

EXPRESSION OF INTEREST

FOR

CONTRACT MANUFACTURING OF ELECTRIC BUS

Issued by:

Bharat Heavy Electricals Limited

High Pressure Boiler Plant, Tiruchirappalli, Tamilnadu -620014

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1. Introduction

BHEL solicits response from Bus Manufacturers / Bus Prototype Developers, who meet the requirement of this Expression of Interest (EOI) and who are willing to be associated with BHEL towards carrying out the design, engineering, integration, manufacturing, assembly etc. of various E-Bus variants. The scope will also cover wherever applicable, facilitating homologation through suitable certifying agency and extending the needed coordination. In this EOI, “Electric Bus” means only a pure Electric Bus using Li Ion battery and does not mean or include Hybrid Electric Buses.

Subsequent to the receipt of offers from interested bidders for this EOI and holding the needed discussions with the respondent bidders, (1) technical specifications for further ordering will be finalized and (2) eligible and interested bidders will be short-listed for various categories of the requirement. Further ordering for manufacture/execution will be pursued by adopting tendering process.

1.1 About Bharat Heavy Electricals Limited (BHEL):

BHEL is a leading Public Sector Undertaking (PSU) company of India, wherein Government of India is holding majority equity. BHEL is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing organization in India, catering to the core infrastructure sectors of Indian economy viz. energy, transportation, heavy engineering industry, defence and aerospace business, renewable energy, non-conventional energy etc. The energy sector covers generation, transmission and distribution equipment for thermal, gas, hydro, nuclear and solar photo voltaic based power generation.

BHEL has been in this business for more than 50 years and BHEL supplied equipment's account for more than 57% (approx. 180 GW) of the total thermal generating capacity in India. BHEL is also listed on Indian stock exchanges. BHEL has 17 manufacturing units, 2 Repair Units, 4 power sector regions, 8 service centres, 3 overseas offices and 15 regional offices besides host of project sites spread all over India and abroad. Government of India categorized BHEL as “Maharatna Company” in 2013.

BHEL has identified e-mobility as a promising business vertical as well as a critical enviro-friendly green technology to be pursued in the near and far term. It affirms keen interest to pursue various aspects related to the current and future needs of EV-Electric Vehicles. BHEL has also embarked upon elaborate plans to start regular commercial production of PMSM-traction motors and Li-ion battery modules; this would cater to both captive consumption and to the larger open market as well. In-house manufacture, integration and rollout of commercial EVs are planned to be carried out from the manufacturing unit located at Trichy.

2. Expression of Interest – EOI - Description:

BHEL is soliciting Expression of Interest from eligible and interested Bus Prototype Developers / Bus Manufacturers for the development of E-Bus prototypes and/or manufacturing of E-buses as per the variant/ Category / feature list given hereunder.

The E-bus variants that BHEL may plan to manufacture through the prospective vendors could pertain to any of / combination of the following variants / features.

1. Nominal Length of the E-bus: Standard (9.4m - 12 m), Midi (7.0 -9.4 m) and Mini – (<7.0 m)
2. Nominal Floor height : Low floor (<400 mm), Medium floor (650mm) and high floor (>900 mm)
3. Bus Rapid Transit System (BRTS) buses – as well as non-BRTS buses
4. Air-conditioned (A/c) as well as non-A/c buses
5. City bus / Inter-city bus / Coach bus / Tarmac bus / School bus / or for any other applications.

3. Category: The scope of engagement under the ambit of this EOI and further manufacturing orders decided following this could fall under four main categories as detailed below.

A. Category: A – Prototype manufacture as per BHEL finalized chassis design & aggregate choice.

- BHEL carries out the Chassis Design, engineering, selection of major aggregates for e-Bus prototype.
- Balance activities like procurement of all raw material and aggregates, fabrication of chassis, assembly of aggregates, testing and body building leading to a finished fully built up bus shall be carried out by the vendor.
- Also included in the scope are preparation and submission of all documents and drawings needed for homologation of the prototypes and extending the needed technical coordination during homologation, leading to successful grant of homologation/ type approval certificate in the name of BHEL and delivery of the bus to its intended destination.

