



CHHATTISGARH STATE RENEWABLE ENERGY DEVELOPMENT AGENCY (CREDA)
(Dept. of Energy, Govt. of Chhattisgarh)

V.I.P. (Airport) Road, Near Energy Education Park, P.O. Deopuri, Raipur - 492 015 (C.G)
Tel.: 83700 09915, 83700 09923 • Email: contact.creda@gov.in • Website: www.creda.co.in



Ref: ~~2583~~/CREDA/T.No. 10686/2020-21

Raipur, Date: **16 DEC 2020**

//CORRIGENDUM (Amendment) For T.No. 10686, dated 12-11-2020//

In continuation of Tender No 10686 dated 12.11.2020 regarding “Design, manufacturing & supply of solar powered motorized cum manual driven tricycle including grid charging facility with five years onsite warrantee, COMC & insurance anywhere in the state of Chhattisgarh”. Following amendments are being made in some section of tender.

As per discussion by CREDA’s Tender Committee, the Technical Specifications (Annexure -1), e-Price Bid (Annexure – 2) and the Benchmark Cost (annexure – 3) has been amended. Those bidders who have already submitted the e-price bid are requested to delete the bid response and re-submit the e-price bid on the bidding portal again.

Encl: Annexure 1, 2 and 3 in this corrigendum.

(Sanjeev Jain)
Chief Engineer (RE-II)

**TECHNICAL SPECIFICATION OF SOLAR POWERED MOTORIZED TRICYCLE
WITH GRID CHARGING FACILITY**

S.N.	Particulars	Technical Specifications	
		Model-1 (200Wp with MPPT booster/ 48VAH)	Model-2 (150Wp/24VAH)
1	Overall Length	2000mm	1800mm
2	Overall Width	1000mm	900mm
3	Overall Height	1550mm	1500mm
4	Vehicle Weight	55 kg approx	50 kg approx
5	Payload	Minimum 75kg (1 Adult) + 25kg (luggage etc.)	Minimum 75kg (1 Adult) + 25kg (Luggage etc.)
6	Legroom	400mm to 450mm	400mm to 450mm
7	Seat to PV Roof length	900mm	900mm
8	Shoulder Room	750mm	700mm
9	Foot Rest Size	575 x 525 sq mm	550 x 500 sq mm
10	Foot Rest material	2.5mm checkered Aluminum sheet	2.5mm checkered Aluminum sheet
11	Drive Mode	Motorized; Chain-Sprocket transmission	Motorized; Chain – sprocket Transmission
12	Solar Module Capacity	200Wp with MPPT booster preferably mono-crystalline (Strictly Flexi Panel)	150Wtp preferably mono-crystalline (Strictly Flexi Panel)
13	Battery and	with Minimum 40 AH (3.2V Cell) LFP or 4 x 12 Volt >40 Ah Lead Acid Battery	with Minimum 30 AH (3.2V cell) LFP or 2 x 12 Volt > 26 Ah Lead Acid Battery
	Battery Box	GI 14 gauge (~2mm thickness), with additional space for LMLA battery (only for LFP battery model)	GI 14 gauge (~2mm thickness), with additional space for LMLA battery (only for LFP battery model)
14	Controller	Suitable charge controller	Suitable charge controller
15	Motor	48 Volt , 250 Wtp BLDC Motor (Rear wheel drive)	24 Volt , 250 Wtp BLDC Motor (Rear wheel drive)
16	Body Type	M.S.C.R Tubular (2mm wall thickness) Robust Construction; Vibration/Torsion free conforming to IS: 2039	M.S.C.R Tubular (2mm wall thickness) Robust Construction; Vibration/Torsion free conforming to IS: 2039
17	Recharging Time	7-8 Hours	7-8 Hours
18	Accelerator	Twist Grip Throttle	Twist Grip Throttle
19	Maximum Speed	20 kph on level surface	20 kph on level surface
20	Brakes	On both Front and rear wheels; Lever operated caliper and disc brake	On both Front and rear wheels; Lever operated caliper and disc brake
21	Mileage	Minimum 50-60 km per full charge	50-60 km per full charge
22	Ground Clearance	200 mm	200 mm
23	Centre of Gravity	Approx 575 mm from ground	Approx 575 mm from ground
24	Climbing Ability	Inclined 25° approx	Inclined 25° approx
25	Rain Protection	Canopy Roof and Wind shield	Canopy Roof and Wind shield
26	Seating	Cushion seat and Cushion back seat over MS Frame	Cushion seat and Cushion back seat over MS frame
27	Module Shape	Aerodynamic shape fixed With Anti Theft Nut Bolt	Aerodynamic shape fixed With Anti Theft Nut Bolt
28	Handle Type	Flexible/Fixed with Proper Locking System	Flexible/Fixed with Proper Locking System
29	Tyre Size	Front – Min. 26” x 2.75mm Rear – 28” x 1.5mm (with proper Saree guard and safety and hand rest)	Front – Min. 26” x 2. Rear – 28” x 1.5mm (with proper Saree guard and safety and hand rest)
30	Front shock-ups with camber 15°-18°	Compulsory	Compulsory
31	Turning Radius	3 mtr	3 mtr
32	Tool Box	Mandatory	Mandatory
33	Utility Chamber Space	Min. 1.5 Cu. ft	Min. 1.5 Cu. ft
34	Battery Indication	Compulsory	Compulsory
35	Head Light, Indicators, Horn & Mirror	Compulsory	Compulsory
36	Locking System	Compulsory with proper one	Compulsory with proper one
37	On/Off Switches	Compulsory	Compulsory

