

Corrigendum against NIT No. JREDA/SLEP-03/2007-08 Dt. 06-12- 007 for "Tender for Supply, Installation, Testing, Commissioning & 10 Yrs Comprehensive Maintenance Contract (CMC) of various exhibits of the State Level Energy Park at Sidhu-Kanu Udyan, Ranchi, Jharkhand on Turnkey Basis

REVISED SCHEDULE OF ITEMS OF EXHIBITS FOR STATE LEVEL ENERGY PARK AT RANCHI

Sl. No.	Devices / Description of Items	Proposed Quantity	Rate, Rs	Rate in Words	Amount, Rs.
A	INDOOR EXHIBITS				
1	Solar Power Centre				
1.1	Physics of Solar Photovoltaic as specification No. T4.1	1			
1.2	Flat screen TV with audio visual as per Specification No. T4.2.	1			
1.3.1	Solar parabolic Cooker as per spec. No. T4.3.1	1			
1.3.2	Solar Box Type Cooker as per spec. No. T4.3.2.	1			
1.4	Refrigerator as per Spec. No. T4.4.	1			
1.5	Weighing Machine as per Spec No. T4.5.	1			
1.6	Music System/ Public address-cum-Music System as per spec. No. T8.3.	1			
1.7	Computers for Quiz & Games Ts per Spec. No. T.4.6.	2			
1.8	Solar Replica as per Spec. No. T4.7.	1			
1.9	Panels & Blow ups etc. made with digital prints fixed on 3 mm thick aluminum sheets, Size -4'x3' Ts per Spec. No. T4.8.	3			
1.10	Solar Educational Kit for Children as per Spec. No. T4.9.	3			
1.11	Solar PV Module for display, 12 Volt, 10 Wp as per Specification No. T4.10.	2			

2 Wind Power Centre

Sl. No.	Devices / Description of Items	Quantity	Rate, Rs	Amount, Rs.	Amount in Words
2.1	Wind Blower(included in Sl. No.2.2) as per spec. No. T5.1	1			
2.2	Wind blower and Wind Electro Generator Models as specification	1 Set of 5 types			
2.3	Flat TV Screen with audio visual as per specification No. T5.2.	1			
2.4	Computers for Quiz & Games Ts per specification No. T5.3.	3			
2.5	Blow-ups & panels made with digital prints fixed on 3 mm thick aluminum sheets. Size -4'x3' as per specification No. T5.4.	2			

Sub-total

3 Hydel Power Centre (Indoor)

3.1	Flat plate TV Screen with audio visual as per specification No. T6.8.	1			
3.2	Computers for Quiz & Games as per specification No. T6.9.	2			
3.3	Blow ups & panels made with digital prints fixed on 3 mm thick aluminum sheets for Tidal power Plant, Ocean Thermal Power Plant, Wave Power, Rainwater harvesting, cross section of 3 types hydro turbines as per specification No. T6.10.	7			

Sub-total

4 Bio Energy Centre

Sl. No.	Devices / Description of Items	Quantity	Rate, Rs	Rate in Words	Amount, Rs.
4.1	Biomass Gasifiers (Models) as per specification No. T7.1.	2			
4.2	Biogas Plant (Cut Models) as per specification No. T7.2.	2			
4.3	Different Models of Chulhas as per specification No. T7.3.	8			

4.4	Flat plate TV Screen with audio visual as per specification No. T7.4.	1				
4.5	Computer for Quiz & Games as per specification No. T7.5.	2				
4.6	Panels & Blow up Diagrams made with digital prints fixed on 3 mm thick aluminum sheets of Photosynthesis, Biomass gasifier based power plant, Biomethanation Plant, Biomass Combustion based Power Plant and biodiesel technology as per specification No. T7.	5				
4.7	Illustrative display chart made with digital prints fixed on 3 mm thick aluminum sheets showing properties of Jatropha Oil, Karanj Oil and comparison with mineral diesel oil. Size -4'x2' Ts per specification No. T7.7.	2				
4.8	Illustrative Chart showing Calorific value, proximate analysis and ultimate analysis of Rice Husk, 3 samples of wood, coal (Class a to Class E) & 5 other biomass fuels	1				
Sub-total						

