

State Urban Development Agency, (SUDA) Uttar Pradesh

Nav Chetna Kendra, 10- Ashok Marg, Lucknow- 226001

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Website : sudaup.org

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Competitive Bidding

for

The Supply of E-Rickshaw and Their Comprehensive Warranty Maintenance Services with Establishment of Service Centres in all Districts of Uttar Pradesh

BID REFERENCE No.	:01/RICKSHAW-YOJNA/UPGOVT/2016
DATE AND TIME FOR OBTAINING BID DOCUMENT	: FROM 08.09.2016 TO 29.09.2016 UPTO 02:00 PM
DATE OF PRE-BID CONFERENCE	: 16.09.2016
PLACE FOR OBTAINING BID DOCUMENT	: Office of SUDA U.P, Lucknow
LAST DATE AND TIME FOR SUBMISSION OF BIDS	: 29.09.2016 UPTO 04:00 PM
DATE AND TIME FOR OPENING OF TECHNICAL BIDS	: 29.09.2016 UPTO 04:30 PM at SUDA Meeting Hall
PLACE OF OPENING OF BIDS	: State Urban Development Agency, Nav Chetna Kendra, 10-Ashok Marg, Lucknow-226001.
ADDRESS FOR COMMUNICATION	: State Urban Development Agency, Nav Chetna Kendra, 10-Ashok Marg, Lucknow-226001.
BID SECURITY	:Rs. 1,37,00000.00 (Rupees One Crore thirty-seven lakh) Only
Tender Document Price (Non refundable)	: Rs. 25000.00 (Rupees Twenty Five Thousand) Only

This Document Contain....

It will be the responsibility of the Bidders to check State Urban Development Agency, Uttar Pradesh website <http://www.sudaup.org> for any amendment through corrigendum in the tender document. In case of any amendment, Bidders amendments in their Bids accordingly.

Key Information to Bidders

This invitation for Bids is for supply and comprehensive warranty maintenance of Motor/Battery Operated electric rickshaw with establishment of Service Centres in all districts of Government of Uttar Pradesh.

1. Bidders are advised to study the Tender Document carefully. Submission of Bids against this Tender shall be deemed to have been done after careful study and examination of the procedures, terms and conditions of the Tender Document with full understanding of its implications.
2. The Tender document is available at office of State Urban Development Agency, Uttar Pradesh (hereinafter referred to "SUDA") and its website <http://www.sudaup.org>. Interested Bidders may also view, download the Tender document, and submit their Bid on the date and time mentioned in the table below:

(a)	Date of publication of Tender notice	08.09.2016
(b)	Availability of Tender document	From 08.09.2016 after 11:00 AM on State Urban Development Agency, U.P. website http://www.sudaup.org and also in State Urban Development Agency, U.P. office.
(c)	Place of submission and opening of the Bid	State Urban Development Agency, (SUDA), Nav Chetna Kendra, 10 Ashok Marg, Lucknow-226001
(e)	Last date and time for submission of the Bid	29.09.2016 up to 04:00 PM.
(f)	Technical Bids opening date & time	29.09.2016 at 04:30 PM.
(g)	Financial Bid opening date & time (Only of technically qualified Bidders)	To be announced after evaluation of Technical Bid.
(h)	Venue of opening of technical & financial Bids	State Urban Development Agency, (SUDA), Nav Chetna Kendra, 10-Ashok Marg, Lucknow-226001
(i)	Contact officer	Director, State Urban Development Agency, (SUDA), Nav Chetna Kendra, 10- Ashok Marg, Lucknow-226001
(j)	Cost of Tender document	Rs. 25000.00 (Rupees Twenty five thousand) only (Non refundable)
(k)	Bid Security (Earnest Money Deposit)	Rs. 1.37 Crores (Rupees One Crore thirty-seven Lac) Only

3. Bidder shall have to submit non refundable Rs. 25000.00 (Rupees Twenty five thousand) only in the form of Bank Draft or Banker's Cheque in favour of Director, State Urban Development Agency (SUDA), Lucknow payable at Lucknow along with Technical Bid.
4. The Bids will be opened in the presence of Bidder's representatives, who choose to attend, at the venue, date and time mentioned in the above table.
5. In the event of date specified for Bids opening being declared a holiday for SUDA's office, then the due date for opening of Bids shall be the following working day at the appointed time.

**State Urban Development Agency,(SUDA)U.P.
(Nodal Agency Of Govt.)**

Nav Chetna Kendra, 10- Ashok Marg, Lucknow- 226001

Bid Reference No. : 01/RICKSHAW-YOJNA/UPGOVT/2016

Tender Notice

Sealed tenders are invited from reputed Original Equipment Manufacturers of E-rickshaw, for supply of E-rickshaw and establishment of Service Centres in all districts of Uttar Pradesh up to 04:00PM of 29th September 2016. For details, tender document can be obtained from the office of the SUDA on any working day between 10.00 a.m. to 5.00 pm. on payment of tender document fee Rs. 25000.00 [Rs. Twenty five thousand only],(non refundable) in the form of Bank Demand Draft issued by Nationalised Bank in favour of Director SUDA, payable at Lucknow . Tender document and other related information can also be downloaded from the website <http://www.sudaup.org> from 08.09.2016 onwards.(In this case Tender document is downloaded from website, Tender Document fee shall be submitted in the form of Bank Draft of Nationalised Bank in favour of Director SUDA payable at Lucknow with Technical Bid). The tenders complete in all respect should reach the office of Director, SUDA up to 04:00 PM on or before the last date mentioned above. The SUDA reserves the right to cancel any or all the Bids and annul the bidding process without assigning any reason.

It will be the responsibility of the Bidders to check State Urban Development Agency, Uttar Pradesh website <http://www.sudaup.org> for details and any amendment through corrigendum in the tender document. In case of any amendment, Bidders will have to incorporate the amendments in their Bids accordingly.

DIRECTOR, SUDA

SECTION I : INSTRUCTIONS TO BIDDERS (ITB)

(A) THE BIDDING DOCUMENTS

1 Cost of Bid

- a) The Bidder shall bear all costs associated with the preparation and submission of its Bid and State Urban Development Agency (SUDA), U.P. (hereinafter referred to as “the Authority”), will in no case be held responsible or liable for these costs, regardless of the conduct or outcome of the Bidding process.
- b) This tender document is also available on the web site "<http://www.sudaup.org>" to enable the Bidders to use this document for submitting their Bids on the last date and time mentioned in tender notice/ tender document against this tender. The Bidders who will submit their Bids on down loaded tender documents shall have to pay tender document fee of Rs. 25,000.00 (Rupees Twenty five Thousand) Only through Demand Draft or Banker's Cheque payable in favour of Director, State Urban Development Agency U.P., Lucknow, payable at Lucknow. The copy of the Receipt and the original Demand Draft or Banker's Cheque should be submitted with Technical Bids. This Tender Document fee of Rs. 25,000.00 will be non-refundable to the Bidders. The tenders submitted on down loaded tender documents without enclosing tender document fee Rs. 25000=00 in the form of Bank Draft/ Banker's Cheque shall not be accepted.

2 Contents of Tender Document

- 2.1 The E Rickshaw (hereinafter referred to as “Rickshaw”) required to be supplied, Bidding Procedures and Contract terms and conditions are prescribed in the Tender document. The Tender document include:
 - (a) Invitation for Bids
 - (b) Section I : Instruction to Bidders (ITB);
 - (c) Section II : Conditions of Contract (CC);
 - (d) Section III : Technical Bid (In original & also a duplicate copy);
 - (e) Section IV : Financial Bid;
- 2.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required as per the Bidding Documents or submission of a Bid not responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in rejection of his Bid.

3 Clarification of Bidding Documents – Pre Bid queries

- 3.1 A prospective Bidder requiring any Technical clarification of the Bidding Documents may notify the Authority in writing or by fax at the Authority's mailing address. The Authority may respond in writing to any request for Technical clarification of the Bidding Documents which it receives no later than 15 days prior to the deadline for submission of Bids prescribed by the Authority.
- 3.2 It will be the responsibility of the Bidders to check State Urban Development Agency, Uttar Pradesh website <http://www.sudaup.org> for any amendment through corrigendum in the tender document. In case of any amendment, Bidders will have to incorporate the amendments in their Bids accordingly.

4 Amendment of Bidding Documents

- 4.1 At any time prior to the deadline for submission of Bids, the Authority may, for any reason, whether at its own initiative or in response to a clarification requested by a Prospective Bidder, modify the Bidding Document by amendments. Such amendments shall be posted/uploaded on the SUDA's website <http://www.sudaup.org> through corrigendum and shall form an integral part of Bid Document. The relevant clauses of the Bid Document shall be treated as amended accordingly.

- 4.2 It shall be the sole responsibility of the prospective Bidder(s) to check the web site <http://www.sudaup.org> from time to time for any amendment(s)/clarification in the Bid Document. In case of failure of prospective Bidder to get the amendments, if any, the Authority shall not be held responsible.
- 4.3 In order to allow prospective Bidder(s) a reasonable time to take the amendment into account in preparing their Bids, the Authority, at its discretion, may extend the deadline for the submission of Bids. Such extensions shall be posted/up-loaded on the SUDA's website <http://www.sudaup.org>.

(B) PREPARATION OF BIDS

5 Language of Bid

- 5.1 The Bid prepared by the Bidder, as well as all correspondence and documents relating to the Bid exchanged between the Bidder and the Authority shall be written either in Hindi or English language. The correspondence and documents in Hindi must be accompanied by embedded/separate Hindi font files. Only English numerals shall be used in the Bid.

6 Documents Constituting the Bid

- 6.1 The Bid prepared by the Bidder shall comprise the following components:
- (a) **Technical Bid** - Technical Bid will comprise of :
- (i) **Fee Details**—includes Tender Fee and Bid Security furnished in accordance with ITB.
 - (ii) **Bid Form**—Bid should be filled in Form-1 (Annexure-A) as per Section-III(A) of Bidding Document justifying that the Bidder is complying with all the conditions of the Contract and Technical Specifications of the Bidding Document as no deviation will be acceptable to the Authority.
 - (iii) **Technical Specification Details**—Technical Specifications shall be filled by prospective Bidders in Form-III (Annexure-C) as per Section-III(C) of Bidding Document.
 - (iv) **Qualification Details**—
 - (a) Bidders can be Company/Firm/Individual
 - (b) Details of Bidder shall be filled in Form III (Annexure A-H) as per ITB Clauses justifying that the Bidder is qualified to perform the contract if his/ her Bid is accepted and that the Bidder has financial, technical and production capability necessary to perform the contract and meets the criteria outlined in the Qualification Requirement and Technical Specification and fulfil all the conditions of the Contract and that the Rickshaw and axillary services to be supplied by the Bidder conform to the Bidding Documents and Technical Specifications mentioned in Annexure-C. The above filled Form shall be appended with the copies of followings
 - 1) Power of Attorney in favour of signatory of Tender Documents.
 - 2) Certificate of Incorporation of Bidder and place of registration
 - 3) Memorandum and Article of Association showing objectives of the Bidder
 - 4) Income tax registration number of the Bidder
 - 5) Trade tax/VAT registration number of the Bidder.
 - (c) Consortium is not allowed.
 - (v) Filled Form III (Annexure A-H) as per Section III (G) - Capability Statement.
 - (vi) Compliance certificate with specification of Four seated Motor/Battery operated electric Rickshaw by testing agencies approved by Government of India under rule 126 of Central Motor Vehicle Rules 1989 as per ITB clause 10.2

- (vii) Certificate of the trade mark registration/authorisation letter of the competent authority using the trade mark and/or certificate of registration of the manufacturer in excise for Motor/Battery Operated electric rickshaw being offered in this tender. In case, manufacturer is exempted from excise duties by the Government, the Bidder should also submit necessary documentary proof for the same.
- (viii) Documentary Evidence for Original Manufacturer of the Electric Rickshaws should be submitted and the Bidder shall have the facility and capability for the design, fabrication, assembly and testing of the offered electric Rickshaws. The Successful Bidder shall be capable of providing reliable and economical after sales service including provision of spares for all components used. It will be the responsibility of the successful Bidder of the electric Rickshaws to get all the components used in the electric Rickshaw and also the electric Rickshaw as a whole to be tested by the Government of India approved testing centres such as ARAI, ICAT, etc. of the E - rickshaw quoted in the tender are in the business of regular supply and installation of the same make/brand of the rickshaws since last three financial years i.e., 2013- 14, 2014-15 & 2015-16.
- (ix) Notarial Affidavit that the Bidder has not been black listed/debarred/prohibited by any State/Central Government Departments/Organizations and neither criminal case is pending in against the Bidder in the court of competent jurisdiction nor Bidder is convicted of any offence by court of competent jurisdiction.
- (x) Audited Balance Sheet along with Profit & Loss Statement of last three Financial years i.e., 2013-14, 2014-15 and 2015-16.
- (xi) **Self Attested Supportive Document/Certificate about the following Specifications for the 4 Seater E Rickshaw:**

A. Specifications of the 4 -Seater E Rickshaw :

Four-Seater E-Rickshaw with a maximum loading capacity of 380 kg (four passengers, driver and 40 kg luggage), maximum speed of 20 to 25 kmph, minimum range of 70 km with full load, with starting and moving capability at 7 degree gradient, driven by a brushless AC or DC motor of output power 850 W or above but not more that 2000 W, powered from a EV grade battery of 100 Ah, conforming to the Ministry of Road Transport and Highway GSR No. 709 (E) dated 8 October 2014 and Notification No. S.O. 2590 (E) dated 8 October 2014 and also the additional tests specified elsewhere in this document.

Sl no.	Description	Specifications	Remarks/Reference Standards/Test Standards
1	Type of Electric Rickshaw	Fully electric, battery operated motor driven	Four-Seater E-Rickshaw
2	Pedal Assistance	Not required	
3	Reverse Gear	Required	
4	Maximum Speed	20 to 25 kmph	To be tested with full load
5	Loading Capacity (Weight of four passengers, driver and luggage of 40 kg)	380 kg	
6	Range	70 km or more	To be tested as per AIS-040 with full load OR To be tested as per AIS-040 with 150 kg load in which case, the range has to be 100 km or more
7	Motor Output Power	48 V, 850 W or above but not more than 2000 W	At full load
8	Motor Type	Brushless Motor	AC or DC

9	Motor Controller	Suitable controller for starting, accelerating, decelerating, driving and stopping the E-Rickshaw smoothly	
10	Battery Voltage	48 V Nominal	
11	Battery Capacity	100 Ah or more	C ₂₀ rating
12	Battery Type	Traction Battery used in Battery Operated Vehicle	To be tested as per AIS-048/2009
13	Battery Charger	220/230 V Nominal Input Voltage, High Efficiency	
14	Electrical Energy Consumption	75 W/km or less	To be tested as per AIS-039
15	Gradeability	Capability to start and move at 7 ^o gradient with full load	To be tested as per AIS-003 with full load
16	Ground Clearance	120 mm or more	To be tested as per IS:9435
17	Overall size of the E- Rickshaw	Length < 2.8 m Width < 1 m Height < 1.8 m	
18	Front Windshield & Wiper	Windshield shall be made out of laminated safety glass. Wiper shall be electric motor operated.	Front windshield shall conform to IS:2553
19	Brakes	Parking & service brakes, safe & efficient.	
20	Instrument Panel	Speedometer and battery charge indicator	
21	Roof	Made out fiber glass or a combination of fiber glass and good quality metal or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body	
22	Controls	Start/Stop switch and indicators	
23	Tyres	3 -12" minimum	

B. Fitness, Compliance & Test Certificates to be submitted for the E-Rickshaw:

1. Fitness/Compliance Test as per the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014
2. Compliance Certificate for the following test to be carried out as per the Safety Standards

for E-Rickshaws as per the Ministry of Road Transport and Highways Notification No. S.O. 2590 (E) dated 8 October 2014.