38	Arrangement for keeping crutches	Compulsory	Compulsory
39	Curtain Arrangement (03 Sided)	Optional	Optional
40	Mobile charger	Compulsory (Auto cut with BMS)	Compulsory (Auto cut with BMS)
41	ICAT approved	If Required	If Required
42	Fuse in Wiring Harness	25A	25A
43	Reverse Option	Compulsory	Compulsory

Module:

- In order to maximize solar generation under shadow effect the Flexible solar panels should have minimum 06 to 09 bypass diodes and these diodes should be visible on the Flexible Solar PV Modules and bypass diodes should be uniformly distributed among the solar cells in Flexi Solar PV module. IEC certification for the Flexible solar panels will be required and should be submitted along with bid document.
- Flexible Solar PV Panel shall be of crystalline cell with Ethylene Tetra Fluoro Ethylene (ETFE) as top layer conforming to IEC:61215 Ed 2 / IS:14286: 2010, IEC/IS : 61730 – I :2007, IEC : 61730- II : 2007, manufactured in a plant certified under ISO 9001.
- Tenderer should specifically mention about the type of solar cell (mono or poly crystalline) is to be used in Flexible Solar PV panels offered. The Flexible Solar PV modules used should be PID (Potential Induced Degradation) resistant and tested for PID as per IEC 62804. Testing as per IEC 61701. IEC certificates should be submitted along with the bid document.
- CREDA shall prefer use of Mono-crystalline type Flexi Solar Panel under this tender.

Battery: Tenderers shall have to ensure extra battery space if they chose to supply tricycle with LFP Battery, so that the beneficiary has the option to install Lead Acid battery after expiry of COM period.

Test Report: The tenderer shall have to present a Test certificate satisfying the above mentioned technical specifications, tricycle performance and overall Structural robustness from National Govt. Engineering Institutes/any other competent authority of National level. Work Orders to the eligible Tenderers shall be only issued after submission of such valid test report.

Repairability:-

All the spares used for the vehicle should be of conventional make with easy availability in the Rural cycle repair shops too.

Fitment :-

- Fabrication should be of maximum accuracy and proper construction as per prescribed IS codes by BIS.
- All the three wheels mountings should be aligned to each other vertically and horizontally.
- Chassis frame should be with more of rounded corners, sharp edges/points free to avoid any injuries to the user.

Over all shape and color :-

- Frame should be streamlined.
- Proper placement of required support members to give an overall appealing look.
- Color shade should be of light shades or combination of colors.

e-Price Bid – A

*(e-bidding as per Specifications & Scope of **Work of Tender No. 10686/CREDA/ Solar Tricycle/2020-21 Dated: 12.11.2020**)*

Design, Manufacturing & Supply of Solar Powered Motorized Tricycle Including Grid Charging Facility With Five Years On Site Warrantee, COMC & Insurance Anywhere In The State Of Chhattisgarh.