5 Energy Information Centre

Sl. No.	Devices / Description of Items	Quantity	Rate, Rs	Rate in Words	Amount, Rs.
5.1	Internet enabled three Computers/ other equipments, CD Bank, Books, Literature and regular energy journals as per specification No. T8.1 & T6.2.1	3			
5.1.1	Computer Interactive software No. 1, on (i) How electricity is made, electrical distribution basics, AC & DC electricity and other basic knowledge about electricity for school level children as per T8.1 & T8.2.1	3			

5.1.2	Computer interactive software No.-III, about earth, sun, moon, planets, solar radiation, orbit & diameter of these and other details for school level children as per spec No. T8.2.3.	3			
5.2	Illustrative Chart No. 1, made with digital prints fixed on 3 mm thick aluminum sheets for basic electricity, current, voltage, kW, kWh, MW, GW, kV & KVA etc. Size -4'x2' as per Spec. No. T.8.3.4.	1			
5.3	Illustrative Chart No. II, made with digital prints fixed on 3 mm thick aluminum sheets on Nuclear Fission and Fusion, proton, electron and neutron etc. for Junior school level students. Size -4'x2' as per Spec. No. T8.3.5.	1			
5.4	Chart No. III, made with digital prints fixed on 3 mm thick aluminum sheets showing common energy units and their inter-relation with scientific notations. Size -4'x2' as per Spec. No. T8.3.5.6.	1			
5.5	Illustrative Chart No. IV, made with digital prints fixed on 3 mm thick aluminum sheets showing brief details of Kyoto protocol, CDM and Climate Change for Children. Size -4'x2' as per Spec. No. T8.3.7.	2			
5.6	Illustrative chart No. V, made with digital prints fixed on 3 mm thick aluminum sheets on "What human activities contribute to Climate Change?" Size -4'x3' as per Spec. No. T8.3.8.	2			
5.7	Illustrative Chart No. VI, made with digital prints fixed on 3 mm thick aluminum sheets on Chronological History of electrical inventions. Size -4'x2' as per Spec. No. T8.3.9.	1			

5.8	Chart No. VII, made with digital prints fixed on 3 mm thick aluminum sheets showing chronological history of solar energy. Size -4'x2' as per Spec. No. T8.3.10.	1			
5.9	Chart No. VIII, showing comparison between Incandescent lamps, fluorescent tubes, CFL lamps and LED lamps etc. with diagrams & photos. Size -4'x2' as per Spec. No. T8.3.11.	1			
5.10	Illustrative Chart showing "Importance of Renewable Energy in our Future; digital prints fixed on 3 mm thick aluminum sheets). Size -4'x2' as per Spec. No. T8.3.12.	1			
5.11a	Digital Clock - digit size 250 mm for outdoor display as per Spec. No. T8.3.13.	4			
5.11b	Digital Clock - digit size 100 mm for outdoor display as per Spec. No. T8.3.13.	2			
5.13	Exhibit on Energy transformation as per specification as per Spec. No. T9.	1			
5.14	Exhibit on Storage of Energy as per Spec. No. T10.	1			
5.15	Different types of batteries for physical display as per spec. No. T11.	1 lot of 6 (six) batteries			
5.16	Chart on Series-Parallel connection of batteries as per spec. No. T11.1.	1			
5.17	Chart on different types of batteries as per spec. No. T11.2.	1			
5.18	Exhibit of Fuel Cell complete with 1.6 watt, 2.0 VDC solar module, electrolyser, load box & display meters etc. as per spec. No. T12.	1			
5.19	Blow up about "what is a Fuel Cell?" as per spec. No. T12.1.	1			
5.20	Blow up of Alkaline fuel cell as per spec. No. T12.2.1.	1			
5.21	Blow up of Molten Carbonate fuel cell (MCFC) as per spec. No. T12.2.2.	1			

5.22	Blow up of Phosphoric Acid fuel cell (PAFC) as per spec. No. T12.2.3.	1			
5.23	Blow up of Proton Exchange Membrane (PEM) fuel cell as per spec. No. T12.2.4.	1			
5.24	Blow up of Solid Oxide fuel cell (SOFC) as per spec. No. T12.2.5.	1			
5.25	Blow up on Geothermal Power Plant made with digital prints fixed on 3 mm thick aluminum sheets. Size -4'x3' as per specification No.T12.3.1.	1			
5.26	Blow up showing geothermal power plants made with digital prints fixed on 3 mm thick aluminum sheets. Size -4'x3' as specification No. T12.3.2.	1			
5.27	Blow up of Nuclear Power Plant made with digital prints fixed on 3 mm thick aluminum sheets. Size -4'x3' as specification No. T12.3.3.	1			
5.28	Surveillance System as specification No. T13.	1			