Sl.No.	Parts/Components/Assemblies	Test Standards
1.	Automotive lamps used in motor vehicles for the following applications: i. Head Lights Main and Dip ii. Parking Light iii. Direction Indicator Lamp iv. Tail Lamp v. Reversing Lamp vi. Stop Lamp vii. Rear Registration Mark Illuminating Lamp	AIS – 034/2004
2.	Wheel rims	AIS – 073/2007
3.	(a) Installation requirement for lighting , light signaling devices (b) Performance for requirement of lighting , light signaling devices	AIS – 0009/2001 AIS – 012/2004 AIS – 010/2004
4.	The requirements for construction and functional safety of battery operated vehicles	AIS – 038/2003
5.	The measurement of net power and the maximum thirty minute power and speed for battery operated vehicles	AIS – 041/2003
6.	Traction batteries used in battery operated vehicles	AIS – 048/2009
7.	Requirement of handholds	AIS – 046/2009

3. Compliance/Test Certificates for the following Additional Tests to be Carried Out for the E – Rickshaw:

Sl. No.	Parts/Components/Assemblies/Performance	Test Standards
1	Range	AIS-040 with full load OR AIS-040 with 150 kg load in which case, the range has to be 100 km or more
2	Electrical Energy Consumption	AIS-039
3	Grade ability	AIS-003
4	Ground Clearance	IS – 9435

C. Type of Motor:

The motor shall be of “Brushless Type” specifically designed for electric vehicles. These brushless type motors can be of DC or AC type having high efficiencies at the rated output power delivered. These motors shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.)

D. Motor Controller and the Power Supply System:

The motor controller shall be capable of controlling the motor from start to maximum speed with no load to full load and also for slight overloads of 20% over and above the rated full load for shorter durations. They shall be able to continuously drive the motor once started with the full load with maximum speed for the full declared range of the vehicle. The controllers shall be stable, robust and shall be capable of operating at all the conditions normally encompassed by the automobiles. The motor controllers used shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

The power supply system to the motor from the storage battery which includes the dc/dc converter, and the motor driving circuit which may be a dc converter or an inverter as the case may be for the type of motor, along with the controller shall also meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

E. Storage Battery:

As the electric rickshaw is supposed to have frequent start-stop operations, and also varying speed and varying load operations, the battery used shall be able to survive these frequent variations. It shall be capable of supplying electric power as per the requirement and specifications of the vehicle for meeting its travel for the full range with full load. Therefore, the battery used shall be of lead-acid or better type, and shall be EV grade tubular deep discharge type with high cycle life. The batteries used in the electric rickshaws shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

F. Mechanical Power Transmission:

The mechanical power transmission from the motor shaft to the wheels shall be highly efficient. The direct mounting, or chain and sprocket or any other mechanical arrangement shall be highly reliable needing least maintenance and shall be tested for all its maneuvers to be able to meet the electric rickshaw requirements of frequent start, stop and gradient climbing, etc apart from its normal running with full load and full speed. The mechanical power transmission system used in the electric rickshaw shall meet the relevant applicable test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

G. Overall Rickshaw Design:

The overall electric rickshaw design shall meet all the requirements of safety (of the vehicle, safety of passengers and luggage and the driver), reliability, repeatability, efficiency, strength, smoothness in riding, passenger comfort in climbing/entering the rickshaw, sitting at steady state and during the ride, getting down from the rickshaw, keeping the luggage, etc. The rickshaw shall not be noisy to cause discomfort for the passengers. It should have sufficient precautions not to have any electric shock for the passengers as well as the driver. It should have the proper control and instrument panel to indicate the speed, state of charge of the battery (or the remaining charge or kilometers it can run), etc. It should have sufficient braking system, suspension system, start and stop buttons, key, front and back lights with parking lights too, power supply system for these auxiliaries, and proper covered battery compartment not to cause any problem for the passengers, etc. The electric cycle rickshaw should have the certification from any of the Government of India approved testing centers such as ARAI, ICAT, etc, so as satisfy the required performance of the electric rickshaw as a whole and also all the main components used in it such as the motor, battery, motor controller, mechanical power transmission system, its body, other auxiliary systems such as brakes, lighting and control, etc. and the overall safety. The rickshaw has to be fabricated with good quality steel properly plated/painted to avoid rusting for more than five years. The body shall be of good quality metal, and the roof shall be of fiber glass or a combination of fiber glass and metal of good quality or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body. The seats have to be of very good quality with proper cushioning provided. There shall be sufficient number of handles to ease passenger entry and ride.

It shall have sufficient height and shall be giving proper protection to the passengers from the direct sun light and rain. The vehicle integration, packaging of electrical and electronic wires and devices shall be such that the rickshaw can run even in rainy season/during the rain without any problems.

H. Supplier/Manufacturer Conditions:

The supplier of the E-Rickshaw shall be an original manufacturer of the E-Rickshaws. The supplier shall not be a trader/importer or simply an assembler for various components. The supplier shall have the facility and capability for the design, fabrication, assembly and testing of the offered E-Rickshaws. The supplier can use the motors, controllers, batteries and battery charges procured preferably from various reliable and quality sources. All these components have to be tested at the supplier's site independently before assembling into the E-Rickshaws. The supplier shall be capable of providing reliable and economical after-sales service including provision of spares for all components used. It will be the responsibility of the supplier of the E-Rickshaws to get all the components used in the electric rickshaw and also the electric rickshaw as a whole to be tested by the Government of India approved testing centers such as ARAI, ICAT, etc

(b) **Financial Bid** –Financial Bid shall be submitted in two parts:-

- (i) **Bid Form**–First Part of Financial Bid shall be filled in Bid Form IV(A)Annexure-I as per Section-IV(A) of Bidding Document.
- (ii) **Price Schedule/ BOQ**–Second Part of Financial Bid shall be filled as Price Schedule/BOQ in Form IV(B) Annexure-J as per Section-IV(B) of Bidding document.

7 Bid Price

- 7.1 The Bidder shall quote for Price Schedule/BOQ unit price (along with basic price, excise duty, trade tax/VAT and other charges such as installation and onsite comprehensive warranty maintenance service charges, if any) of Rickshaw in the specified places for all the Rickshaw having Technical Specifications mentioned in Section III(C). The unit prices quoted shall be with comprehensive warranty for a period of One Year.
- 7.2 Bid price (through direct supply from OEM or through dealer or authorized agent), Price Schedule/BOQ as mentioned in para 7.1 above, shall also include followings:-
 - I. The price of Rickshaw (ex-works, ex-factory, ex-showroom, ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and other taxes already paid or payable:
 - (a) on components and raw material used in the manufacture or assembly of Rickshaw quoted ex-works or ex-factory; or
 - (b) on the previously imported Rickshaw of foreign origin quoted ex-showroom, ex-Warehouse, or off-the-shelf.
 - II. any Indian duties, sales and other taxes which will be payable on the goods if this Contract is awarded.;
 - III. the price for inland transportation, insurance and other local costs incidental to delivery of the goods to their final destination.
 - IV. the price of other incidental services listed in Clause 11 of the Conditions of Contract.
 - v. colours of E-Rickshaws and also Slogans & UP Government Logo to be embossed on each E-Rickshaws as lawfully determined by Director, SUDA from time to time
- 7.3 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A Bid submitted with an adjustable price quotation for shall be treated as non-responsive and rejected.

8 Bid Currencies

Prices shall be quoted in Indian Rupees only.

9 Documents Establishing Bidder's Qualification

- 9.1 Pursuant to ITB Clause 6, the Bidder shall furnish, as part of its Technical Bid, documents establishing the Bidder's qualification to perform the Contract if its Bid is accepted.
- 9.2 The documentary evidence of Bidder's qualification to perform the Contract if its Bid is accepted shall be as per Qualification Requirements specified in Section III (D) of Bidding Document.

10 Documents Establishing Goods' Conformity to Bidding Documents

- 10.1 Pursuant to ITB Clause 6, the Bidder shall furnish, as part of its Bid, documents establishing the conformity to the Bidding Documents of all Rickshaw and services which the Bidder proposes to supply under the contract.
- 10.2 The documentary evidence of conformity of the Rickshaw and services to the Bidding Documents shall consist of:
- (a) Bidder have to submit compliance certificate with specification given below of Four seated E-Rickshaw by any one the following testing agencies approved by Government of India under rule 126 of Central Motor Vehicle rules, 1989:-
- i- Vehicle Research and Development Establishment of the Ministry of Defence of the Government of India.
 - ii- Automotive Research Association of India, Pune.
 - iii- Central Farm machinery Testing and Training Institute, Budni(MP).
 - iv- Indian Institute of Petroleum, Dehradun.
 - v- Central Institute of Road Transport, Pune.
 - vi- International Centre for Automotive Technology, Manesar.

Specifications of the Four seated E-Rickshaw (excluding driver seat) required as specification mentioned in Technical Bid.

- (b) There shall be established Service Centre in all cities/districts of Uttar Pradesh pursuant to Clause 20.5 of ITB.

11 (A) EMD (Earnest Money Deposit)

- 11.1 Pursuant to ITB Clause 6, the Bidder shall furnish, as part of its Bid, a Bid security/ EMD in the amount of Rs. 1.37 Crore (Rs. One Crore thirty-seven lakhs) only in favour of the Authority i.e. Director, State Urban Development Agency, U.P., Nav Chetna Kendra, 10-Ashok Marg, Luckow-226001. The Bid Security/ EMD must be submitted along with the Technical Bid.
- 11.2 The Bid Security is required to protect the Authority against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 11.7.
- 11.3 The Bid Security shall be in Indian Rupees and shall be in the following forms only:
- (a) A bank guarantee in the form provided in the Bidding Document and valid upto next six months from the date of publication of this Bid
 - (b) Bank Draft/ Pay Order payable in favour Director, State Urban Development Agency, U.P., NavChetna Kendra, 10-Ashok Marg, Luckow-226001 and payable at Lucknow.

The Bidder may submit the above mentioned Bid Security amount issued by the State Bank Of India, or its associates banks or Nationalised bank of India or any schedule bank of India- ICICI Bank, HDFC Bank, IDBI Bank or Axis Bank.

- 11.4 Any Bid not secured in accordance with ITB Clauses 11.1 and 11.3 above shall be treated as non-responsive and rejected by the Authority.
- 11.5 Unsuccessful Bidder's Bid Security will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of Bid validity prescribed by the Authority, pursuant to ITB Clause 12.
- 11.6 The Successful Bidder's Bid Security will be discharged upon the Bidder's furnishing the performance security, pursuant to ITB Clause 28.
- 11.7 The Bid Security may be forfeited:
- (a) if a Bidder (i) withdraws its Bid during the period of Bid Validity specified by the Bidder on the Bid Form; or (ii) does not accept the correction of errors pursuant to ITB Clause 21.2; or (iii) modifies its Bid price during the period of Bid Validity specified by the Bidder on the Bid form or
 - (b) in case of a Successful Bidder, if the Bidder fails:
 - (i) to sign the Contract with the Authority in accordance with ITB Clause 27; or
 - (ii) to furnish performance security in accordance with ITB Clause 28.

11 (B) Exemption from payment of EMD

- (a) Micro and Small Enterprises and Industrial Co-operatives within state which are certified as such by the Commissioner and Director of Industries or by Deputy Commissioner, District Industries centre, are exempted in respect of certified items from furnishing earnest money deposit in support of tenders submitted by them. The Khadi and Village Industries Co-operative Societies within the state, registered as such with the Khadi and Village Industries Board/Khadi and Village Industries Commission on furnishing proof of such registration are also exempted from furnishing earnest money deposit.
- (b) Micro and Small Enterprises registered with the National Small Industries Corporation Limited, New Delhi (NSIC) and in respect of which competency certificates are issued by the NSIC will be exempted from furnishing earnest money deposit.
- (c) Government Institutions/State Public Sector Undertakings, which manufacture and supply goods, are exempted from furnishing earnest money for tenders.

12 Period of Validity of Bids

- 12.1 Bids shall remain valid for 180 days after the date of Bid opening prescribed by the Authority, pursuant to ITB Clause 18. A Bid valid for a shorter period shall be rejected by the Authority as non-responsive.
- 12.2 In exceptional circumstances, the Authority may solicit the Bidder's consent to an extension of the period of Bid Validity subject to maximum period of 60 days. The request and the response thereto shall be made in writing. The Bid Security provided under ITB Clause 11 shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request will not be required nor permitted to modify its Bid.

13 Format and Signing of Bid

- 13.1 The Bidder shall prepare one copy of each of the Technical Bid and Financial Bid separately.
- 13.2 The Bid Documents shall be signed by the Bidder or a person or persons duly authorized to

bind the Bidder to the Contract. The authorization letter shall be included in the Bid Document along with power-of-attorney. All the pages/documents of the Bid that are to be submitted shall be signed by the person authorized to sign the Bid.

14. Submission of Bids

Bidders should start the Bid Submission process well in advance so that they can submit their Bids in time. Once the Bid submission date and time is over, the Bidders cannot submit their Bids. For delay in submission of Bids due to any reasons, the Bidders shall only be held responsible.

- 14.1 The Bidder shall prepare one copy of each of the Technical Bid and Financial Bid separately,.
- 14.2 The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons of the bidder duly authorized to bind the Bidder to the Contract. The latter authorization shall be indicated by written power-of-attorney accompanying the Bid. All pages of the Bid shall be initiated and stamped by the person or persons signing the Bid.
- 14.3 Any interlineations, erasures or overwriting shall be valid only if they are initiated by the person or persons signing the Bid.
- 14.4 The Technical Bid shall be placed in a sealed envelope clearly marked "**Technical Bid-SUDA – E-Rickshaw 2016**" and the Financial Bid shall be placed in another sealed envelope clearly marked "**Financial Bid - SUDA - Motor/Battery operated Rickshaws 2016, Do not open with Technical Bid**". Then both the above two inner envelopes shall be placed in an outer envelope clearly marked "**Technical/Financial Bids inside for Suda – E-Rickshaws 2016**".