B. Category: B – Prototype manufacture as per Vendor finalized chassis design & aggregate choice

- The whole scope of manufacturing the prototype to BHEL-stipulated performance specifications is that of the vendor's. This includes *inter alia* Chassis Design, Engineering, choice and procurement of the needed raw material and aggregates, fabrication and body building till finishing of the prototype.
- The vendor shall be primarily responsible for getting the homologation certificate successfully granted in the name of BHEL and delivery of the bus to its intended destination.

C. Category: C – Manufacture of E-Bus as per BHEL-owned homologation certificate.

D. Category: D - Manufacture of E-Bus as per Vendor-owned homologation certificate

In all these four categories, the performance specifications of the E-Bus stipulated by BHEL shall be sacrosanct. Detailed scope of work envisaged for each of the categories is given below in section 5.1 – 5.4. Vendors are requested to affirm acceptance or otherwise by marking suitably in the “Vendor Response” column.

4. Pre-Qualifying Requirement: The bidding Vendors have to compulsorily meet and qualify for the specified criteria wherever applicable.

4.1 For Bus Prototype Developer: (Category A & B)

PQR Criteria – Necessary Documentary Proof should be furnished to substantiate any claim	Vendor Response
1. Vendor should be an Indian legal entity registered as a company in India under the Indian companies act and meeting the following criteria as given below.	
2. Financial Capability: The average Annual Turnover of the bidding vendor should be at least Rs. 300 Lakhs in last 3 years Separate Chartered Accountant's certificate shall be attached along with the Bid.	
3. Technical Capability: The bidding vendors should have prior experience in Electric Vehicles in general and should have carried out manufacture / integration of Electric Buses in the last five years.	
4. Bus Certification: The bidding vendor should have obtained necessary homologation certification for CMVR compliance of at least two buses (any type of buses such as e-bus, Diesel driven buses, CNG buses etc.,) from the designated approving authorities such as Automotive Research Association of India (ARAI) or International Centre for Automotive Technology (ICAT, CIRT etc. in the last 5 years.	
5. Accredited manufacturing facility: The bidding vendor should own a certified/accredited manufacturing facility (by any of the CMVR authorized agencies) in India for manufacturing buses (any type of buses such as e-bus, Diesel driven buses, CNG buses, etc.). Such accreditation certification should be currently valid.	

4.2 For Bus Manufacturer: (For Category C&D)

PQR Criteria – Necessary Documentary Proof should be furnished to substantiate any claim	Vendor Response
1. Vendor should be an Indian legal entity registered as a company in India under the Indian companies act and meeting the following criteria as given below.	
2. Financial Capability: The average Annual Turnover of the bidding vendor should be at least Rs. 1000 Lakhs in last 3 years Separate Chartered Accountant's certificate shall be attached along with the Bid.	
3. Technical Capability: The bidding vendors should have prior experience in Electric Vehicles in general and should have carried out manufacture / integration of Electric Buses in the last five years.	
4. Manufacturing Capability: The bidding vendor should possess bus manufacturing facilities with a licensed annual manufacturing capacity of more than 500 buses.	
5. Bus Certification: The bidding vendor should have obtained necessary homologation certification for CMVR compliance of at least two buses (any type of buses such as e-bus, Diesel driven buses, CNG buses etc.,) from the designated approving authorities such as Automotive Research Association of India (ARAI) or International Centre for Automotive Technology (ICAT, CIRT etc. in the last 5 years.	
6. Accredited manufacturing facility: The bidding vendor should own a certified/accredited manufacturing facility (by any of the CMVR authorized agencies) in India for manufacturing buses (any type of buses such as e-bus, Diesel driven buses, CNG buses, etc.). Such accreditation certification should be currently valid.	