Sub-total

6	Muscle Power Exhibits/Dynamo Paddle Cycle as per spec. No. T14.	1			
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7 Furniture & fixtures

SI.No.	Devices/ Description of Items	Quantity	Rate, Rs	Rate in Words	Amount, Rs.
7.1	Inkjet Printer-cum-Scanner as per spec. No. T15.1.	2			
7.2	Web Camera windows compatible, resolution -640x480 as per spec. No. T15.2.	2			
7.3	Computer Workstation with 1(one) terminal table & printer table attached with fixed Keyboard & 3 drawers on one side. Size - 48"x30"x30" as per spec. No.T15.3.	3			

7.4	Computer Workstation with 1(one) terminal table with sliding Keyboard & 3 drawers on one side. Size - 30"x24"x30" as per spec. No. T15.4.	2			
7.5	Computer Chair with arms, Godrej or equivalent good make as per spec. No. T15.5.	6			
7.6	Steel Chair without arms but with cushion seat	12			
7.8	Executive table, 60"x36"x30"with 3 drawers & one cupboard, Godrej or equivalent good make as per spec. No. T15.6.	4			
7.9	Enclosed shelves with glass cover, Size - 66"x33"x12" as per spec. No. T15.7.	2			
7.10	Steel Almirah - Size 78" x 35" x 19' with 1 locker and 4 compartments. Steel sheet thickness –19 SWG, Godrej make or equivalent reputed make as per spec. No. T15.8.	4			

SUB-TOTAL

B OUTDOOR EXHIBITS

SI. No.	OUTDOOR EXHIBITS	Quantity	Rate	Rate in Words	Amount
1	Power Generating Drum as per Spec. No. T16.	1			
2.1	Solar Toy Car as per spec. No.T17.	1			
2.2	Battery Operated Bicycles as per spec. No. T18.	3			
3	Energy Slip as per specification No. T19.	1			
4	Solar Photovoltaic Street Lights as per specification No. T21.	25			
5	Solar Garden Lights.	15			
6	Solar Photovoltaic Pump (surface pump) with sprinkler (1800 watt peak PV array capacity) as per spec. No. T22.	1			
7	Solar pump set for water supply, 1800 Wp for water supply with submersible pump.	1			

8	Solar Water Heating System (500 LPD) (Collectors BIS approved) and Solar Cooking Systems (Concentrating type) as per spec. No. T23.	1			
9	Solar Trolley Bus fitted with 5.5 kW DC motor to be operated on 72 Volt DC supply to be taken from 415 Volt 3 phase output power of 20 kWp BIPV power plant (The power plant is not included but suitable rectifier for converting 415 , 3 phase AC power to 72	2			
10	Solar Cabinet Dryer as per spec. No. T24.	1			
11	Solar water distillation unit as per specification No. T4.11.	1			
12	Water fall animation (Outdoor)/ Artificial water fall on existing rocky hillock to be illuminated with coloured LED lamps as per spec. No. T6.1.	1			
13	Working Model of Turbines (Outdoor) as per spec. No. T6.2 to T6.5.	5			
	(Pelton Turbine, Francis, Kaplan, Bulb Turbine and Stream Flow Turbine)				
14	Water supply system for exhibits as per spec. No. T6.6.	Lot			
15	Musical Fountain replacing the existing fountain as per spec. No. T6.7.	1			

Sub-total of B

Grand Total (A + B)

C.	Annual Comprehensive Maintenance Contract (ACMC)				
	Description of job.	Quantity	Rate	Rate in Words	Amount
	Comprehensive Maintenance Contract for 10 years - The contractor will be responsible for all costs of replacement,	1 st 5 Years			

	rectification and maintenance for first 5 years. For the next 5 years JREDA will bear the cost of only spare parts if required for replacement. The Contractor will maintain sufficient employees to maintain the exhibits.	6 th to 10 th year			
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20 kWp Solar PV power plant considered separately with Exhibition Hall based on solar passive architecture. Trolley bus instead of toy train due to operational problems.