14.5 The inner and outer envelopes shall :

- (a) be addressed to the following address:
Director,
State Urban Development Agency,
(SUDA), Nav Chetna Kendra,
10 Ashok Marg,
Lucknow-226001

(b) Bear the Invitation for Bids Tender reference No. 01/RICKSHAW-YOJNA/UPGOVT/2016 and a statement "**Do not open before 04:30 PM on 29.09.2016**"

- 14.6 The inner envelopes shall also indicate the name and address of the Bidder.
- 14.7 If the outer envelope is not sealed and marked as required by the ITB Clause 14.4, the Authority will assume no responsibility for the Bid's misplacement or premature opening.
- 14.8 Bids submitted through e-mail, fax etc. shall be rejected
- 14.9 Authority reserves the right to cancel any or all Bids without assigning any reason.

15. Deadline for Submission of Bids

- 15.1 Bids (Technical and Financial) must be received by the Authority at the address specified under ITB Clause 14.5 (a) no later than the time at 04:00 PM on 29.09.2016. In the event of the specified date for the submission of Bids being declared a holiday for the Authority, the Bids shall be received upto the appointed time on the next working day.
- 15.2 The Authority may, at its discretion, extend this deadline for submission of Bids by amending the Bid Documents in accordance with ITB Clause 4.

16 Late Bids

- 16.1 Any Bid received by the Authority after the deadline for submission of Bids prescribed by the Authority will be rejected and/or returned unopened to the Bidder. Once the Bid submission date and time is over, the Bidder cannot submit his/ her Bid.

17 Withdrawal and Resubmission of Bids

- 17.1 No Bid shall be modified after submission of Bids.
- 17.2 No Bid may be withdrawn in the interval between the deadline for submission of Bids and the expiration of period of Bid validity specified by the Bidder on the Bid form. Withdrawal of a Bid during this interval may result in the Bidder's forfeiture of its Bid Security, pursuant to ITB Clause 11.7.

(C) BID OPENING AND EVALUATION OF BIDS

18(A) Opening of Technical Bids by the Authority

- 18.A.1 The Authority will open all Technical Bids, in the presence of Bidders' representatives who choose to attend at 04:30PM on 29.09.2016 at State Urban Development Agency (SUDA), U.P. Nav Chetna Kendra, 10-Ashok Marg, Lucknow-226001. The Bidder's representatives who are present shall sign an attendance sheet evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for the Authority, the Bids shall be opened at the appointed time and location on the next working day.
- 18.A.2 The Bidder's names and the presence or absence of requisite Bid Security and such other details as the Authority at its discretion may consider appropriate, will be announced at the opening.

18(B) Opening of Financial Bids

- 18.B.1 The Authority will notify the Bidders, whose Technical Bids are considered acceptable to the Authority on SUDA's website <http://www.sudaup.org>. The Financial Bids of Successful Technical Bidders will be opened at State Urban Development Agency (SUDA, Office) on the date and time announced on the website, after evaluation of Technical Bids.

Simultaneously, prior to opening of the Financial Bids of the technically qualified Bidders, the Authority shall announce the names of the Bidders who, for any reason, do not qualify for the Financial Bid Opening.

- 18.B.2 The Financial Bids of technically qualified Bidders shall be opened on the date and time as mentioned in the Schedule above at State Urban Development Agency (SUDA), U.P. Nav Chetna Kendra, 10-Ashok Marg, Lucknow-226001 in the presence of Bidders who choose to attend. The name of Bidders, Unit Price quoted for various items etc will be announced at the meeting.

19 Clarification of Bids

During evaluation of Bids, the Authority may, at its discretion, ask the Bidder for a clarification or request to submit any document in addition to the ones already submitted as part of the Bid. The request for clarification and the response shall be in writing.

20 Evaluation of technical Bids and Evaluation Criteria

The Authority will examine the Bids to determine whether they are complete, whether they meet all the conditions of the Contract, whether required tender fee, Bid Security and other required documents have been furnished, whether the documents have been properly

digitally signed, and whether the Bids are generally in order. Any Bid or Bids not fulfilling these requirements shall be rejected.

The Bidders shall submit clear and readable scanned copies of following as documentary proof for evaluation of their Technical Bids:-

- 20.1 The Bidder should be a Original Equipment Manufacturers of E-Rickshaw.
- 20.2 The Bidder should have certificate of the trade mark registration/authorisation letter of the competent authority using the trade mark and/or certificate of registration of the manufacturer in excise for Motor/Battery Operated electric rickshaw being offered in this tender. In case, manufacturer is exempted from excise duties by the Government, the Bidder should also have necessary documentary proof for the same. Bids not fulfilling the requirements shall be rejected.
- 20.3 The Original Equipment Manufacturer of the E - rickshaw quoted in the tender shall be in the business of regular supply and installation of the same make/brand of the Rickshaws since last three financial years.
- 20.4 E Rickshaw being quoted should have minimum technical specifications given in this tender.
- 20.5 The Successful Bidder (here in after referred to as "Supplier") shall be bound to established Service Centre in every cities/districts as per requirement within one month from the date of issue of work order as per following criteria:-

Nagar Nigam : 2 Service Centre
Nagar Palika Parishad : 1 Service Centre

If at any stage, it is found that the centres have not been opened or non functional or have been closed down, then the Bid Security/ Performance Bank Guarantee shall be forfeited.

- 20.7 The Bidder should submit a notorial affidavit that the Bidder has not been black listed/debarred/prohibited by any State/Central Government Departments /Organisations and neither criminal case is pending against the Bidder in the court of competent jurisdiction nor bidder is convicted of any offence by the court of competent jurisdiction. The Bids of those Bidders not submitting the required affidavit shall be rejected.
- 20.8 Bidder should have a average annual turnover of at least Rs. 02.00 crores annual in preceding three financial year is 2013-14, 2014-15 and 2015-16. Bidder not having the required turnover and applying against the Bid shall rejected.

20.9 All Bids submitted shall also include the following:

- (i) Filled in form as per Section III (G) - Capability Statement.
- (ii) Copies of relevant pages of following documents:
 - a. Memorandum and Article of Association showing objectives of the Bidder and authority to sign the Bid/ Agreement or delegate the power to others for signing the Bid/ Agreement.
 - b. Place of registration.
 - c. The power-of-attorney authorizing the Bidder to sign the Bid/Agreement.
 - d. Income tax registration number of the Bidder.
 - e. Trade tax/VAT registration number of the Bidder.

The Bids of the Bidders not submitting copies of documents mentioned in clause 20.9 above shall be rejected.

- 20.10 The Bids of Bidders who will not quote for all the items in Technical Bid and Financial Bid shall be rejected.

- 20.11 The Bids found to be not responsive to and not fulfilling all the conditions of the contract and not meeting Technical Specifications and Qualification Requirements to the satisfaction of Purchase Committee shall be rejected and shall not subsequently be made responsive by the Bidder by correction of the non-conformity. The Bids of Bidders mentioning any of their conditions which are not mentioned in this Tender Document or are not in conformity with the Conditions of the Contract shall be rejected.
- 20.12 It shall be the discretion of the Tender Committee/Purchase Committee to decide as to whether a Bid fulfils the evaluation criterion mentioned in this Tender Document or not.
- 20.13 The Bidders are advised not to mix Financial Bid (documents) with the documents submitted for Technical Bid. The Bids of the Bidders having Financial Bid (documents) in the Technical Bid will out rightly be rejected.
- 20.14 Supplier shall ensure the availability of all spare parts for after sale service support for a period of at least five years including the comprehensive warranty period of the items.
- 20.15 Prior to the delivery of E - rickshaw, the Bidders have to demonstrate the capabilities of offered E-Rickshaws before a Select Technical Committee formed by the Authority.
- 20.16 Bidder have to submit compliance certificate with specification given below of Four seated E-Rickshaw by any one the following testing agencies approved by Government of India under Rule 126 of Central Motor Vehicle Rules, 1989:-
- i- Vehicle Research and Development Establishment of the Ministry of Defence of the Government of India.
 - ii- Automotive Research Association of India, Pune.
 - iii- Central Farm machinery Testing and Training Institute, Budni(MP).
 - iv- Indian Institute of Petroleum, Dehradun.
 - v- Central Institute of Road Transport, Pune.
 - vi- International Centre for Automotive Technology, Manesar.

A. Specifications of the 4 -Seater E Rickshaw :

Four-Seater E-Rickshaw with a maximum loading capacity of 380 kg (four passengers, driver and 40 kg luggage), maximum speed of 20 to 25 kmph, minimum range of 70 km with full load, with starting and moving capability at 7 degree gradient, driven by a brushless AC or DC motor of output power 850 W or above but not more that 2000 W, powered from a EV grade battery of 100 Ah, conforming to the Ministry of Road Transport and Highway GSR No. 709 (E) dated 8 October 2014 and Notification No. S.O. 2590 (E) dated 8 October 2014 and also the additional tests specified elsewhere in this document.

Sl no.	Description	Specifications	Remarks/Reference Standards/Test Standards
1	Type of Electric Rickshaw	Fully electric, battery operated motor driven	Four-Seater E-Rickshaw
2	Pedal Assistance	Not required	
3	Reverse Gear	Required	
4	Maximum Speed	20 to 25 kmph	To be tested with full load
5	Loading Capacity (Weight of four passengers, driver and luggage of 40 kg)	380 kg	
6	Range	70 km or more	To be tested as per AIS-040 with full load OR To be tested as per

			AIS-040 with 150 kg load in which case, the range has to be 100 km or more
7	Motor Output Power	48 V, 850 W or above but not more than 2000 W	At full load
8	Motor Type	Brushless Motor	AC or DC
9	Motor Controller	Suitable controller for starting, accelerating, decelerating, driving and stopping the E-Rickshaw smoothly	
10	Battery Voltage	48 V Nominal	
11	Battery Capacity	100 Ah or more	C ₂₀ rating
12	Battery Type	Traction Battery used in Battery Operated Vehicle	To be tested as per AIS-048/2009
13	Battery Charger	220/230 V Nominal Input Voltage, High Efficiency	
14	Electrical Energy Consumption	75 Wh/km or less	To be tested as per AIS-039
15	Gradeability	Capability to start and move at 7 ⁰ gradient with full load	To be tested as per AIS-003 with full load
16	Ground Clearance	120 mm or more	To be tested as per IS:9435
17	Overall size of the E- Rickshaw	Length < 2.8 m Width < 1 m Height < 1.8 m	
18	Front Windshield & Wiper	Windshield shall be made out of laminated safety glass. Wiper shall be electric motor operated.	Front windshield shall conform to IS:2553
19	Brakes	Parking & service brakes, safe & efficient.	
20	Instrument Panel	Speedometer and battery charge indicator	
21	Roof	Made out fiber glass or a combination of fiber glass and good quality metal or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body	
22	Controls	Start/Stop switch and indicators	
23	Tyres	3 -12" minimum	

B. Fitness, Compliance & Test Certificates to be submitted for the E-Rickshaw:

1. Fitness/Compliance Test as per the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014
2. Compliance Certificate for the following test to be carried out as per the Safety Standards for E-Rickshaws as per the Ministry of Road Transport and Highways Notification No. S.O. 2590 (E) dated 8 October 2014.

Sl.No.	Parts/Components/Assemblies	Test Standards
1.	Automotive lamps used in motor vehicles for the following applications: i. Head Lights Main and Dip ii. Parking Light iii. Direction Indicator Lamp iv. Tail Lamp v. Reversing Lamp vi. Stop Lamp vii. Rear Registration Mark Illuminating Lamp	AIS – 034/2004
2.	Wheel rims	AIS – 073/2007
3.	(a) Installation requirement for lighting , light signaling devices (b) Performance for requirement of lighting , light signaling devices	AIS – 0009/2001 AIS – 012/2004 AIS – 010/2004
4.	The requirements for construction and functional safety of battery operated vehicles	AIS – 038/2003
5.	The measurement of net power and the maximum thirty minute power and speed for battery operated vehicles	AIS – 041/2003
6.	Traction batteries used in battery operated vehicles	AIS – 048/2009
7.	Requirement of handholds	AIS – 046/2009

3. Compliance/Test Certificates for the following Additional Tests to be Carried Out for the E – Rickshaw:

Sl. No.	Parts/Components/Assemblies/Performance	Test Standards
1	Range	AIS-040 with full load OR AIS-040 with 150 kg load in which case, the range has to be 100 km or more
2	Electrical Energy Consumption	AIS-039
3	Grade ability	AIS-003
4	Ground Clearance	IS – 9435

C. Type of Motor:

The motor shall be of “Brushless Type” specifically designed for electric vehicles. These brushless type motors can be of DC or AC type having high efficiencies at the rated output power delivered. These motors shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.)

D. Motor Controller and the Power Supply System:

The motor controller shall be capable of controlling the motor from start to maximum speed with no load to full load and also for slight overloads of 20% over and above the rated full load for shorter durations. They shall be able to continuously drive the motor once started with the full load with maximum speed for the full declared range of the vehicle. The controllers shall be stable, robust and shall be capable of operating at all the conditions normally encompassed by the automobiles. The motor controllers used shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

The power supply system to the motor from the storage battery which includes the dc/dc converter, and the motor driving circuit which may be a dc converter or an inverter as the case may be for the type of motor, along with the controller shall also meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

E. Storage Battery:

As the electric rickshaw is supposed to have frequent start-stop operations, and also varying speed and varying load operations, the battery used shall be able to survive these frequent variations. It shall be capable of supplying electric power as per the requirement and specifications of the vehicle for meeting its travel for the full range with full load. Therefore, the battery used shall be of lead-acid or better type, and shall be EV grade tubular deep discharge type with high cycle life. The batteries used in the electric rickshaws shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

F. Mechanical Power Transmission:

The mechanical power transmission from the motor shaft to the wheels shall be highly efficient. The direct mounting, or chain and sprocket or any other mechanical arrangement shall be highly reliable needing least maintenance and shall be tested for all its maneuvers to be able to meet the electric rickshaw requirements of frequent start, stop and gradient climbing, etc apart from its normal running with full load and full speed. The mechanical power transmission system used in the electric rickshaw shall meet the relevant applicable test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

G. Overall Rickshaw Design:

The overall electric rickshaw design shall meet all the requirements of safety (of the vehicle, safety of passengers and luggage and the driver), reliability, repeatability, efficiency, strength, smoothness in riding, passenger comfort in climbing/entering the rickshaw, sitting at steady state and during the ride, getting down from the rickshaw, keeping the luggage, etc. The rickshaw shall not be noisy to cause discomfort for the passengers. It should have sufficient precautions not to have any electric shock for the passengers as well as the driver. It should have the proper control and instrument panel to indicate the speed, state of charge of the battery (or the remaining charge or kilometers it

can run), etc. It should have sufficient braking system, suspension system, start and stop buttons, key, front and back lights with parking lights too, power supply system for these auxiliaries, and proper covered battery compartment not to cause any problem for the passengers, etc. The electric cycle rickshaw should have the certification from any of the Government of India approved testing centers such as ARAI, ICAT, etc, so as satisfy the required performance of the electric rickshaw as a whole and also all the main components used in it such as the motor, battery, motor controller, mechanical power transmission system, its body, other auxiliary systems such as brakes, lighting and control, etc. and the overall safety. The rickshaw has to be fabricated with good quality steel properly plated/painted to avoid rusting for more than five years. The body shall be of good quality metal, and the roof shall be of fiber glass or a combination of fiber glass and metal of good quality or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body. The seats have to be of very good quality with proper cushioning provided. There shall be sufficient number of handles to ease passenger entry and ride. It shall have sufficient height and shall be giving proper protection to the passengers from the direct sun light and rain. The vehicle integration, packaging of electrical and electronic wires and devices shall be such that the rickshaw can run even in rainy season/during the rain without any problems.