5.1 Detailed scope of work for Category A:

Sl.	Prototype: BHEL Designed Chassis & aggregates Vendor scope / BHEL terms and conditions	Vendor response (Kly tick suitably)	
A1	Scrutiny and finalizing of the detailed chassis design finalized y BHEL, choice of aggregates, choice of front/rear facia design/styling, plan of manufacturing and procurement. The detailed procurement and manufacturing schedule shall be submitted to BHEL after PO.		Agree
			Disagree
A2	Chassis fabrication, inspection and testing as needed. Including pre-despatch and post-despatch inspection of all procured aggregates BHEL inspectors and/or third-party inspectors appointed by BHEL and customers shall be involved in inspection/QC checks.		Agree
			Disagree
A3	Mechanical and Electrical assembly and integration		Agree
			Disagree
A4	Panel fixing, front facia/ rear facia fixing, cubing and completion of superstructure, trial running of drive-away chassis as applicable		Agree
			Disagree
A5	Body building, painting, panel and trim fitment, fixing of seats and other internal fairings, incorporation of mandatory ITS systems and finishing the complete bus		Agree
			Disagree
A6	Preliminary performance tests, shower test etc		Agree
			Disagree
A7	Document, drawings submission, coordination for preparation of Homologation tables and type test formats.		Agree
			Disagree
A8	Suitable packing and transportation of the prototype to the finalized CMVR testing agency like ARAI-Pune, CIRT-Pune, ICAT-Manesar, GARC-Chennai etc.		Agree
			Disagree
A9	Extending the needed technical coordination and support for homologation; this would need full time stationing of a skilled technician plus driver during the homologation testing (~ 3-4 months.)		Agree
			Disagree
A10	Upon successful passing and certification of prototype, the prototype bus shall be shipped to BHEL, Trichy or to the BHEL-designated location		Agree
			Disagree
A11	Undertaking to initiate/ carry out the needed permissions, paperwork and approvals with regard to RTO rules/processes on BHEL's behalf – optional, wherever needed.		Agree
			Disagree
A12	Others...		

5.2 Detailed scope of work for Category B

Sl.	Prototype: Vendor Designed Chassis & aggregates Vendor scope / BHEL terms and conditions	Vendor response (Kly tick suitably)	
B1	Scrutiny and finalizing of the detailed chassis design, choice of aggregates, choice of front/rear facia design/styling, plan of manufacturing and procurement. The detailed procurement and manufacturing schedule shall be submitted to BHEL after PO.		Agree
			Disagree
B2	Chassis fabrication, inspection and testing as needed. Pre-despatch and post-despatch inspection of all procured aggregates. BHEL inspectors and/or third-party inspectors appointed by BHEL and customers shall be involved in inspection/QC checks.		Agree
			Disagree
B3	Mechanical and Electrical assembly and integration		Agree
			Disagree
B4	Panel fixing, front facia/ rear facia fixing, cubing and completion of superstructure, trial running of drive-away chassis as applicable		Agree
			Disagree
B5	Body building, painting, panel and trim fitment, fixing of seats and other internal fairings, incorporation of mandatory ITS systems and finishing the complete bus		Agree
			Disagree
B6	Preliminary performance tests, shower test etc		Agree
			Disagree
B7	Document, drawings submission, coordination for preparation of Homologation tables and type test formats.		Agree
			Disagree
B8	Suitable packing and transportation of the prototype to the finalized CMVR testing agency like ARAI-Pune, CIRT-Pune, ICAT-Manesar, GARC-Chennai etc.		Agree
			Disagree
B9	Extending the needed technical coordination and support for homologation; this would need full time stationing of a skilled technician plus driver during the homologation testing (~ 3-4 months.)		Agree
			Disagree
B10	Upon successful passing and certification of prototype, the prototype bus shall be shipped to BHEL, Trichy or to the BHEL-designated location		Agree
			Disagree
B11	Undertaking to initiate/ carry out the needed permissions, paperwork and approvals with regard to RTO rules/processes on BHEL's behalf – optional		Agree
			Disagree
B12	Others...		

5.3 Detailed scope of work for Category C

Sl.	BHEL-owned Certificate; Regular Manufacture of E-Bus Vendor scope / BHEL terms and conditions	Vendor response (Kly tick suitably)	
C1	Scrutiny and finalizing of the procurement action on aggregates, action on sourcing front/rear facia, manufacturing plan. The procurement and manufacturing schedule shall be submitted to BHEL after PO.		Agree
			Disagree
C2	Chassis fabrication, inspection and testing as needed. BHEL inspectors and/or third-party inspectors appointed by BHEL and customers shall be involved in inspection/QC checks.		Agree
			Disagree
C3	Pre-despatch and post-despatch inspection of all procured aggregates		Agree
			Disagree
C4	Mechanical and Electrical assembly and integration		Agree
			Disagree
C5	Panel fixing, front facia/ rear facia fixing, cubing and completion of superstructure, trial running of drive-away chassis as applicable		Agree
			Disagree
C6	Body building, painting, panel and trim fitment, fixing of seats and other internal fairings, incorporation of mandatory ITS systems and finishing the complete bus		Agree
			Disagree
C7	Performance demonstration tests, shower test etc		Agree
			Disagree
C8	Undertaking to initiate/ carry out the needed permissions, paperwork and approvals with regard to RTO rules/processes on BHEL's behalf – optionally, wherever needed.		Agree
			Disagree
C9	Completed bus shall be shipped to BHEL, Trichy or to the BHEL-designated location with the specified packaging, protection, harness.		Agree
			Disagree
C10	Others...		

