS structural Members of 120 gsm mass coating (total both sides) as per Class-VII of Table-2 of BIS:277 for resistance corrosion or deterioration from atmospheric conditions & road salts so as to enable them & frame to last for at least 12 years or 7,50,000 Kms whichever is later....
14.	VIII	17.1: Service Doors	83	...The entrance and exit doors shall be electro-pneumatically controlled by the driver and/or the conductor with internal and external emergency open controls...	...The entrance and exit doors shall be electro-pneumatically controlled by the driver and/or the conductor with internal and external emergency open controls. Due to closing of Service Doors, care should be taken for adequate ventilation & dissipation of heat in view of extremely hot summer season in Delhi...
15.	VIII	19.1: Windows	85	The window shall be in two-piece design with flat and fixed top window glass and	The window shall be preferably in two-piece design with sliding window glasses for both at top & bottom by ensuring

				sliding bottom window glasses...	maximum opening of the sliding window glasses for adequate ventilation and dissipation of heat during summer season....
16.	VIII	20: Window Guard Rail	85	...The window guard rail brackets provided in the windows above wheel arch shall be additionally strengthened to avoid flexing during wheel repair alongwith a provision for additional non flexing bracket in the middle of window bay area holding all guard rails together.	.. The window guard rail brackets provided in all the windows shall be additionally strengthened to avoid flexing during wheel repair alongwith a provision for additional non flexing bracket in the middle of window bay area holding all guard rails together.
17.	VIII	22: Escape Hatch	85	In addition to emergency exits, at least one Ejectable or hinged type escape hatch be fitted in the roof as per the bus code.	In addition to emergency exits, at least one Ejectable or hinged type escape hatch be fitted in the roof as per the bus code. An additional roof hatch to be provided to ensure adequate ventilation and dissipation of heat during summer season.
18.	VIII	24.6: Floor	86	...The anti-skid type silicon grain material shall have features for non accumulation of dust.	...The anti-skid type silicon grain material shall have features for non accumulation of dust. The problem of dust accumulation in bus flooring needs to be properly addressed to maintain neat & clean interior aesthetics in Delhi's environmental conditions.
19.	VIII	27.1 Stanchions	86	...The stanchions shall be of 40.0 mm dia and 3.15 mm thick aluminium tubing covered with PVC sleeve of contrast colour with the interior decor.	...The stanchions shall be of 40.0 mm dia and 3.15 mm thick MS tubing covered with PVC sleeve of contrast colour with the interior decor.
20.	VIII	32: Rear View Mirror Exterior	88	Rear-view mirrors shall be provided on both sides of the bus to enable driver to have clear side/rear views.	Rear-view mirrors shall be provided on both sides of the bus to enable driver to have clear side/rear views with sufficient height to avoid obstructions by other road users like rickshaws etc as per the provision of CMVR/ Bus Code.
21.	VIII	35: Destination Boards	88 to 91	35.1 Alphanumeric Dual Display Technology coloured LED based electronic route display system of high intensity illumination with automatic brightness control alongwith audible and display system in English and Hindi shall be installed at the front, rear and side of bus as per the following details.	Alphanumeric Dual Display Technology Amber coloured LED based electronic route display system of high intensity illumination with automatic brightness control (minimum 50 steps) along with audible and display system in English and Hindi languages via window type software package shall be installed at the front, rear and side of bus as per the details given in the following Sub-clauses. Amber coloured (Dominant wavelength between 590 to 595mm), Diffused type of Better Visibility, UV Resistant Type with viewing angle of 120 degree Horizontal/ 80 degree vertical. Equipment to be 'E' Marked. Front Sign display shall be clearly visible in all weathers at a