H. Supplier/Manufacturer Conditions:

The supplier of the E-Rickshaw shall be an original manufacturer of the E-Rickshaws and will distribute the E-Rickshaws in districts/Urban Local Bodies. The supplier shall not be a trader/importer or simply an assembler for various components. The supplier shall have the facility and capability for the design, fabrication, assembly and testing of the offered E-Rickshaws. The supplier can use the motors, controllers, batteries and battery charges procured preferably from various reliable and quality sources. All these components have to be tested at the supplier's site independently before assembling into the E-Rickshaws. The supplier shall be capable of providing reliable and economical after-sales service including provision of spares for all components used. It will be the responsibility of the supplier of the E-Rickshaws to get all the components used in the electric rickshaw and also the electric rickshaw as a whole to be tested by the Government of India approved testing centers such as ARAI, ICAT, etc. E-Rickshaws can be distributed through Dealer/Authorized Agent

Bids of Bidder who fails to submit their compliance report shall be rejected. Financial Bids of only those Bidders will be opened whose E-Rickshaw will be found suitable for the work.

The Bidders must quote prices of with one year warranty. If a Bidder fails to Bid as above then his/her Bid shall not be accepted.

21 Financial Evaluation and Comparison of Bids

- 21.1 The Authority will evaluate and compare the Financial rates quoted in the price schedule/BOQ of those Bidders whose Technical Bids are found responsive as per the conditions of this tender.
- 21.2 No additional payments shall be made for completion of any contractual obligation beyond the quoted prices. If the Successful Bidder does not accept the correction of errors if any, its Bid shall be rejected and its Bid Security may be forfeited.
- 21.3 No weightage/preference shall be given to the Bidder quoting any higher technical specifications against the technical specifications of the items asked in this Tender Document.
- 21.4 The Authority's evaluation of a Financial Bid shall be based on lowest rate amount quoted including VAT/Service Tax of State/Central Government Cost of equipment/item as

indicated in the technical specification (Ex-factory/ex-warehouse/off-the-shelf price of the Rickshaw offered from within India, such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the Rickshaw, and Excise duty on the finished Rickshaw, if payable) and price of incidental services and the cost of inland transportation, insurance and other costs within India incidental to the delivery of the Rickshaw to their final destination as mentioned in para 7.2 of ITB.

- 21.5 Uttar Pradesh State Unit manufacturer Bidders will be given purchase preference/price preference for their manufactured quoted goods as per the GO 2/2016/071/18-2-2016-51(SP)/2016 dated 28 January, 2016 of Small Industries Department, Govt of Uttar Pradesh.
- 21.6 Evaluation for Bids shall be done on total Bid price (including VAT) received in Bid.
- 21.7 If the Successful Bidder is not able to supply tendered quantity of electric Rickshaw, Authority reserves the right to allot other Bidder at L-1 price if they are ready to supply within the time frame. Order of such allotment shall be L-2, L-3, L-4 etc.

22 Contacting the Authority

- 22.1 Subject to ITB Clause 19, no Bidder shall contact the Authority on any matter relating to his/her Bid, from the time of the Bid opening to the time the Agreement is executed. If the Bidder wishes to bring additional information to the notice of the Authority, he/ she can do so in writing.
- 22.2 Any effort by a Bidder to influence the Authority in its decisions on Bid evaluation, Bid comparison or execution of Agreement may result in rejection of the Bidder's Bid.

(D) AWARD OF CONTRACT

23 Award Criteria

- 23.1 The Authority will determine to its satisfaction whether the Bidder(s) that is selected as having submitted the lowest evaluated responsive Bid meets the criteria specified in ITB Clause 9.2, and is qualified to perform the contract satisfactorily.
- 23.2 Subject to ITB Clause 25, the Authority will award the Contract to the lowest evaluated Successful Bidder whose Bid has been determined to be responsive to all the conditions of the Contract and meeting the Technical specification and qualification requirement of this Bidding Document.

24 Tendering Authority's right to vary Quantities at Time of Award

- 24.1 The Authority reserves the right at the time of Contract award to increase or decrease the quantity of E-Rickshaw and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. Quantity shall be determined in accordance with the capacity of the Supplier and OEM
- 24.2 If any taxes/duties are increased/decreased by the Government during Contract period, the same shall be adjusted mutually after submitting the proof by the Successful Bidders to the Authority.

25 Authority's right to accept any Bid and to reject any or all Bids

The Authority reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or Bidders.

26 Notification of Award

- 26.1 After evaluation of Bids and its acceptance by the Authority the Successful Bidder may be awarded the "Letter of Intent" for the Supply of E-Rickshaws.
- 26.2 The Successful Bidder will submit the Performance Bank Guarantee as per clause 28 within 15 days from the date of issue of Letter of Intent. Thereafter the Successful Bidder will have to Sign an Agreement with the Authority which will be effective for a period of 1 Year from the date of signing of Agreement.
- 26.3 Upon Successful Bidder's furnishing of Performance Security pursuant to ITB Clause 28, the Authority will promptly discharge Bid Security pursuant to ITB Clause 11.

27. Signing of Contract

- 27.1 At the same time as the Authority notifies the Successful Bidder that its Bid has been accepted, the Authority will send the Bidder the Contract Form provided in the Bidding Documents, incorporating all agreements between the parties i.e. Authority and Successful Bidder.
- 27.2 Within 7 days of receipt of the Contract Form, the Successful Bidder shall sign the Contract and return it to the Authority.

28. Performance Security

(A.1) Performance Security should be equivalent to 5% (Five per cent) of the value of contract, rounded to the nearest multiple of hundred.

The validity of Performance Security will be for the period of Two Years 6 months (i.e., 30 months) from State Bank of India or its associate banks or any Nationalized bank of India or scheduled bank located in India or from the ICICI Bank, HDFC Bank, IDBI Bank or the Axis Bank in favour of the Authority, in accordance with this tender in the Performance Security Form III(H) (Annexure-E) provided in the is Bidding Documents. If the Successful Bidder fails to deposit the Performance Security or to execute the Agreement within the specified period, it will be treated as the breach of the terms and conditions of this Tender Document and will result in the forfeiture of the Earnest Money without prejudice to any other remedy that Authority may take. In this case the Authority may select the next lowest evaluated Bidder for the Supply of Rickshaws on the rate of Successful Bidder.

(A.2) Performance Security in favour of Director, State Urban Development Agency, (SUDA) is to be furnished by a specific date (within 15 days from date of notification of the award / letter of acceptance) and it should remain valid for a period of 30 months.

(B) Exemption from Performance Security

(a) No security would be demanded or taken from any government corporations, which supply E-Rickshaws. This provision will apply in the matter of purchase of goods from government of India undertakings as well

(b) Micro and Small Enterprises and Industrial Co-operatives within state, which have been registered as such with the Commissioner and Director of Industries, on furnishing proof of such

registration are exempted from furnishing performance security against contracts for supply of E-Rickshaws manufactured by them.

(c) In the matter of purchase of E-Rickshaws by Government departments, Micro and Small Enterprises sponsored by NSIC and in respect of which competency certificates are issued by NSIC, will be exempted from furnishing Performance Security. This will not, however apply in the matter of purchase of E-Rickshaws on rate or running contract basis

(d) The Khadi and Village Industries Co-operative Societies within the state, registered as such with Khadi and Village Industries Board/Khadi and Village Industries Commission on furnishing proof of such registration are exempted from furnishing performance security against contracts for supply of E-Rickshaws manufactured by them.

(e) No fresh performance security need to be demanded from the rate contract holder(s) for extended period of the rate contract originally concluded with them. The performance security obtained against the original rate contract may be considered as security for the extended period of the rate contract. In case it does not fulfill the requirement of Para A.2, the validity period should be suitably got extended or a fresh performance security be obtained. In all such cases a supplemental agreement shall be made.

29 Rejection/Cancellation of Bid(s)

- 29.1 Bidders must quote for all the items in the Technical Bid and in the price schedule/BOQ of Financial Bid. The Bids of Bidders who do not quote for all the items in Technical Bid and Financial Bids shall be rejected. Incomplete or non-responsive Bids shall be summarily rejected.
- 29.2 **The Authority reserves the right to cancel any or all the Bids/annul the Bidding process without assigning any reason thereof.**
- 29.3 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding documents. Failure to furnish all information required as per the Bidding documents or submission of a Bid not responsive to the Bidding documents in every respect will be at the Bidder's risk and may result in rejection of his Bid.
- 29.4 Bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.
- 29.5 If it is found that (i) the Bidder is not the owner and/or (ii) the Bidder has intellectual Property Rights in the hardware and the software items offered, wilfully misrepresented IPR, Authority shall cancel of the Bid/ contract without prejudice of other remedies that the Authority may take.
- 29.6 Any Bid not secured in accordance with ITB Clauses 11.1 and 11.3 above shall be treated as non-responsive and rejected by the Authority.
- 29.7 Tendered quantity of E-Rickshaw shall be supplied by the Successful Bidder at the sites mentioned in Annexure-K

SECTION II :

Conditions of Contract

1. Definitions

1.1 In this Contract, the following terms shall be interpreted:

- (a) "The Contract" means Agreement entered into between the Authority and the Supplier, as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein.
- (b) "The Contract Price" means the prices of various items payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) "The E Rickshaw" means E Rickshaw, and/or other materials which the Supplier is required to supply to the Authority under the Contract.
- (d) "Services" means services ancillary to the supply of the Rickshaws, such as transportation and insurance, and any other incidental services, such as installation, provision of technical assistance, establishment of Service Centres in all cities/districts of Uttar Pradesh and other obligations of the Supplier covered under the Contract;
- (e) "The Authority" means, State Urban Development Agency, (SUDA), NavChetna Kendra, 10-Ashok Marg, Lucknow -226001
- (f) "The Supplier" means the Successful Bidder supplying the E-Rickshaw and Services under this Contract and Supplier is -----;
- (g) "The Project Site", where applicable, means the Area of Local Bodies (Nagar Nigams, Nagar Panchyat Parishads, Nagar Palikas) and DUDA Offices in various Districts of Uttar Pradesh where the Motor/Battery Operated electric Rickshaw will be supplied, installed and maintained against the purchase orders of the Authority.
- (h) "Day" means calendar day.
- (i) "Contract Clause" means the clause of this Section II. II "GoUP" means Government of Uttar Pradesh

2. Application

These Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

3. Bench Marking and Standard

- 3.1 Prior to the delivery the Bidders have to demonstrate E-Rickshaw before a Select Technical Committee formed by the Authority..
- 3.2 The E-Rickshaw supplied under this Contract shall conform to the standards mentioned in the Technical Specifications or higher.
- 3.3 The first lot of E-Rickshaws to be certified by the Testing Agencies.

4. Patent Rights

- 4.1 The Supplier shall indemnify the Authority against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the E-Rickshaw or any part thereof in India.

5. Performance Security

- 5.1 Before execution of Agreement, the Successful Bidder has to furnish Performance Security in the form of bank guarantee for 5% amount of Value of Contract in favour of Director, State Urban Development Agency, (SUDA), Nav Chetna Kendra, 10-Ashok Marg, Lucknow - 226001 which would be valid for the period of Two Year 6 months(i.e. 30 months) from State Bank of India or its associate banks or any nationalized bank of India or scheduled bank or from the ICICI Bank, The HDFC Bank, The IDBI Bank or the Axis Bank located in India in the Performance Security Form provided in the Bidding Documents. Thus 5% of Bank Guarantee for validity of 30 months is proposed to ensure warranty maintenance Services of delivered E-Rickshaws during warranty period.
- 5.2 During warranty period, the defective item or component is to be replaced or repaired whatever required, shall be done by the Supplier to the satisfaction of the Authority.
- 5.3 The proceeds of the Performance Security shall be payable to the Authority in favour of whom the Performance Bank Guarantees being made as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 5.4 The Performance Security shall be denominated in Indian Rupees.
In case the Authority invokes the Performance Bank Guarantee for aforesaid purposes, the supplier shall replenish/refurnish the Performance Bank Guarantee within 15 days from the date of invocation.
- 5.5 Exemption from Performance Security.

(a) No security would be demanded or taken from any government corporations, which supply E-Rickshaws. This provision will apply in the matter of purchase of goods from government of India undertakings as well

(b) Micro and Small Enterprises and Industrial Co-operatives within state, which have been registered as such with the Commissioner and Director of Industries, on furnishing proof of such registration are exempted from furnishing performance security against contracts for supply of E-Rickshaws manufactured by them.

(c) In the matter of purchase of E-Rickshaws by Government departments, Micro and Small Enterprises sponsored by NSIC and in respect of which competency certificates are issued by NSIC, will be exempted from furnishing Performance Security. This will not, however apply in the matter of purchase of E-Rickshaws on rate or running contract basis

(d) The Khadi and Village Industries Co-operative Societies within the state, registered as such with Khadi and Village Industries Board/Khadi and Village Industries Commission on furnishing proof of such registration are exempted from furnishing performance security against contracts for supply of E-Rickshaws manufactured by them.

5.6 The Performance Security will be discharged by the by the Authority and returned to the supplier not later than 60 days following the date of its validity/completion of the Supplier's performance obligations including any warranty obligations under the contract.

5.7 In the event of any amendment in the agreement the Supplier shall, within 7 days of receipt of such amendment, furnish the amendment to the Performance Security rendering the same valid for the duration of the Agreement and six month (Battery), one year comprehensive warranty obligation periods of all the items.

Inspection & Tests and Self Certificate

6.1 Inspection and tests prior to delivery of E-Rickshaws and at final acceptance are as follows:

- (i) The inspection of the E-Rickshaws shall be carried out to check whether the E-Rickshaws are in conformity with the technical specifications attached to the contract and the Conditions of Contract.

The Authority will test the equipment prior to their delivery/Distribution at Sites in the office/factory of the Supplier or District DUDA offices or at any place mutually agreed between the Authority and Supplier and the Supplier will dispatch the inspected & tested E-E-Rickshaws by the Authority to the ultimate consignee along with manufacturer's warranty certificate. Complete hardware and software as specified in Section III(B) should be supplied, installed and commissioned properly against the purchase order of the Authority by the Supplier prior to commencement of performance tests, if not carried out by the Authority prior to their delivery at Sites.

- (ii) The acceptance test/verification will be conducted by the team of Authority nominated by the Authority. There shall not be any additional charges for carrying out acceptance tests. The acceptance will involve trouble-free operation during acceptance testing period. During acceptance tests, the E-Rickshaws having the same or higher technical specifications as given in the contract shall only be accepted.

- (iii) In the event of the E-Rickshaws failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the Authority reserves the rights to get the E-Rickshaws replaced by the Supplier at no extra cost to the Authority.