5.4 Detailed scope of work for Category D

Sl.	Vendor–owned Certificate; Regular Manufacture of E-Bus Vendor scope / BHEL terms and conditions	Vendor response (Kly tick suitably)	
D1	Scrutiny and finalizing plan of manufacturing and procurement. The procurement/manufacturing schedule to be submitted to BHEL after PO.		Agree
			Disagree
D2	Chassis fabrication, inspection and testing as needed. BHEL inspectors and/or third-party inspectors appointed by BHEL and customers shall be involved in inspection/QC checks.		Agree
			Disagree
D3	Pre-despatch and post-despatch inspection of all procured aggregates		Agree
			Disagree
D4	Mechanical and Electrical assembly and integration		Agree
			Disagree
D5	Panel fixing, front facia/ rear facia fixing, cubing and completion of superstructure, trial running of drive-away chassis as applicable		Agree
			Disagree
D6	Body building, painting, panel and trim fitment, fixing of seats and other internal fairings, incorporation of mandatory ITS systems and finishing the complete bus		Agree
			Disagree
D7	Performance demonstration tests, shower test etc		Agree
			Disagree
D8	Undertaking to initiate/ carry out the needed permissions, paperwork and approvals with regard to RTO rules/processes on BHEL's behalf – optionally, wherever needed.		Agree
			Disagree
D9	Completed bus shall be shipped to BHEL, Trichy or to the BHEL-designated location with the specified packaging, protection, harness.		Agree
			Disagree
D10	Others...		

Note: Broad technical Specifications of the E-Bus shall be as detailed in **Annexure-1**

6. Quality control, Inspection & Testing (As Applicable)

1. The bidder shall be required to ensure compliance of the prototypes developed and E-buses with all the latest provisions of the Central Motor Vehicle Rules 1989 (CMVR), Motor Vehicle Act 1988 (MVA), relevant section of AIS, UBS-II and other standards and guidelines as applicable along with any and all amendments therein along with other statutory and legal requirements as applicable on the date of delivery/registration of Buses.
2. The bidder shall allow BHEL inspectors and/or third-party inspectors appointed by BHEL, for carrying out preliminary inspection at their works in every stage of E-bus assembly.
3. The bidder shall offer the fully built electric buses/prototypes for preliminary inspection like complete internal and external inspection, functioning of all electrical and mechanical aggregates, equipment and instruments, shower test etc. at their works.
4. Bidder shall also arrange for a trail run of the E-buses manufactured as per BHEL requirement at their works.
5. Bidder shall submit the quality Plan. In case the bidder does not have a standard format, quality plan shall be furnished as per the "BHEL format".

7. Possible Variants:

List of E-bus Variants		Please affix one of the following response symbol.	Category of Supply Scope			
Sr. No.	Model	✓ - Agreement/willingness to develop prototype/E-bus for BHEL ☒ – Non-agreement/ non-willingness to participate.	Category A Prototype BHEL Design	Category B Prototype Vendor Design	Category C Regular Bus BHEL Certificate	Category D Regular Bus Vendor Certificate
1	AC12L	12m Low floor E-bus - (350 -400 mm floor height) with Air conditioning				
2	12L	12m Low floor E-bus - (350 -400 mm floor height) without Air conditioning				
3	AC12M	12m Medium floor E-bus - (650 -750 mm floor height) with Air conditioning				
4	12M	12m Medium floor E-bus - (650 -750 mm floor height) without Air conditioning				
5	AC12H	12m High floor E-bus - (900 mm or higher floor height) with Air conditioning				
6	12H	12m High floor E-bus - (900 mm or higher floor height) without Air conditioning				
7	AC09L	9m Low floor E-bus - (350 -400 mm floor height) with Air conditioning				
8	09L	9m Low floor E-bus - (350 -400 mm floor height) without Air conditioning				