			<p>35.1.1...The display system be accommodated in the size specified in the bus code. The display should be fixed type. The pitch of the LED shall be optimised to cover the maximum possible area along the length for displaying maximum number of letters. ....</p> <p>35.1.2: There shall be scrolling display of destination in Hindi &amp; English alternatively along with fixed route number in Arabic numerals...The display system be accommodated as per the minimum size specified in the bus code. The pitch of the LED shall be optimized to cover the maximum possible area along the length for displaying maximum number of letters. ....</p> <p>35.1.3... The display system shall be accommodated within the minimum size specified in the bus code. The display shall be fixed type. The pitch of the LED shall be optimised to cover the maximum possible area along the length for displaying maximum number of letters. .</p> <p>35.1.4:.... The illumination system will be of module display type. The display size shall be 800mm x 100 mm...</p> <p>...Further the system shall also have a programming for minimum 150 nos. of</p>	<p>distance of 15 meters. The system shall be rugged construction, vibration proof and shall be able to operate efficiently at ambient temperatures of approximately 0 deg to 50 deg C, humidity level of 5% to 100%.</p> <p>...The display system be accommodated in the size specified in the bus code i.e. minimum height of Destination Board should be 220mm &amp; Minimum height of character should be 200mm. The display should be fixed, scroll &amp; alternate mode type. The pitch of the LED shall be 13.4x 13.0mm optimised to cover the maximum possible area along the length for displaying maximum number of letters. ....</p> <p>There shall be fixed, scrolling &amp; alternate mode display of destination in Hindi &amp; English alternatively along with fixed route number in Arabic numerals...The display system be accommodated as per the minimum size specified in the bus code i.e. minimum height of Destination Board should be 220mm &amp; Minimum height of character should be 200mm. The pitch of the LED shall be 13.4x10.0mm optimized to cover the maximum possible area along the length for displaying maximum number of letters....</p> <p>...The display system shall be accommodated within the minimum size specified in the bus code i.e. minimum height of Destination Board should be 220mm &amp; Minimum height of character should be 200mm. The display shall be fixed, scroll &amp; alternate mode type. The pitch of the LED shall be 13.4x10.0mm optimised to cover the maximum possible area along the length for displaying maximum number of letters...</p> <p>The illumination system will be of module display type. The display size shall be 800mm x 100 mm in Amber colour...</p> <p>...Further the system shall also have a programming for minimum 150 nos. of bus stops on each route. The next bus</p>
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				<p>bus stops on each route. ...</p> <p>To add as C 35.7: ITS Related requirements.</p>	<p>stop/ destination display synchronized with voice announcement is essential....</p> <p>35.7.1: Ticketing: Bus architecture should be compatible with ITS.</p> <p>35.7.2: Smart Card.</p> <p>35.7.3: Passenger Information Audio-visual Systems.</p> <p>35.7.4: Vehicle Tracking Systems: Bus architecture should be compatible with Vehicle Tracking Systems.</p> <p>35.7.5: The System on the Bus should be such that a single controller, compatible with Ticketing machine and Smart Card reader, should be able to control Passenger Information Systems (Audio &amp; Visual), Vehicle Tracking Systems, Drivers Bus route guidance and Multiplex wiring system, and Two Cameras on the Bus. The Camera Recording for at least 48 hours should be available either on the Bus or Recorded in the back office system (To be downloaded atleast once a day via WLAN or Class 1 Blue Tooth interface). The controller should have inbuilt GPS, GPRS capability (GSM or CDMA or Private Radio Network), to be able to integrate with the Back office ITS Requirements and Signs on Bus Stops and BRT's. Equipment to be 'E' Marked. The Controller memory size should be minimum 64 Mega Byte. Communication interface in the controller should include RS485 &amp; RS232 (atleast 2 ports) &amp; CAN 2B &amp; USB Host.</p>
22.	VIII	38: Towing Device	91	Heavy-duty ring type towing devices shall be provided in the front and rear bumpers area with load transfer to bus structural members...	Heavy-duty ring type towing devices shall be provided in the front and rear bumpers area with load transfer to bus structural members. Towing devices should be visible...
23.	VIII	41: Fire Extinguishers	92	...The enclosure box shall have transparent breakable glass at front cover.	...The enclosure box shall have transparent breakable glass at front cover. The Location & fitment of Fire Extinguishers should be such that the equipment can be easily located & removed for use in case of emergencies.