- (iv) Successful conducts and the conclusion of the acceptance test for the installed E-Rickshaw shall also be the sole responsibility and at the cost of the Supplier.

6.2 The inspections and tests will be conducted on the premises of the Supplier or at DUDA offices in District or at place mutually agreed between Authority and Supplier. For conducting the inspection and tests at the premises of the Supplier, all reasonable facilities and assistance, shall be provided by the Supplier at no charge to the inspection team of the Authority. Supplier shall intimate to the Authority that the E-Rickshaws are ready for inspection and the Authority can send their team for inspection. After receipt of such intimation from the Supplier, the Authority shall arrange for inspection.

6.3 Should any inspected or tested E-Rickshaws fail to conform to the specifications, the Authority shall reject the E-Rickshaws and the Supplier shall either replace the rejected E-Rickshaws or make alterations necessary to meet specification requirements free of cost to the Authority.

6.4 The Authority's rights to inspect, test and, where necessary, reject the E-Rickshaws after the E-Rickshaws arrival at Delivery Site shall in no way be limited or waived by reason of the E-Rickshaws having previously been inspected, tested and passed by the Authority or its representative.

6.5 Manual and Drawing

6.5.1 Before the E-Rickshaws are taken over by the representative(s) of the project site(s) i.e. DUDA Offices in Districts, the Supplier shall supply operation/user manual together with, if any. These shall be in such detail as will enable the Authority to operate all the equipment as stated in the specifications.

- 6.5.2 The manual shall be in the Hindi and in such form and numbers as stated in the Purchase Order. Unless and otherwise agreed, the E-Rickshaws shall not be considered to be completed for the purpose of taking over until such manuals, as stated in the Purchase Order, have been supplied to the Authority.

7. Packing

- 7.1 The Supplier shall provide such packing of the E-Rickshaw as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Purchase Order. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall be taken into consideration where appropriate, the remoteness of the E-Rickshaws final destination and the absence of heavy handling facilities at all points in transit.
- 7.2 The packing, making and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Agreement.

8. Delivery and Documentation

8.1 Upon delivery of the E-Rickshaws the Supplier shall notify in writing the Authority and the insurance company the full details of the delivery including Purchase Order number, description of E-Rickshaw quantity, name of the consignee etc. The Supplier shall mail the following documents to the Authority:-

- (a) 3 copies of the Supplier's invoice showing E Rickshaw description, quantity, unit price, total Amount.
- (b) Delivery challans duly signed & stamped by the consignee i.e. by the representatives of project sites.
- (c) Manufacturers/Supplier's warranty certificate;
- (d) E-Rickshaws inspection report.

8.2 Sale letter to be issued by the Supplier in the name of individual beneficiaries

9. Insurance

For delivery of E-Rickshaws at site, the insurance shall be obtained by the Supplier at their own cost equivalent to 110% of the value of the E-Rickshaws from warehouse of the Supplier to the final destinations of installation/Delivery defined as project site on "All Risks" basis including war risks and strikes. It will be the sole responsibility of the Supplier to file the claim, if any, with the Insurance Company immediately after delivery of E-Rickshaws at project sites.

10. Transportation

The Supplier is required under the Contract to transport the E-Rickshaw's to the specified destinations within Uttar Pradesh defined as Project sites given in Purchase Order.

11. Incidental Services

The following services shall be furnished and the cost shall be included in the Contract rates:

- a. On-site delivery & satisfactory installation and execution of all the E-Rickshaws as per Purchase Order;
- b. Furnishing all the manuals as per Purchase Order to the project sites; and
- c. Maintenance and repair of the E-Rickshaws at each location during the comprehensive warranty period including the cost of all spares.

12. Spare Parts

Supplier shall carry sufficient inventories to assure ex-stock availability of spares. Supplier shall ensure the availability of all spare parts for after sale service support for a period of at least five years including the comprehensive warranty period of the items.

13. Warranty

13.1 The Supplier warrants that the E-Rickshaws supplied under the Agreement are new, unused. The Supplier further warrants that all E-Rickshaws supplied under the Agreement shall have no defect arising from design materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied E-Rickshaws in the conditions prevailing in the Uttar Pradesh, India as per annexure H-1

13.2 **(a)** The warranty shall be comprehensive for all the equipment, parts and components. The Warranty period is one year. The period of warranty shall be considered from the date of installation and acceptance of the E-Rickshaws or 3 months more than warranty period from the date of delivery at project sites, whichever occurs earlier for all the items. The Supplier shall in addition comply with the performance guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall, make such changes, modifications and or additions to the E-Rickshaws or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with Contract Clause 6.

(b)The battery used shall be lead acid battery used in electric E-Rickshaws shall meet the relevant applicable test standards and Supplier shall give the warranty of minimum six months from the date of registration.

13.3 The Authority shall promptly notify the Supplier in writing of any claims arising under this warranty.

13.4 During warranty period, the defective item(s) or component(s) shall be replaced or repaired whatever required, by the Supplier or the Service Centre authorised by the Supplier, to the satisfaction of the Authority.

13.5 Period for correction of defects in the warranty period is maximum 48 hrs.

13.6 If any E-Rickshaws gives continuous trouble, say six times in one month, during the warranty period, the Supplier shall replace those equipment/part(s)/component(s) with new one without any additional cost to Authority.

13.7.1 The Supplier shall be bound to establish Service Centre in every cities/districts within 30 days from the date of the Purchase Order as per following criteria:-

Nagar Nigam : 2 Service Centre
Nagar Palika Parishad : 1 Service Centre

If at any stage, it is found that the centres have not been opened or non functional or have been closed down, then the Performance Bank Guarantee shall be forfeited.

13.8 Maintenance service

The Supplier is bound to repair the E-Rickshaw and make it usable within 48 hours from the time of complaint by the beneficiary. Further In case of providing repair/replacement/rectification services within the stipulated time of 48 hours, the cost of arranging the repair/replacement/rectification from a third party shall be borne by the Supplier.

13.9(A) As per Ministry of Road Transport and Highways Notification no. 25 dated January 13, 2015, Supplier would be responsible to provide at least 10 days successful training to E-Rickshaw beneficiaries. It would also be mandatory for the Supplier to issue certificate to E-Rickshaw beneficiaries on successful completion of training as per the notification mentioned above.

14.Payment

In Consideration of delivery/transfer of E-Rickshaws, incidental services therefore Authority shall pay in Rs. to supplier.

Payment of Contract Price of Rs._____ for E-Rickshaws and services shall be made in Indian Rupees as follows:

- (i) After RTO Registration:-** Eighty percent (80%) of the Contract Price of all E-Rickshaws (Inspected and approved by inspection team) given in the Purchase Order shall be paid by the Authority to the Supplier upon submission of the documents specified in Clause 8 of Contract Clause.
- (ii) On Installation :-** The remaining ten percent (10%) amount of the Contract Price of the E-Rickshaws shall be paid to the Supplier within 15 days after successful installation of E-Rickshaws and submission of all installation reports duly signed & stamped by the representative(s) of all the project sites. If the distribution of all the E-Rickshaws is not made within 30 days due to any reason for which Supplier is not responsible, the 10% payment against installation of delivered E-Rickshaws will be released by the Authority after their due satisfaction. However after successful installation of remaining E-Rickshaws by supplier within reasonable time to the satisfaction of Authority, Authority shall release the balance amount of 10% payment.
- (iii) After Training :** The remaining ten percent (10%) amount of the Contract Price of the E-Rickshaws shall be paid to the Supplier after providing at least ten days successful operational training with certificate to each beneficiaries of E-Rickshaws. If the beneficiaries of E-Rickshaws not participate in the training on given training schedule, the payment against training of delivered E-Rickshaws will be released by the Authority after their due satisfaction.

14A. (Mobilization Advance)

“14A-1. In case Supplier request from Authority to give Mobilization Advance, Authority may give Mobilization Advance to Supplier up to 10% of Contract Price. Before providing Mobilization Advance to Supplier, Authority should take Bank Guarantee of the amount equivalent to 110% of the Mobilization Advance. Interest would be charged against the Mobilization Advance at the rate of Bank Prime Lending Rate.

14A-2. Mobilization Advance may be paid in two instalments. It shall be released in two stages depending upon the progress of the supply of E-Rickshaws. Utilization certificates shall be obtained by the Authority from the Supplier for the use of first instalment of Mobilization Advance before release of Second instalment of Mobilization Advance.

14A-3. Bank Guarantee for Mobilization Advance shall be issued from Nationalized Bank in the format prescribed in Section-III, Annexure- E-1 to this Bid Document. Bank Guarantee shall be valid for a period of 180 days from the date of delivery of Mobilization Advance.

14A-4. Mobilization Advance (with interest) shall be recovered from the Supplier by Adjustment from the first Bill presented by the Supplier as per provisions of Clause 14(i) of Contract Clause of this Tender Document.

14A-5. The Bank Guarantee for Mobilization Advance shall be invoked by the Authority in the following cases:-

- (i) In case required number of E-E-Rickshaws are not delivered within 45 days from the date of Purchase Order, or
- (ii) In case Supplier fails to establish Service Centres within one month from the date of issue of Purchase Order.

Draft of Bank Guarantee is enclosed as annexure E-1 if Section-III of the bid document.

15. Prices

- 15.1 Prices payable to the Supplier as stated in the Agreement shall remain fixed during the performance of the Contract. However, in the event of any increase/decrease in Government taxes/duties as applicable at the time of delivery, the prices shall be adjusted at the time of payment on submission of their proof by the Supplier to the Authority.

16. Change Orders

- 16.1 The Authority may, at any time, by written order given to the Supplier, make changes the place of delivery within the general scope of the Agreement.

17. Contract Amendments

- 17.1 Subject to clause 16 no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

18. Assignment

- 18.1 The Supplier shall not assign, in whole or in parts its obligations to perform under the Contract to any other person.

19. Delivery of the E-Rickshaws and Delay in the Supplier's Performance

- 19.1 Supplier shall intimate to the Authority that the E-Rickshaws are ready for inspection and test. After receipt of such intimation from the Supplier, the Authority will arrange the inspection and test of the E-Rickshaws.
- 19.2 If, at any time, during performance of the Contract the Supplier should encounter conditions impeding timely delivery of the E-Rickshaws and performance of Services, the Supplier shall promptly notify the Authority in writing of the fact of the delay, its likely duration and its cause(s) as soon as possible. After receipt of the Supplier's notice, the Authority shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Purchase order.
- 19.3 Except as provided under Clause 22 of Contract Clause a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to Clause 20 of Contract Clause unless an extension of time is agreed upon pursuant to Conditions of Contract without the application of liquidated damages.

20. Liquidated Damages

- 20.1 Subject to other provisions of Conditions of Contract, if the Supplier fails to deliver or install any or all of the E-Rickshaws or to establish the Service Centre within the period(s) specified in Clause 13.7.1 of Contract Clause, the Authority shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 1% of the delivered price of the delayed E-Rickshaws or unperformed Services for each week or part thereof of the delay until actual delivery or installation or performance, up to a maximum deduction of 10%. Once the maximum penalty is reached, the Authority may consider termination of the Contract/Purchase Order pursuant to conditions of Contract Clause 21.

21. Termination for Default

- 21.1 The Authority may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:
- (a) if the Supplier fails to deliver any or all of the E-Rickshaws or Services within the period(s) specified in the Contract, or within any extension thereof granted by the Authority
or
 - (b) if the Supplier fails to perform any other obligation(s) under the Contract
- 21.2 In the event the Authority terminates the Contract in whole or in part, pursuant to the conditions of Contract Clause no. 21.1 Authority may procure, upon such terms and in such manner as it deems appropriate. E-Rickshaws and/or Services similar to those undelivered, and the Supplier shall be liable to the Authority for any excess costs for such/similar E-Rickshaws or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

22. Force Majeure

- 22.1 Notwithstanding the provisions of conditions of Contract Clause no. 19, 20 & 21 the Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 22.2 For purpose of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Authority either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises the Supplier shall promptly notify the Authority in writing of such conditions and the cause thereof. Unless otherwise directed by the Authority, in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

23. Termination for Insolvency

- 23.1 The Authority may, at any time, terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Authority.

24. Settlement of Disputes

- 24.1 If any dispute or difference of any kind, whatsoever, shall arise between the Authority and the Supplier in connection with or arising out of the Contract the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 24.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Authority or the Supplier may give notice to other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.
- 24.3 Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration.

Arbitration may be commenced prior to or after delivery of the E-Rickshaws under the Contract.

- 24.4.1 In case of dispute or difference arising between the Authority and Supplier relating to any matter arising out of or connected with this Agreement, such dispute or difference shall be settled in accordance with the Arbitration and Conciliation Act 1996. The Arbitral Tribunal shall consist of 3 arbitrators and one each to be appointed by the Authority and the Supplier. The third Arbitrator shall be chosen by the two Arbitrator appointed by the parties and shall act as Presiding arbitrator. In case of failure of two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Principal Secretary/Secretary, Urban Development, Government of Uttar Pradesh.
- 24.4.2 Arbitration proceedings shall be held at Lucknow, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be in English or Hindi.
- 24.4.3 The decision of the majority of the arbitrators shall be final and binding upon both the parties. The cost and expenses of arbitration proceedings will be paid as determined by the Arbitral Tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.
- 24.4.4 Notwithstanding any reference to arbitration herein.
- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
 - (b) the Authority shall pay the Supplier any monies due to the Supplier.

25. Limitation of Liability

- 25.1 Except in cases of criminal negligence or wilful misconduct, and in the case of Infringement pursuant to Clause 4 of Contract Clause.
- (a) The Supplier shall not be liable to the Authority, whether in contract tort, or otherwise, for any indirect or consequential loss of damage, loss of use, loss of production, or loss of profits or interest costs; Provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Authority ; and
 - (b) The aggregate liability of the Supplier to the Authority, whether under the Contract, in tort or otherwise, shall not exceed the total value of items ordered under the Contract Provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

26. Governing Language

The Contract shall be written in English language Subject to condition of Contract Clause 28. English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

27. Applicable Law

The Contract shall be interpreted in accordance with the laws of the Union of India.

27. Notices

- 28.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by fax and confirmed in writing to the other Party's address. For the purpose of all notices, the following shall be the address of the Authority and Supplier

Authority:
State Urban Development Agency (SUDA),
Nav Chetna Kendra 10-Ashok Marg,
Lucknow-226001

Supplier: (To be filled in at the time of Contract execution)

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28.2 A notice shall be effective when delivered or on the notice's effective date whichever is later.

29. Taxes and Duties

29.1 Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits etc. incurred until delivery of the contracted E-Rickshaws and or Services to the Authority.

30. Right to use defective equipment

If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the equipment proves to be unsatisfactory, the Authority shall have the right to continue to operate or use such equipment until rectification of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Authority's operation.

31. Supplier Integrity

The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contracts using state-of-the-art methods and economic principles and exercising all means available to achieve the performance specified in the Contract.