List of E-bus Variants		Please affix one of the following response symbol.	Category of Supply Scope			
Sr. No.	Model	✓ - Agreement/willingness to develop prototype/E-bus for BHEL ☒ – Non-agreement/ non-willingness to participate.	Category A Prototype BHEL Design	Category B Prototype Vendor Design	Category C Regular Bus BHEL Certificate	Category D Regular Bus Vendor Certificate
9	AC09M	9m Medium floor E-bus - (650 -750 mm floor height) with Air conditioning				
10	09M	9m Medium floor E-bus - (650 -750 mm floor height) without Air conditioning				
11	AC09H	9m High floor E-bus - (900 mm or higher floor height) with Air conditioning				
12	09H	9m High floor E-bus - (900 mm or higher floor height) without Air conditioning				
13	AC07L	7m Low floor E-bus - (350 -400 mm floor height) with Air conditioning				
14	07L	7m Low floor E-bus - (350 -400 mm floor height) without Air conditioning				
15	AC07M	7m Medium floor E-bus - (650 -750 mm floor height) with Air conditioning				
16	07M	7m Medium floor E-bus - (650 -750 mm floor height) without Air conditioning				
17	AC07H	7m High floor E-bus - (900 mm or higher floor height) with Air conditioning				

List of E-bus Variants		Please affix one of the following response symbol.	Category of Supply Scope			
Sr. No.	Model	✓ - Agreement/willingness to develop prototype/E-bus for BHEL ☒ – Non-agreement/ non-willingness to participate.	Category A Prototype BHEL Design	Category B Prototype Vendor Design	Category C Regular Bus BHEL Certificate	Category D Regular Bus Vendor Certificate
18	07H	7m High floor E-bus - (900 mm or higher floor height) without Air conditioning				
19	AC-BRTS	9m Low floor E-bus - (900 mm floor height) with Air conditioning				
20	BRTS	9m Low floor E-bus - (900 mm floor height) without Air conditioning				
21	Mini	Less than 7m – Mini E-bus – (360 – 650mm floor height) With Air-conditioning / without Air-conditioning				
22	H2FC	Hydrogen-fed Fuel cell powered Pure Electric Bus with minimal Li-ion battery – Specify length – Specify Features etc.				
23	SPL	Any special category bus – (eg. Composite structure chassis, Fibreglass body, Aluminium structure, etc) - Specify length – Specify Features etc.				
24		<vendor to specify, if anything other than above>				
25		<vendor to specify, if anything other than above>				

8. Reference list of Electric Buses

Sl.	Bus Model Type of Bus	Name of Customer /Country	Bus Size (no of seats)	GVW, kg Of the Bus	Range per single charge	Homologat ion agency	Cumulative Kms of successful operation till date	Qty of Buses supplied	Battery Chemistry (if Electric)	Traction motor kW (if Electric)	Charging type, standard (if Electric)

9. Special Terms & Conditions: Vendor may indicate any special clause or condition pertaining to the different variants / categories

<u>Sl.</u>	<u>Description / Details</u>	<u>Category-A</u>	<u>Category-B</u>	<u>Category-C</u>	<u>Category-D</u>

10. DISCLAIMER

1. All information contained in this EOI are provided / clarified are in good interest and faith. The purpose of this EOI is to provide interested parties with needed information to enable them formulate their response / offer / bid for qualification and subsequent processing pursuant to this EOI.
2. Though adequate care has been taken in the preparation of this EOI document, the interested respondent should satisfy themselves towards the document's completeness in all respects. As the information is non-exhaustive, interested parties are required to make enquiries and seek clarifications wherever required.
3. The issue of this EOI does not imply that BHEL is bound to select and shortlist any/some of the respondents for the next stage or to enter into any agreement(s). BHEL reserves its right to reject any application submitted in response to this EOI document at any stage without assigning any reasons thereof. BHEL also reserves the right to withhold or withdraw the entire EOI process at any stage.
4. The Applicant shall bear all costs associated with or relating to the preparation and submission of its Application including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by BHEL or any other costs incurred in connection with or relating to its Application. All such costs and expenses will be to the Applicant's account and BHEL shall not be liable in any manner whatsoever regardless of the conduct or outcome of this EOI.
5. BHEL shall accept no liability of any nature towards those acts resulting from reliance of /use of any statements/information contained in this EOI by anybody.