24.	VIII	44: Bus Dimensions	92	The bus shall be with wheelbase of 6100 mm to 6500 mm (with ramp over angle from 6.0 deg. to 6.4 deg.) with the rear overhang not exceeding 50% of wheelbase and front overhang not exceeding 45% of the wheelbase (further limited to 2700mm)...	The bus shall be with wheelbase of 6100 mm to 6500 mm (with ramp over angle from 6.0 deg. to 6.4 deg.) with the rear overhang not exceeding 50% of wheelbase and front overhang not exceeding 45% of the wheelbase (further limited to 2700mm). Slope of rear bottom overhang structure should be adequately raised to prevent damages due to raised obstructions on the road....
25.	VIII	46: Multiplex Wiring	93 to 95	The bus body will have Multiplex Wiring System...	The Chassis and Bus Body shall have a Master Master Type Multiplexed Wiring System subject to ARAI's Report on LT wire, with onboard Diagnostic Display panel. The Multiplex Wiring System shall have Current Measurement of each output and Automatic Trip Facility. The Multiplex Wiring System shall be integrated with the Common Controller of Destination Signs, to enable Back Office Monitoring and Control Centre to Monitor and analyse Vehicle Health. The bus body will have Multiplex Wiring System....
26.	VIII	47.7: Side Markers	95	Side markers shall be provided on both sides as per bus code/ AIS 008.	Sunken type side markers shall be provided on both sides as per Bus Code/ AIS 008.
27.	VIII	57: General Requirements	98-100	Add at 57.2.3	Flammability test for all flammable components/ items/ material shall be tested as per the current standards and is a safety requirement of the Contracts irrespective of their value is less than 0.5% DDP price of the bus.
28.	VIII	66: Number Plates & Graphics	102	Add 66.0	66.1: Number Plate on exterior front & rear ends as well as interior front for indicating Bus Depot/ Region also. 66.2: All graphics/ instructions should be bold & properly located specifically instructions for emergencies.
29.	XI	Annexure-11 1.2.2: Lab Test Reports	182	The Bus Manufacturer can use the material out of the lot, which has been approved by the lab. It is necessary to furnish latest Lab Test Report (as per specification of the contract from CIRT, Pune/ ARAI, Pune/ BIS approved Labs) to the Purchaser before use in manufacturing of Buses.	The Bus Manufacturer can use the material out of the lot, which has been approved by the lab. It is necessary to furnish latest Lab Test Report (as per specification of the contract from CIRT, Pune/ ARAI, Pune/ BIS approved Labs) to the Purchaser before use in manufacturing of Buses. Only the components/ items/ material passing on all the specified parameters including flammability test wherever required in Lab Test be used in manufacturing of the LF CNG Buses. All Lab Test Reports (LTRs) will be required at the time of delivery of buses to DTC except the LTRs for paints 'Gloss Test' which takes longer period of about one year. However, to maintain the continuity in production the stage inspection will be cleared at

					the risk & cost of the Contractors.
30.	XI	Annexure-11 Para-1.3: Purchase of Material	183	...Also, the lab testing will not be compulsory in case value of any item consumed in bus body fabrication is less than 0.5 % of DDP rate of the bus as per LOA subject to the condition that the Contractor shall make available list of all such items with rates, quantity and total value, duly certified by Chartered Accountant at the time of supply of prototype bus to the Purchaser.	...Also, the lab testing will not be compulsory in case value of any item consumed in bus body fabrication is less than 0.5 % of DDP rate of the bus as per LOA subject to the condition that the Contractor shall make available list of all such items with rates, quantity and total value, duly certified by Chartered Accountant at the time of supply of prototype bus to the Purchaser. However, Flammability test for all flammable components/ items/ material shall be tested as per the current standards and is a safety requirement of the Contracts irrespective of their value less than 0.5% DDP price of the bus.
31.	XI	Annexure-13 List of the Material for Pre-testing & their Random Samples	189	2. Phosphating/ Galvanizing: To be tested per lot of 5 buses.  6. Paint: PU Paint as per relevant IS: 13213:1991 (or latest) & any other relevant BIS Standards.  7. LT Wire: BIS: 2465-1984 (or latest).	To be tested per lot of 10 buses  PU Paint as per relevant IS: 13213:1991 (or latest) & any other relevant BIS Standards. In case of relevant BIS/ International Specifications not available, Manufacturers' Specifications shall be complied.  Subject to ARAI's Report on LT Wire.

**N.B.: PLEASE NOTE THAT AFTER INCORPORATING THE ABOVE AMENDMENTS (PAGE- 01 TO 09); THE RFP DOCUMENT HAS BEEN FROZEN.**