32. Supplier's Obligations

The Supplier is obliged to work closely with the Authority's staff, act within its own authority and abide by directives issued by the Authority and implementation activities. The Supplier has to abide by the job safety measures prevalent in India and will free the Authority from all demands or responsibilities arising from accidents or loss of life the cause of which is the Supplier's negligence. The Supplier will pay all indemnities arising from such incidents and will not hold the Authority responsible or obligated. The Supplier is responsible for managing the activities of its personnel and will hold itself responsible for any misdemeanours. The Supplier will treat as confidential all data and information about received from the Authority, obtained in the execution of his/her responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Authority.

33. Patent Right

In the event of any claim asserted by a third party of infringement of copy right, patent, trademark or industrial design rights arising from the use of the E-Rickshaw or any parts thereof in the Authority's country, the Supplier shall act expeditiously to extinguish such claim. If the Supplier fails to comply and the Authority is required to pay compensation to a third party resulting from such infringement, the Supplier shall be responsible for the compensation including all expenses (court costs and lawyer fees). The Authority will give notice to the Supplier of such claim, if it is made, without delay.

SECTION III : TECHNICAL BID

- III(A) BID FORM
- III(B) SCHEDULE OF REQUIREMENTS
- III(C) TECHNICAL SPECIFICATIONS
- III(D) QUALIFICATION REQUIREMENTS
- III(E) BID SECURITY FORM
- III(E-1) DRAFT OF BANK GUARANTEE FOR MOBILIZATION ADVANCE
- III(F) CONTRACT FORM
- III(G) CAPABILITY STATEMENT
- III(H) PERFORMANCE SECURITY FORM
- III(H-1) FORMAT OF WARRANTY
- IV(A) FINANCIAL BID FORM
- IV(B) PRICE SCHEDULE/BOQ

SECTION III (A) : BID FORM

Tender reference no.: 01/RICKSHAW-YOJNA/UPGOVT/2016

Date :

To :

Director,
State Urban Development Agency,
(SUDA) NavChetna Kendra,
10-Ashok Marg, Lucknow-226001.

Sir,

Having examined the Bid Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver E - RICKSHAW in conformity with the said Bid Documents and hereby undertake that we accept all the Conditions of the Contract (Section II) of the Bid document and will supply the Motor/Battery Operated Rickshaw and other items/materials as per the Technical Specifications (Section III(C)) of the Bid documents. We further undertake that we full fill the Qualification Requirements (Section III(D)) and for this purpose we enclose the details. In addition to this, the particulars of our organization such as legal status, details of experience and past performance, service support details, capability statement and the required bid security in shape of bank guarantee are furnished with this Bid form.

We further undertake, if our Bid is accepted, to deliver the E-E-Rickshaws in accordance with the delivery schedule specified in the Schedule of Requirements (Section III (B)).

If our Bid is accepted, we will obtain the guarantee of a bank in the form prescribed by the Purchaser for a sum equivalent to 5% of the Contract price for the due performance of the Contract.

We agree to abide by this Bid for the Bid validity period specified in Clause 12.1 of the ITB and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us. All the terms and conditions of the Tender Document are acceptable to us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1998".

We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this day of 20.....

(Signature)

(in the capacity of)

Duly authorized to sign Bid for and on behalf of _____

SECTION III (B) : SCHEDULES OF REQUIREMENTS

Items Brief Description	Destination	Delivery Schedule	Bid Security
As per the details given in the SECTION III I TECHNICAL SPECIFICATIONS	All District offices of DUDA in Uttar Pradesh	All the items shall be delivered within 45 days from the date of issue of the purchase order.	Rs. 1.37 Crores

SECTION III (C) TECHNICAL SPECIFICATIONS

(For Four seated E Rickshaw (excluding driver seat))

A. Specifications of the 4 -Seater E Rickshaw :

Four-Seater E-Rickshaw with a maximum loading capacity of 380 kg (four passengers, driver and 40 kg luggage), maximum speed of 20 to 25 kmph, minimum range of 70 km with full load, with starting and moving capability at 7 degree gradient, driven by a brushless AC or DC motor of output power 850 W or above but not more than 2000 W, powered from a EV grade battery of 100 Ah, conforming to the Ministry of Road Transport and Highway GSR No. 709 (E) dated 8 October 2014 and Notification No. S.O. 2590 (E) dated 8 October 2014 and also the additional tests specified elsewhere in this document.

Sl no.	Description	Specifications	Remarks/Reference Standards/Test Standards	Specification of Concerned Bidder (To be filled with page no. of concerned and supportive documents)
1	Type of Electric Rickshaw	Fully electric, battery operated motor driven	Four-Seater E-Rickshaw	
2	Pedal Assistance	Not required		
3	Reverse Gear	Required		
4	Maximum Speed	20 to 25 kmph	To be tested with full load	
5	Loading Capacity (Weight of four passengers, driver and luggage of 40 kg)	380 kg		
6	Range	70 km or more	To be tested as per AIS-040 with full load OR To be tested as per AIS-040 with 150 kg load in which case, the range has to be 100 km or more	
7	Motor Output Power	48 V, 850 W or above but not more than 2000 W	At full load	
8	Motor Type	Brushless Motor	AC or DC	
9	Motor Controller	Suitable controller for starting, accelerating, decelerating, driving and stopping the E-Rickshaw smoothly		
10	Battery Voltage	48 V Nominal		
11	Battery Capacity	100 Ah or more	C ₂₀ rating	
12	Battery Type	Traction Battery	To be tested as per	

		used in Battery Operated Vehicle	AIS-048/2009	
13	Battery Charger	220/230 V Nominal Input Voltage, High Efficiency		
14	Electrical Energy Consumption	75 Wh/km or less	To be tested as per AIS-039	
15	Gradeability	Capability to start and move at 7 ⁰ gradient with full load	To be tested as per AIS-003 with full load	
16	Ground Clearance	120 mm or more	To be tested as per IS:9435	
17	Overall size of the E- Rickshaw	Length < 2.8 m Width < 1 m Height < 1.8 m		
18	Front Windshield & Wiper	Windshield shall be made out of laminated safety glass. Wiper shall be electric motor operated.	Front windshield shall conform to IS:2553	
19	Brakes	Parking & service brakes, safe & efficient.		
20	Instrument Panel	Speedometer and battery charge indicator		
21	Roof	Made out fiber glass or a combination of fiber glass and good quality metal or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body		
22	Controls	Start/Stop switch and indicators		
23	Tyres	3 -12" minimum		

B. Fitness, Compliance & Test Certificates to be submitted for the E-Rickshaw:

- Fitness/Compliance Test as per the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014**
- Compliance Certificate for the following test to be carried out as per the Safety Standards for E-E-Rickshaws as per the Ministry of Road Transport and Highways Notification No. S.O. 2590 (E) dated 8 October 2014.**

SI.No.	Parts/Components/Assemblies	Test Standards	Specification of Concerned Bidder (To be filled with page no. of concerned and supportive documents)
1.	Automotive lamps used in motor vehicles for the following applications: i. Head Lights Main and Dip ii. Parking Light iii. Direction Indicator Lamp iv. Tail Lamp v. Reversing Lamp vi. Stop Lamp vii. Rear Registration Mark Illuminating Lamp	AIS – 034/2004	
2.	Wheel rims	AIS – 073/2007	
3.	(a) Installation requirement for lighting , light signaling devices (b) Performance for requirement of lighting , light signaling devices	AIS – 0009/2001 AIS – 012/2004 AIS – 010/2004	
4.	The requirements for construction and functional safety of battery operated vehicles	AIS – 038/2003	
5.	The measurement of net power and the maximum thirty minute power and speed for battery operated vehicles	AIS – 041/2003	
6.	Traction batteries used in battery operated vehicles	AIS – 048/2009	
7.	Requirement of handholds	AIS – 046/2009	

3. Compliance/Test Certificates for the following Additional Tests to be Carried Out for the E-Rickshaw :

SI. No.	Parts/Components/Assemblies/ Performance	Test Standards	Specification of Concerned Bidder (To be filled with page no. of concerned and supportive documents)
1	Range	AIS-040 with full load OR AIS-040 with 150 kg load in which case, the range has to be 100 km or more	
2	Electrical Energy Consumption	AIS-039	
3	Grade ability	AIS-003	
4	Ground Clearance	IS – 9435	

C. Type of Motor:

The motor shall be of “Brushless Type” specifically designed for electric vehicles. These brushless type motors can be of DC or AC type having high efficiencies at the rated output power delivered. These motors shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.)

D. Motor Controller and the Power Supply System:

The motor controller shall be capable of controlling the motor from start to maximum speed with no load to full load and also for slight overloads of 20% over and above the rated full load for shorter durations. They shall be able to continuously drive the motor once started with the full load with maximum speed for the full declared range of the vehicle. The controllers shall be stable, robust and shall be capable of operating at all the conditions normally encompassed by the automobiles. The motor controllers used shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

The power supply system to the motor from the storage battery which includes the dc/dc converter, and the motor driving circuit which may be a dc converter or an inverter as the case may be for the type of motor, along with the controller shall also meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

E. Storage Battery:

As the electric rickshaw is supposed to have frequent start-stop operations, and also varying speed and varying load operations, the battery used shall be able to survive these frequent variations. It shall be capable of supplying electric power as per the requirement and specifications of the vehicle for meeting its travel for the full range with full load. Therefore, the battery used shall be of lead-acid or better type, and shall be EV grade tubular deep discharge type with high cycle life. The batteries used in the electric E-Rickshaws shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

F. Mechanical Power Transmission:

The mechanical power transmission from the motor shaft to the wheels shall be highly efficient. The direct mounting, or chain and sprocket or any other mechanical arrangement shall be highly reliable needing least maintenance and shall be tested for all its maneuvers to be able to meet the electric rickshaw requirements of frequent start, stop and gradient climbing, etc apart from its normal running with full load and full speed. The mechanical power transmission system used in the electric rickshaw shall meet the relevant applicable test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

G. Overall Rickshaw Design:

The overall electric rickshaw design shall meet all the requirements of safety (of the vehicle, safety of passengers and luggage and the driver), reliability, repeatability, efficiency, strength, smoothness in riding, passenger comfort in climbing/entering the rickshaw, sitting at steady state and during the ride, getting down from the rickshaw, keeping the luggage, etc. The rickshaw shall not be noisy to cause discomfort for the passengers. It should have sufficient precautions not to have any electric shock for the passengers as well as the driver. It should have the proper control and instrument panel to indicate the speed, state of charge of the battery (or the remaining charge or kilometers it can run), etc. It should have sufficient braking system, suspension system, start and stop buttons, key, front and back lights with parking lights too, power supply system for these auxiliaries, and proper covered battery compartment not to cause any problem for the passengers, etc. The electric cycle rickshaw should have the certification from any of the Government of India approved testing centers such as ARAI, ICAT, etc, so as satisfy the required performance of the electric rickshaw as a whole and also all the main components used in it such as the motor, battery, motor controller, mechanical power transmission system, its body, other auxiliary systems such as brakes, lighting and control, etc. and the overall safety. The rickshaw has to be fabricated with good quality steel properly plated/painted to avoid rusting for more than five years. The body shall be of good quality metal, and the roof shall be of fiber glass or a combination of fiber glass and metal of good quality or a combination of good quality

metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body. The seats have to be of very good quality with proper cushioning provided. There shall be sufficient number of handles to ease passenger entry and ride. It shall have sufficient height and shall be giving proper protection to the passengers from the direct sun light and rain. The vehicle integration, packaging of electrical and electronic wires and devices shall be such that the rickshaw can run even in rainy season/during the rain without any problems.

H. Supplier/Manufacturer Conditions:

The supplier of the E-Rickshaw shall be an original manufacturer of the E-E-Rickshaws. The supplier shall not be a trader/importer or simply an assembler for various components. The supplier shall have the facility and capability for the design, fabrication, assembly and testing of the offered E-E-Rickshaws. The supplier can use the motors, controllers, batteries and battery charges procured preferably from various reliable and quality sources. All these components have to be tested at the supplier's site independently before assembling into the E-E-Rickshaws. The supplier shall be capable of providing reliable and economical after-sales service including provision of spares for all components used. It will be the responsibility of the supplier of the E-E-Rickshaws to get all the components used in the electric rickshaw and also the electric rickshaw as a whole to be tested by the Government of India approved testing centers such as ARAI, ICAT, etc.

Bidder have to submit compliance certificate by any one the following testing agencies approved by Government of India under rule 126 of Central Motor Vehicle rules 1989:-

- i- Vehicle Research and Development Establishment of the Ministry of Defence of the Government of India.
- ii- Automotive Research Association of India, Pune.
- iii- Central Farm machinery Testing and Training Institute, Budni(MP).
- iv- Indian Institute of Petroleum, Dehradun.
- v- Central Institute of Road Transport, Pune.
- vi- International Centre for Automotive Technology, Manesar.

Warranty Period : One Year

Quantity : **10,000(approximately).**

Signature and seal of the Bidder:

Place:

Date:

SECTION III(D) : QUALIFICATION REQUIREMENTS

1. The Bidder should be a Original Equipment Manufacturers of Motor/Battery Operated Electric Rickshaw. Bidder should be Company/Firm/Individual.
2. The Bidder should have certificate of the trade mark registration/authorisation letter of the competent authority using the trade mark and/or certificate of registration of the manufacturer in excise for Motor/Battery Operated electric rickshaw being offered in this tender. In case, manufacturer is exempted from excise duties by the Government, the Bidder should also have necessary documentary proof for the same.
3. The original equipment manufacturer of the E - rickshaw quoted in the tender shall be in the business of regular supply and installation of the same make/brand of the E-Rickshaws since last three financial years i.e., 2013-14, 2014-15 and 2015-16.
4. Motor/Battery Operated electric rickshaw being quoted should have minimum technical specifications given in the tender.
5. The Supplier shall be bound to established Service Centre in every cities/districts within one month from the date of issue of work order as per the following criteria –

Nagar Nigam	: 2 Service Centre
Nagar Palika Parishad	: 1 Service Centre

E- Rickshaw supplier shall establish service centres for repair and maintenance of E-Rickshaws and battery charging in local body area in which this scheme is being executed where beneficiary will get facility of repair and maintenance of Rickshaw as well as charging of E-Rickshaws battery and facility of obtaining charge battery replacing discharged battery on payment basis. If at any stage, it is found that the centres have not been opened or non functional or have been closed down, then the Bid Security/ Performance Bank Guarantee shall be forfeited. After establishing the charging and servicing centres, successful Bidder shall not be permanent Grantee.

6. The Bidder should submit a notarial affidavit that the bidder has not been black listed/debarred/prohibited by any State/Central Government Departments /Organisations and there is no criminal case pending in the court against the Bidder. The Bids of the black-listed bidders or those not submitting the required affidavit shall be rejected.
7. Bidder should have a average annual turnover of at least Rs. 02.00 crores annual in preceding three financial year is 2013-14, 2014-15 and 2015-16. Bidder not having the required turnover and applying against the Bid shall rejected.
8. The Bidder should have relevant documents for following:
 - (i) Memorandum and Article of Association or any other document showing objective of the Bidder.
 - (ii) Place of registration.
 - (iii) The power-of-attorney authorizing the Bidder to sign the bid/ contract.
 - (iv) Income tax registration number of the Bidder.
 - (v) Trade tax/VAT registration number of the Bidder.