Model- 1-48V/ 200Wp with MPPT booster/40 AH

No.	1 (a) Description	Per Unit Rate (without GST, in Rs.)
1	Design, Manufacturing & Supply of Solar Powered Motorized Tricycle Including Grid Charging Facility of 48V/ 200Wp with MPPT booster w/ 40AH LFP Battery capacity (For Individual Beneficiary use) etc.	
2	Comprehensive Operation & Maintenance (COM) of Systems for five years.	
3	TOTAL AMOUNT (without GST) .	

No.	1 9b) Description	Per Unit Rate (without GST, in Rs.)
1	Design, Manufacturing & Supply of Solar Powered Motorized Tricycle Including Grid Charging Facility of 48V/ 200Wp with MPPT booster w/ 4 x 12 Volt > 40 Ah LMLA Battery capacity (For Individual Beneficiary use) etc.	
2	Comprehensive Operation & Maintenance (COM) of Systems for five years.	
3	TOTAL AMOUNT (without GST)	

Certified that rates quoted above are as per the requirement, specifications, and terms & condition mentioned in the Tender document.

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, insurance, duties and any other job required to properly execute the work with 5 years warrantee as mentioned in the bid document. The GST payable on the bill produced for payment to CREDA shall be paid in addition to above quoted price as per rate of GST applicable at the time of billing.

(No other cost will be claimed above the price quoted & the applicable GST).

Name of the authorized Signatory:

Signature of the Authorized Signatory:

Seal of Company:

Date:

e-Price Bid – B

*(e-bidding as per Specifications & Scope of **Work of Tender No. 10686/CREDA/ Solar Tricycle/2020-21 Dated: 12.11.2020**)*

Design, Manufacturing & Supply of Solar Powered Motorized Tricycle Including Grid Charging Facility With Five Years On Site Warrantee, COMC & Insurance Anywhere In The State Of Chhattisgarh.

Model- 2- 24V/ 150Wp/30 AH

No.	2 (a) Description	Per Unit Rate (without GST, in Rs.)
1	Design, Manufacturing & Supply of Solar Powered Motorized Tricycle Including Grid Charging Facility of 24V/ w/ 30AH LFP Battery capacity (For Individual Beneficiary use) etc.	
2	Comprehensive Operation & Maintenance (COM) of Systems for five years.	
3	TOTAL AMOUNT (without GST).	

No.	2 (b) Description	Per Unit Rate (without GST, in Rs.)
1	Design, Manufacturing & Supply of Solar Powered Motorized Tricycle Including Grid Charging Facility of 24V/ 150 w/ 2 x 12 Volt > 26Ah LMLA Battery capacity (For Individual Beneficiary use) etc.	
2	Comprehensive Operation & Maintenance (COM) of Systems for five years.	
3	TOTAL AMOUNT (without GST)	

Certified that rates quoted above are as per the requirement, specifications, and terms & condition mentioned in the Tender document.

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, insurance, duties and any other job required to properly execute the work with 5 years warrantee as mentioned in the bid document. The GST payable on the bill produced for payment to CREDA shall be paid in addition to above quoted price as per rate of GST applicable at the time of billing.

(No other cost will be claimed above the price quoted & the applicable GST).

Name of the authorized Signatory:

Signature of the Authorized Signatory:

Seal of Company:

Date:

**Benchmark Cost For Solar Powered Motorized Tricycle including Grid
Charging Facility**

S. No.	Particular	Supply Cost without GST (in Rs.)	COM Cost for 05 Years without GST (in Rs.)	Total without GST (in Rs.)
MODEL 1 - 48V/200Wp with MPPT Booster/ 40AH				
1	Solar Powered Motorized Tricycle of 48V/250Wp/ 40AH(3.2V cell) LFP Battery capacity	1,40,000/-	14000/-	1,54000/-
2	Solar Powered Motorized Tricycle 48V/250Wp/40AH Lead Acid Battery capacity	1,20,000/-	20000/-	1,40,000/-
MODEL 2 - 24V/150Wp/ 30-26AH				
1	Solar Powered Motorized Driven Tricycle of 24V/150Wp/30AH (3.2V cell) LFP Battery capacity	1,20,000/-	20000/-	1,40000/-
2	Solar Powered Motorized Driven Tricycle 24V/150Wp/>26AH Lead Acid Battery capacity	1,10,000/-	11000/-	1,21,000/-