Annexure – 1 : Electric Bus - Broad Specifications		
Sl.No	Description	Details / Requirements
1	Bus Chassis	Monocoque Chassis/ Ladder frame Chassis
2	Bus Floor Height mm	Low floor – 350 to 400 Medium floor – 600 to 700 High floor – above 900
3	Propulsion System	Pure Electric, Battery operated
4	Power Train	Electric motor. The motor shall be Permanent Magnet Synchronous Motor (PMSM) motor. Centrally driven/e-axle (integrated with rear axle)/hub motors
5	Restart Gradeability from stop with GVW	17%
6	Range	Min. 120 km; upper limit : As per requirement from time to time
7	Max. GVW for design	7m Bus – 10000 kg 9m Bus – 15000 kg 12 m Bus – 18000 kg
8	Motor/ Battery Power pack operational requirements	Motor/ Battery Power pack should be able to operate efficiently at ambient temperatures of approximately 0°to 50°C, humidity level from 5% to 100%, and altitude levels of up to 2000 meters, generally operating in the semi-arid zone / hilly region prevailing in the area.
9	Battery Power pack location	Optional; preferably at the bottom / rear
10	Battery capacity	Based on specific energy consumption. Threshold levels of Mini @ 0.7 kWhr/km Midi @ 1.0 kWhr/km Standard @ 1.4 kWhr/km and specified range for a SOC/DOC of 20 – 100%
11	Battery Type	Advanced Li-Ion (LFP/NMC/Any other acceptable chemistry)
12	Battery Pack Protection Level	IP67
13	Battery Cooling System	Liquid cooling / No cooling
14	BMS communication with Charger	CCS combo 2.0 (PLC), GB/T (CAN)
15	Steering system	Hydraulic Power steering
16	Suspension system (Front and Rear)	Front: Leaf/Air-suspension – Rear: Air Suspension
17	Kneeling Mechanism	required for low floor
18	Suspension Controls	Mechanical or Electronically controlled air suspension system
19	Anti-skid Anti-Lock Braking system (ABS)	As per CMVR Mandatory
20	Regenerative braking system	Needed
21	Batteries for auxiliary power requirement	Low maintenance type Lead acid batteries for 24 V system-performance as per BIS: 14257-1995 (latest). 2*12V of commensurate capacity. Maintenance free batteries preferred.
22	Speed limiting device	Electronic type duly approved / certified as per AIS-018/2001 or latest, tamper proof and be adjusted to applicable speed limit

23	Tyre	Steel radial tube-less, size and performance as per CMVR
24	Bus Characteristics	Category-1, 2, 3 etc.
25	Bus dimensions	As per CMVR (Length, Width, Height, Overhang etc.)
26	Minimum Turning Circle Radius (mm)	As per CMVR
27	Number of seats incl. wheel chair	Vendor to specify
28	Ramp for wheel chair at the gates	Yes, needed
29	Bus complete superstructure	AS per UBS-II and AIS 052, AIS-153
30	ITS enabled bus	needed
31	Life cycle requirements of bus	12 years or 10,00,000 kms(whichever is earlier)
32	CCTV cameras	Needed
33	Aux. Charge Port	Cash-less ticket vending machine, passenger seat mobile charging etc.
34	Percentage of Localization	Bidder shall submit the split of sourcing country/country of origin of all mechanical and electrical aggregates.
35	Guarantee/Warranty	Entire bus should be carrying a full replacement warranty covering performance failures during the first year or 1.0 Lakh kilometres, whichever is earlier. For traction batteries this shall be first 5 years or 5,00,000 kms.
36	Full body building including passenger cabin A/c, CMVR compliant doors, windshields, seating arrangement, easy access features to help the differently abled, ITS features, infotainment, GPS, cashless ticketing etc.	
37	User-comfort-specific, safety-specific features like CC Camera, 2-way microphone/speaker for driver, emergency STOP button in passenger area, adequate number of Emergency doors/windows etc., On-board Driver information & communication systems	
38	Homologation Co-ordination: Bidder shall take responsibility for homologation support with presence of one technician/executive and one driver. Bidder shall take responsibility for fabrication of needed Mock-up assembly for testing. Homologation agency will be identified by BHEL. Transportation of bus from bidder location to testing agency and back will also be under bidder scope.	