The bids of the Bidders not submitting copies of documents mentioned in clause 20.8 above shall be rejected.

9. Uttar Pradesh State Unit manufacturer Bidders seeking purchase preference/price preference for their manufactured quoted Rickshaw as per the G.O. 706/18-5-2003-9(S.P.)/95, dated 11 June 2003 and 1261/18-5-2006-9(S.P.)/95 dated 22 September 2006 of Small Industries Department, Govt of Uttar Pradesh shall have to submit the evidence that their quoted Rickshaw have been manufactured by them in a manufacturing unit in Uttar Pradesh. The Bidder should also submit proof that its manufacturing unit falls into small/medium/large scale industry unit as per Uttar Pradesh Government norms.
10. Supplier shall ensure the availability of all spare parts for after sale service support for a period of at least five years including the comprehensive warranty period of the items.
11. Prior to the delivery of E - rickshaw, the Bidders have to demonstrate the capabilities of this machine before a select technical committee formed by the Authority.
12. Bidder have to submit compliance certificate with specification given below of Four seated E-Rickshaw by any one the following testing agencies approved by Government of India under Rule 126 of Central Motor Vehicle Rules 1989:-
 - i- Vehicle Research and Development Establishment of the Ministry of Defence of the Government of India.
 - ii- Automotive Research Association of India, Pune.
 - iii- Central Farm machinery Testing and Training Institute, Budni(MP).
 - iv- Indian Institute of Petroleum, Dehradun.
 - v- Central Institute of Road Transport, Pune.
 - vi- International Centre for Automotive Technology, Manesar.

Specifications for the Motor/Battery Operated Electric Rickshaw:

A.Specifications of the 4 -Seater E Rickshaw :

Four-Seater E-Rickshaw with a maximum loading capacity of 380 kg (four passengers, driver and 40 kg luggage), maximum speed of 20 to 25 kmph, minimum range of 70 km with full load, with starting and moving capability at 7 degree gradient, driven by a brushless AC or DC motor of output power 850 W or above but not more that 2000 W, powered from a EV grade battery of 100 Ah, conforming to the Ministry of Road Transport and Highway GSR No. 709 (E) dated 8 October 2014 and Notification No. S.O. 2590 (E) dated 8 October 2014 and also the additional tests specified elsewhere in this document.

Sl no.	Description	Specifications	Remarks/Reference Standards/Test Standards
1	Type of Electric Rickshaw	Fully electric, battery operated motor driven	Four-Seater E-Rickshaw
2	Pedal Assistance	Not required	
3	Reverse Gear	Required	
4	Maximum Speed	20 to 25 kmph	To be tested with full load
5	Loading Capacity (Weight of four passengers, driver and luggage of 40 kg)	380 kg	
6	Range	70 km or more	To be tested as per AIS-040 with full load OR To be tested as per AIS-040 with 150 kg load in which case, the range has to be 100 km or more

7	Motor Output Power	48 V, 850 W or above but not more than 2000 W	At full load
8	Motor Type	Brushless Motor	AC or DC
9	Motor Controller	Suitable controller for starting, accelerating, decelerating, driving and stopping the E-Rickshaw smoothly	
10	Battery Voltage	48 V Nominal	
11	Battery Capacity	100 Ah or more	C ₂₀ rating
12	Battery Type	Traction Battery used in Battery Operated Vehicles	To be tested as per AIS-048/2009
13	Battery Charger	220/230 V Nominal Input Voltage, High Efficiency	
14	Electrical Energy Consumption	75 Wh/km or less	To be tested as per AIS-039
15	Gradeability	Capability to start and move at 7 ^o gradient with full load	To be tested as per AIS-003 with full load
16	Ground Clearance	120 mm or more	To be tested as per IS:9435
17	Overall size of the E- Rickshaw	Length < 2.8 m Width < 1 m Height < 1.8 m	
18	Front Windshield & Wiper	Windshield shall be made out of laminated safety glass. Wiper shall be electric motor operated.	Front windshield shall conform to IS:2553
19	Brakes	Parking & service brakes, safe & efficient.	
20	Instrument Panel	Speedometer and battery charge indicator	
21	Roof	Made out fiber glass or a combination of fiber glass and good quality metal or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body	
22	Controls	Start/Stop switch and indicators	
23	Tyres	3 -12" minimum	

B. Fitness, Compliance & Test Certificates to be submitted for the E-Rickshaw:

1. Fitness/Compliance Test as per the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014
2. Compliance Certificate for the following test to be carried out as per the Safety Standards for E-E-Rickshaws as per the Ministry of Road Transport and Highways Notification No. S.O. 2590 (E) dated 8 October 2014.

Sl.No.	Parts/Components/Assemblies	Test Standards
1.	Automotive lamps used in motor vehicles for the following applications: i. Head Lights Main and Dip ii. Parking Light iii. Direction Indicator Lamp iv. Tail Lamp v. Reversing Lamp vi. Stop Lamp vii. Rear Registration Mark Illuminating Lamp	AIS – 034/2004
2.	Wheel rims	AIS – 073/2007
3.	(a) Installation requirement for lighting , light signaling devices (b) Performance for requirement of lighting , light signaling devices	AIS – 0009/2001 AIS – 012/2004 AIS – 010/2004
4.	The requirements for construction and functional safety of battery operated vehicles	AIS – 038/2003
5.	The measurement of net power and the maximum thirty minute power and speed for battery operated vehicles	AIS – 041/2003
6.	Traction batteries used in battery operated vehicles	AIS – 048/2009
7.	Requirement of handholds	AIS – 046/2009

3. Compliance/Test Certificates for the following Additional Tests to be Carried Out for the E – Rickshaw:

Sl. No.	Parts/Components/Assemblies/Performance	Test Standards
1	Range	AIS-040 with full load OR AIS-040 with 150 kg load in which case, the range has to be 100 km or more
2	Electrical Energy Consumption	AIS-039
3	Gradeability	AIS-003
4	Ground Clearance	IS – 9435

C. Type of Motor:

The motor shall be of “Brushless Type” specifically designed for electric vehicles. These brushless type motors can be of DC or AC type having high efficiencies at the rated output power delivered. These motors shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.)

D. Motor Controller and the Power Supply System:

The motor controller shall be capable of controlling the motor from start to maximum speed with no load to full load and also for slight overloads of 20% over and above the rated full load for shorter durations. They shall be able to continuously drive the motor once started with the full load with maximum speed for the full declared range of the vehicle. The controllers shall be stable, robust and shall be capable of operating at all the conditions normally encompassed by the automobiles. The motor controllers used shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

The power supply system to the motor from the storage battery which includes the dc/dc converter, and the motor driving circuit which may be a dc converter or an inverter as the case may be for the type of motor, along with the controller shall also meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

E. Storage Battery:

As the electric rickshaw is supposed to have frequent start-stop operations, and also varying speed and varying load operations, the battery used shall be able to survive these frequent variations. It shall be capable of supplying electric power as per the requirement and specifications of the vehicle for meeting its travel for the full range with full load. Therefore, the battery used shall be of lead-acid or better type, and shall be EV grade tubular deep discharge type with high cycle life. The batteries used in the electric E-Rickshaws shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

F. Mechanical Power Transmission:

The mechanical power transmission from the motor shaft to the wheels shall be highly efficient. The direct mounting, or chain and sprocket or any other mechanical arrangement shall be highly reliable needing least maintenance and shall be tested for all its maneuvers to be able to meet the electric rickshaw requirements of frequent start, stop and gradient climbing, etc apart from its normal running with full load and full speed. The mechanical power transmission system used in the electric rickshaw shall meet the relevant applicable test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

G. Overall Rickshaw Design:

The overall electric rickshaw design shall meet all the requirements of safety (of the vehicle, safety of passengers and luggage and the driver), reliability, repeatability, efficiency, strength, smoothness in riding, passenger comfort in climbing/entering the rickshaw, sitting at steady state and during the ride, getting down from the rickshaw, keeping the luggage, etc. The rickshaw shall not be noisy to cause discomfort for the passengers. It should have sufficient precautions not to have any electric shock for the passengers as well as the driver. It should have the proper control and instrument panel to indicate the speed, state of charge of the battery (or the remaining charge or kilometers it can run), etc. It should have sufficient braking system, suspension system, start and stop buttons, key, front and back lights with parking lights too, power supply system for these auxiliaries, and proper covered battery compartment not to cause any problem for the passengers, etc. The electric cycle rickshaw should have the certification from any of the Government of India approved testing centers such as ARAI, ICAT, etc, so as satisfy the required performance of the electric rickshaw as a whole and also all the main components used in it such as the motor, battery, motor controller, mechanical power transmission system, its body, other auxiliary systems such as brakes, lighting and control, etc. and the overall safety. The rickshaw has to be fabricated with good quality steel properly plated/painted to avoid rusting for more than five years. The body shall be of good

quality metal, and the roof shall be of fiber glass or a combination of fiber glass and metal of good quality or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body. The seats have to be of very good quality with proper cushioning provided. There shall be sufficient number of handles to ease passenger entry and ride. It shall have sufficient height and shall be giving proper protection to the passengers from the direct sun light and rain. The vehicle integration, packaging of electrical and electronic wires and devices shall be such that the rickshaw can run even in rainy season/during the rain without any problems.

H. Supplier/Manufacturer Conditions:

The supplier of the E-Rickshaw shall be an original manufacturer of the E-E-Rickshaws. The supplier shall not be a trader/importer or simply an assembler for various components. The supplier shall have the facility and capability for the design, fabrication, assembly and testing of the offered E-E-Rickshaws. The supplier can use the motors, controllers, batteries and battery charges procured preferably from various reliable and quality sources. All these components have to be tested at the supplier's site independently before assembling into the E-E-Rickshaws. The supplier shall be capable of providing reliable and economical after-sales service including provision of spares for all components used. It will be the responsibility of the supplier of the E-E-Rickshaws to get all the components used in the electric rickshaw and also the electric rickshaw as a whole to be tested by the Government of India approved testing centers such as ARAI, ICAT, etc.

Bids of Bidder who fails to submit their compliance report shall be rejected. Financial Bids of only those Bidders will be opened whose E-Rickshaw will be found suitable for the work.

The Bidders must quote prices of equipment with one year warrant

SECTION III(E) : BID SECURITY FORM

Whereas(here in after called the "bidder") has submitted their offer datedfor the supply of(here in after called the "tender") against the purchaser's tender enquiry No.KNOW ALL MEN by these presents that WEofhaving our registered office atare bound unto(here in after called the "Purchaser) in the sum offor which payment will and truly to be made to the said purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank thisday of20.....

THE CONDITIONS OF THIS OBLIGATION ARE:

- (1) If the bidder withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- (2) If the bidder having been notified of the acceptance of his tender by the Purchaser during the period of its validity
 - (a) Fails to furnish the Performance Security for the due performance of the contract.
 - (b) Fails or refuses to accept/execute the contract.

WE undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 (forty five) days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

.....
 (Signature of the authorized officer of the Bank)

 Name and designation of the officer

Seal, name and address of the Bank / Branch

SECTION III(E-1): SECURITY OF MOBILIZATION ADVANCE FORM**Bank Guarantee**

Whereas(*Name of Supplier*) (Hereinafter called “the Supplier”) has submitted its Bid dated(*Date of submission of bid*) for the supply of(*name and description of the E-E-Rickshaws*)

(hereinafter called “the Contract Of Supply Order”)

KNOW ALL PEOPLE by these present that We(*name of Bank*) of(*name of country*), having our registered offices at(*address of bank*) (hereinafter called “the Bank”), are bound unto(*name of Purchaser*) (hereinafter called “the Purchaser”) in the sum of for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the common seal of the said Bank this Day of20....

THE CONDITIONS OF THIS OBLIGATIONS ARE (As Per bid document point 14 A of Section II):

14A. (Mobilization Advance)

“14A-1. In case Supplier request from Authority to give Mobilization Advance, Authority may give Mobilization Advance to Supplier upto 10% of Contract Price. Before providing Mobilization Advance to Supplier, Authority should take Bank Guarantee of the amount equivalent to 110% of the Mobilization Advance. Interest would be charged against the Mobilization Advance at the rate of Bank Prime Lending Rate.

14A-2. Mobilization Advance may be paid in two instalments. It shall be released in two stages depending upon the progress of the work. Utilization certificates shall be obtained by the Authority from the Supplier for the use of first instalment of Mobilization Advance before release of Second instalment of Mobilization Advance.

14A-3. Bank Guarantee for Mobilization Advance shall be issued from Nationalized Bank in the format prescribed in Section-III, Annexure- E-1 to this Bid Document. Bank Guarantee shall be valid for a period of 180 days from the date of delivery of Mobilization Advance.

14A-4. Mobilization Advance (with interest) shall be recovered from the Supplier by Adjustment from the first Bill presented by the supplier as per provisions of Clause 14(i) of Section II of this Bid Document.

14A-5. The Bank Guarantee for Mobilization Advance shall be invoked by the Authority in the following cases:-

- (i) In case required number of E-E-Rickshaws are not delivered within 45 days from the date of purchase order, or
- (ii) In case Supplier fails to establish charging and service centre within one month from the date of issue of purchase order.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having substantiate its demand, provided that in the demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence or one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto/...../2016 and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank Authority)

SECTION III(F) : CONTRACT FORM

THIS AGREEMENT made the day of ... 20..... Between(*Name and Address of Purchaser*) hereinafter called “the Authority” of the one part and (*Name and address of Supplier*) of hereinafter called “the Supplier” of the other part :

WHEREAS the Authority is desirous to have some Rickshaw and ancillary services viz., and has accepted a Bid by the Supplier for the supply of these E-Rickshaws and services in the sum of (*Contract price in Words and Figures*) (Hereinafter called the “Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Bid Form;
 - (b) the Technical Specifications and approved rates; and
 - (c) the Conditions of Contract;
3. In consideration of the payment to be made by the Authority to the Supplier as, the Supplier hereby covenants with the Purchaser to provide the E-Rickshaws and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Authority hereby covenants to pay the Supplier in consideration of the provision of the E-Rickshaws and services and the remedying of defects therein, the value of ordered items on the Contract rates or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

DELIVERY & INSTALLATION SCHEDULE :

All the items shall be delivered within 45 days from the date of issue of the purchase order and installed within one week thereafter. The pre dispatch inspection of the items shall be done by the Authority before delivery at final destination.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws of the day and year first above written.

Signed, Sealed and Delivered by the

said(For the Authority)

in the presence of

Signed, Sealed and Delivered by the

said(For the Supplier)

in the presence of

SECTION III(G) : CAPABILITY STATEMENT (CS)

1. (a) Name and complete mailing address of the business/sales office of the Bidder:

(b) Phones :

Mobile :

(c) Fax :

(d) E-mail for communication:

(e) Principal place of business:

(f) Date and Place of Incorporation of bidder's firm:

(g) Website of Bidder's Firm:

2. Strength of business/sales office of Bidder:

(i) No. of Marketing personnel :

(ii) No. of Technical personnel :

(iii) No. of Service engineers :

(iv) No. of Supporting personnel :

(v) TAN No. of Bidder Firm :

(VI) PAN No. of Bidder firm :

4. Type of equipment supplied during the last 3 years by bidder:

Year	Name of equipment	Capacity & Model	Name of manufacturer and country of origin	Total no. of equipment supplied in India

5. Turnover of the bidder in last three financial years : **(Please fill the figures. Do not quote "As per enclosures")**

Turnover		2013-14	2014-15	2015-16
(Rs. In Crores)				
Profit after taxation (Rs. In Crores)				

6. Bidder's Production capacity of the E-Rickshaws per month

.....

6 Names of two buyers from different departments to whom similar equipments were supplied in the last three financial years and to whom reference may be made by the Purchaser regarding the bidder's performance for timely completion of delivery, installation and after sales service support:

A. (i) Complete address of the buyer :.....

.....

(ii) Name & designation of contract person :

.....

(iii) Mobile/Phone/Fax no./E-mail address:

B. (i) Complete address of the buyer :.....

.....

(ii) Name & designation of contract person :

.....

(iii) Mobile/Phone/Fax no./E-mail address:

10. (a) Whether the Bidder has a manufacturing unit in the state of Uttar Pradesh (Yes/No) :

(b) If yes, the manufacturing unit falls into which type of industry unit (Small/Medium/Large Scale) as per Uttar Pradesh Government norms :

(c) If yes, name of items along with item code of tendered items which have been manufactured by your firm and quoted in this Tender :

Seal and signature of the Bidder _____

SECTION III(H):
PERFORMANCE SECURITY FORM

To

Director, State Urban Development Agency

WHEREAS.....(name and address of the supplier)
(hereinafter called "the supplier) has under taking pursuance of contract
no.....dated to supply (description of E-E-Rickshaws and services)
(herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract: AND WHEREAS we have agreed to give the supplier such a bank guarantee; NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to total of(amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified there in.

We here by waive the necessity of your demanding the said debt form the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until theday of20.....

.....
(Signature of the authorized officer of the Bank)

.....
Name and designation of the officer

.....
Seal, Name and address of the Bank/Branch

SECTION III(H-1)**Format of Warranty**

The contractor/seller hereby declares that the E-E-Rickshaws/stores/articles sold to the buyer under this contract shall be of the best quality (and workmanship) and shall be strictly in accordance with the specifications and particulars contained/mentioned in clause _____ hereof and the contractor/seller hereby guarantees that the said E-E-Rickshaws/stores/articles would continue to conform to the description and quality aforesaid for a period of _____ days/months from the date of delivery of the said E-E-Rickshaws/stores/articles to the purchaser and that notwithstanding the fact that the purchaser (inspector) may have inspected and/or approved the said E-E-Rickshaws/stores/articles if during the aforesaid period of _____ days/months the said E-E-Rickshaws/stores/articles be discovered not to conform to the description and quality aforesaid or have deteriorated (and the decision of the purchaser in that behalf will be final and conclusive) and the purchaser will be entitled to reject the said E-E-Rickshaws/stores/articles or such portion thereof as may be discovered not to conform to the said description and quality. On such rejection the E-E-Rickshaws/stores/articles will be at the seller's risk and all the provisions herein contained relating to rejection of E-E-Rickshaws, etc. shall apply. The contractor/seller shall, if so called upon to do, replace the E-E-Rickshaws, etc. or such portion thereof as is rejected by the purchaser free of cost at the ultimate destination otherwise the contractor/seller shall pay to the purchaser such damages as may arise by reason of the breach of the condition herein contained. Nothing herein contained shall prejudice any other right of the purchaser in that behalf under this contract or otherwise.

SECTION IV(A) : FINANCIAL BID

IV (A) BID FORM
IV (B) PRICE SCHEDULE/ BOQ

SECTION IV (A) : BID FORM

Tender reference No. : 01/RICKSHAW-YOJNA/UPGOVT/2016

Date :

To :

Director,
State Urban Development Agency,
(SUDA) Nav Chetna Kendra,
10-Ashok Marg, Lucknow-226001.

Sir,

Having examined the Bid documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver (*Description of Rickshaw and Services*) in conformity with the said Bid documents for the sum as may be ascertained in accordance with the Schedule of rates attached herewith and made part of this bid, and hereby undertake that we accept all the conditions of the contract (section II) of the Bid document and will supply the E - rickshaw and established the Service/Charging Centres as per the Technical Specifications (Section III(C)) of the Bid documents. We further undertake that we fulfil the qualification requirement (Section III(D))and for this purpose we enclose the details. In addition to this, the particulars of our organization such as legal status, principal place of business, details of experience and past performance, service support details, capability statement and the required bid security in the shape of Bank guarantee are furnished with this Bid form.

We further undertake, if our Bid is accepted, to deliver the E-E-Rickshaws in accordance with the delivery schedule specified in the Schedule of Requirements (section III (B)).

If our Bid is accepted, we will obtain the guarantee of a bank in the form prescribed by the Authority for a sum equivalent to 5% of the contract price for the due performance of the Contract.

We agree to abide by this Bid for the Bid validity period specified in Clause 12.1 of the ITB and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1998".

We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this day of 20.....

(Signature)

(in the capacity of)

Duly authorized to sign Bid for and on behalf of

SECTION IV (B)
Price Schedule/BOQ

Name of Bidder:

Sr. No	Required Items with Technical Specifications	Warranty Period (in Years)	Quantity	Basic Price Including Excise, Service Charge, Installation & warranty Charges (`)	VAT %	VAT Amount (`)	Unit Price inclusive all taxes etc. (`)
<1>	<2>	<3>	<4>	<5>	<6>	<7>	<8>
1	As mention below	1 year	10000 (approx)				

Specifications for the Motor/Battery Operated Electric Rickshaw:

A. Specifications for the E - Rickshaw:

Four-Seater E-Rickshaw with a maximum loading capacity of 380 kg (four passengers, driver and 40 kg luggage), maximum speed of 20 to 25 kmph, minimum range of 70 km with full load, with starting and moving capability at 7 degree gradient, driven by a brushless AC or DC motor of output power 850 W or above but not more than 2000 W, powered from a EV grade battery of 100 Ah, conforming to the Ministry of Road Transport and Highway GSR No. 709 (E) dated 8 October 2014 and Notification No. S.O. 2590 (E) dated 8 October 2014 and also the additional tests specified elsewhere in this document.

Sl no.	Description	Specifications	Remarks/Reference Standards/Test Standards
1	Type of Electric Rickshaw	Fully electric, battery operated motor driven	Four-Seater E-Rickshaw
2	Pedal Assistance	Not required	
3	Reverse Gear	Required	
4	Maximum Speed	20 to 25 kmph	To be tested with full load
5	Loading Capacity (Weight of four passengers, driver and luggage of 40 kg)	380 kg	
6	Range	70 km or more	To be tested as per AIS-040 with full load OR To be tested as per AIS-040 with 150 kg load in which case, the range has to be 100 km or more
7	Motor Output Power	48 V, 850 W or above but not more than 2000 W	At full load
8	Motor Type	Brushless Motor	AC or DC
9	Motor Controller	Suitable controller for starting, accelerating, decelerating, driving and stopping the E-Rickshaw smoothly	
10	Battery Voltage	48 V Nominal	
11	Battery Capacity	100 Ah or more	C ₂₀ rating
12	Battery Type	Traction Battery used in Battery Operated Vehicles	To be tested as per AIS-048/2009
13	Battery Charger	220/230 V Nominal Input Voltage, High Efficiency	
14	Electrical Energy Consumption	75 Wh/km or less	To be tested as per AIS-039

15	Gradeability	Capability to start and move at 7 ⁰ gradient with full load	To be tested as per AIS-003 with full load
16	Ground Clearance	120 mm or more	To be tested as per IS:9435
17	Overall size of the E- Rickshaw	Length < 2.8 m Width < 1 m Height < 1.8 m	
18	Front Windshield & Wiper	Windshield shall be made out of laminated safety glass. Wiper shall be electric motor operated.	Front windshield shall conform to IS:2553
19	Brakes	Parking& service brakes, safe & efficient.	
20	Instrument Panel	Speedometer and battery charge indicator	
21	Roof	Made out fiber glass or a combination of fiber glass and good quality metal or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body	
22	Controls	Start/Stop switch and indicators	
23	Tyres	3 -12" minimum	

B. Fitness, Compliance & Test Certificates to be submitted for the E-Rickshaw:

1. **Fitness/Compliance Test as per the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014**
2. **Compliance Certificate for the following test to be carried out as per the Safety Standards for E-E-Rickshaws as per the Ministry of Road Transport and Highways Notification No. S.O. 2590 (E) dated 8 October 2014.**

Sl.No.	Parts/Components/Assemblies	Test Standards
1.	Automotive lamps used in motor vehicles for the following applications: i. Head Lights Main and Dip ii. Parking Light iii. Direction Indicator Lamp iv. Tail Lamp v. Reversing Lamp vi. Stop Lamp vii. Rear Registration Mark Illuminating Lamp	AIS – 034/2004
2.	Wheel rims	AIS – 073/2007
3.	(a) Installation requirement for lighting , light signaling devices (b) Performance for requirement of lighting , light signaling devices	AIS – 0009/2001 AIS – 012/2004 AIS – 010/2004
4.	The requirements for construction and functional safety of battery operated vehicles	AIS – 038/2003
5.	The measurement of net power and the maximum thirty minute power and speed for battery operated vehicles	AIS – 041/2003
6.	Traction batteries used in battery operated vehicles	AIS – 048/2009
7.	Requirement of handholds	AIS – 046/2009

3. Compliance/Test Certificates for the following Additional Tests to be Carried Out for the E – Rickshaw:

Sl. No.	Parts/Components/Assemblies/Performance	Test Standards
1	Range	AIS-040 with full load OR AIS-040 with 150 kg load in which case, the range has to be 100 km or more
2	Electrical Energy Consumption	AIS-039
3	Grade ability	AIS-003
4	Ground Clearance	IS – 9435

C. Type of Motor:

The motor shall be of “Brushless Type” specifically designed for electric vehicles. These brushless type motors can be of DC or AC type having high efficiencies at the rated output power delivered. These motors shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc).

D. Motor Controller and the Power Supply System:

The motor controller shall be capable of controlling the motor from start to maximum speed with no load to full load and also for slight overloads of 20% over and above the rated full load for shorter durations. They shall be able to continuously drive the motor once started with the full load with maximum speed for the full declared range of the vehicle. The controllers shall be stable, robust and shall be capable of operating at all the conditions normally encompassed by the automobiles. The motor controllers used shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

The power supply system to the motor from the storage battery which includes the dc/dc converter, and the motor driving circuit which may be a dc converter or an inverter as the case may be for the type of motor, along with the controller shall also meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

E. Storage Battery:

As the electric rickshaw is supposed to have frequent start-stop operations, and also varying speed and varying load operations, the battery used shall be able to survive these frequent variations. It shall be capable of supplying electric power as per the requirement and specifications of the vehicle for meeting its travel for the full range with full load. Therefore, the battery used shall be of lead-acid or better type, and shall be EV grade tubular deep discharge type with high cycle life. The batteries used in the electric E-Rickshaws shall meet the relevant applicable available test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

F. Mechanical Power Transmission:

The mechanical power transmission from the motor shaft to the wheels shall be highly efficient. The direct mounting, or chain and sprocket or any other mechanical arrangement shall be highly reliable needing least maintenance and shall be tested for all its maneuvers to be able to meet the electric rickshaw requirements of frequent start, stop and gradient climbing, etc apart from its normal running with full load and full speed. The mechanical power transmission system used in the electric rickshaw shall meet the relevant applicable test standards of the Government of India approved test centers for automobiles (like ARAI, ICAT, etc.).

G. Overall Rickshaw Design:

The overall electric rickshaw design shall meet all the requirements of safety (of the vehicle, safety of passengers and luggage and the driver), reliability, repeatability, efficiency, strength, smoothness in riding, passenger comfort in climbing/entering the rickshaw, sitting at steady state and during the ride, getting down from the rickshaw, keeping the luggage, etc. The rickshaw shall not be noisy to cause discomfort for the passengers. It should have sufficient precautions not to have any electric shock for the passengers as well as the driver. It should have the proper control and instrument panel to indicate the speed, state of charge of the battery (or the remaining charge or kilometers it can run), etc. It should have sufficient braking system, suspension system, start and stop buttons, key, front and back lights with parking lights too, power supply system for these auxiliaries, and proper covered battery compartment not to cause any problem for the passengers, etc. The electric cycle rickshaw should have the certification from any of the Government of India approved testing centers such as ARAI, ICAT, etc, so as satisfy the required performance of the electric rickshaw as a whole and also all the main components used in it such as the motor, battery, motor controller, mechanical power transmission system, its body, other

auxiliary systems such as brakes, lighting and control, etc. and the overall safety. The rickshaw has to be fabricated with good quality steel properly plated/painted to avoid rusting for more than five years. The body shall be of good quality metal, and the roof shall be of fiber glass or a combination of fiber glass and metal of good quality or a combination of good quality metal and 2 mm or above thick good quality fire/heat resistant rexine with proper support from the vehicle body. The seats have to be of very good quality with proper cushioning provided. There shall be sufficient number of handles to ease passenger entry and ride. It shall have sufficient height and shall be giving proper protection to the passengers from the direct sun light and rain. The vehicle integration, packaging of electrical and electronic wires and devices shall be such that the rickshaw can run even in rainy season/during the rain without any problems.

H. Supplier/Manufacturer Conditions:

The supplier of the E-Rickshaw shall be an original manufacturer of the E-E-Rickshaws. The supplier shall not be a trader/importer or simply an assembler for various components. The supplier shall have the facility and capability for the design, fabrication, assembly and testing of the offered E-E-Rickshaws. The supplier can use the motors, controllers, batteries and battery charges procured preferably from various reliable and quality sources. All these components have to be tested at the supplier's site independently before assembling into the E-E-Rickshaws. The supplier shall be capable of providing reliable and economical after-sales service including provision of spares for all components used. It will be the responsibility of the supplier of the E-E-Rickshaws to get all the components used in the electric rickshaw and also the electric rickshaw as a whole to be tested by the Government of India approved testing centers such as ARAI, ICAT, etc.

Bidder have to submit compliance certificate with specification given below of Four seated Motor/Battery operated electric Rickshaw by any one the following testing agencies approved by Government of India under Rule 126 of Central Motor Vehicle Rules 1989:-i- Vehicle Research and Development Establishment of the Ministry of Defence

of the Government of India.

ii- Automotive Research Association of India, Pune.

iii- Central Farm machinery Testing and Training Institute, Budni(MP). iv- Indian Institute of Petroleum, Dehradun.

v- Central Institute of Road Transport, Pune.

vi- International Centre for Automotive Technology, Manesar.

Total Amount of Rickshaw per Unit Price inclusive all taxes etc. In words :

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**Authorized
Signature: Name:**

Designation:

Address:

Mobile no. :