

**Project Name: - "Improvement and Upgradation of PFI Field Station Shinkiari"**

**Name of Work: - Supplying and Installation of 5KW Hybrid Solar System (Complete in all respect) at PFI Field Station, Shinkiari, District Mansehra Khyber Pakhtunkhwa**

S.No	Particulars	Evaluation	
		YES	NO
	<b>{Knock out criteria (Bidders Requirements / Attachments)}</b>	<b>Evaluation</b>	
		<b>Yes</b>	<b>No</b>
1	Valid National Tax Number (NTN) Certificate copy	<input type="checkbox"/>	<input type="checkbox"/>
2	Valid General Sales Tax (GST) Certificate copy	<input type="checkbox"/>	<input type="checkbox"/>
3	Copy of Active Tax Payer as appeared on website of FBR.	<input type="checkbox"/>	<input type="checkbox"/>
4	Affidavit on Stamp Paper that the firm is not black listed by any government /semi government Department	<input type="checkbox"/>	<input type="checkbox"/>
5	Valid PEC registration for the year 2019, along with specialization codes EE04 and EE11.	<input type="checkbox"/>	<input type="checkbox"/>
6	Company/Firm profile along with list of registered engineers/Professional Engineers with PEC and other professional's staff working with firm.	<input type="checkbox"/>	<input type="checkbox"/>
7	Last two years income Tax and sales Tax returns showing annual turnout in the field of solar Business.	<input type="checkbox"/>	<input type="checkbox"/>
8	Solar equipment internationally recognized certificates.	<input type="checkbox"/>	<input type="checkbox"/>
9	Detail nature of in hand solar projects with Government Departments, during last three years and satisfactory performance certificates.	<input type="checkbox"/>	<input type="checkbox"/>
10	Technical specification sheets of Panels, Inverters and Batteries.	<input type="checkbox"/>	<input type="checkbox"/>
	<b>{Technical Criteria}</b>		
1	<b>PV Module/Panels ( 6000Watts)</b>	<input type="checkbox"/>	<input type="checkbox"/>
2	PV Module Mono crystalline Branded, capacity 300 watt or above each.	<input type="checkbox"/>	<input type="checkbox"/>
3	Grade <b>A</b> quality with efficiency $\geq 16.5\%$	<input type="checkbox"/>	<input type="checkbox"/>
4	Certified <b>IEC 61215, IEC 61730</b>	<input type="checkbox"/>	<input type="checkbox"/>
5	5 years material and working ship warranty with 25- years Power output warranty	<input type="checkbox"/>	<input type="checkbox"/>
6	<b>Inverter</b>	<input type="checkbox"/>	<input type="checkbox"/>
7	5KW Solar, 48V, pure sine wave, Grid tie off Grid.	<input type="checkbox"/>	<input type="checkbox"/>
8	Hybrid inverter along with Built-in Dual MPPT solar charge controller, and all sorts of safety protections. Infini series or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>
9	CE and IEC certified.	<input type="checkbox"/>	<input type="checkbox"/>
10	Warranty should be at least 01 Year	<input type="checkbox"/>	<input type="checkbox"/>
11	<b>Cells ( To provide 3 Hours backup )</b>	<input type="checkbox"/>	<input type="checkbox"/>
12	400AH, 2V VRLA/OPZV dry cells (24 No.)	<input type="checkbox"/>	<input type="checkbox"/>
13	Product warranty: 1 Year	<input type="checkbox"/>	<input type="checkbox"/>
14	<b>PV panels Structure</b>	<input type="checkbox"/>	<input type="checkbox"/>
15	Single axis manual tracker, pole mounting structures made of GI material to support 4 or more PV modules/each structure.	<input type="checkbox"/>	<input type="checkbox"/>
16	PV structures gauge should be 10 SWG	<input type="checkbox"/>	<input type="checkbox"/>
17	SS panels fixing nuts and galvanized nut bolts for structure parts,	<input type="checkbox"/>	<input type="checkbox"/>
18	Rust protected frames and fixtures, strong enough and capable to withstand high speed wind, Complete in all respect and as per instructions of Engineer Incharge	<input type="checkbox"/>	<input type="checkbox"/>

19	<b>Cell/Battery Rack</b>	<input type="checkbox"/>	<input type="checkbox"/>
20	Battery Rack with shelves for holding cells/batteries and completely insulated (with wooden base)	<input type="checkbox"/>	<input type="checkbox"/>
21	Battery Rack should be made of 14 SWG GI materials/ or angle iron material with all necessary items to support the weight of cells/batteries.	<input type="checkbox"/>	<input type="checkbox"/>
22	Battery rack should be theft protected with doors.	<input type="checkbox"/>	<input type="checkbox"/>
23	Proper ventilation system should be provided in battery rack. Complete in all respect and as per instructions of Engineer Incharge	<input type="checkbox"/>	<input type="checkbox"/>
24	<b>Wires and Breakers.</b>	<input type="checkbox"/>	<input type="checkbox"/>
25	10mm, 16 mm and 25mm DC wires as much required from panels to inverter and between the batteries and inverter.	<input type="checkbox"/>	<input type="checkbox"/>
26	Suitable rating AC wires between inverter and main Distribution board. (All wires/cables should be 99% pure Copper, registered with Government/Engineering Department.)	<input type="checkbox"/>	<input type="checkbox"/>
27	Suitable rating DC input/output circuit breakers between inverter and Batteries/Solar panels.	<input type="checkbox"/>	<input type="checkbox"/>
28	Suitable rating AC input/output circuit breakers between inverter and Main Distribution board. Complete in all respect and as per instructions of Engineer Incharge	<input type="checkbox"/>	<input type="checkbox"/>
29	<b>Servo Motor.</b>	<input type="checkbox"/>	<input type="checkbox"/>
30	10KW, 50HZ, 220V and pure copper auto Stabilizer of good and recognized brands.	<input type="checkbox"/>	<input type="checkbox"/>
31	<b>Panel board</b>	<input type="checkbox"/>	<input type="checkbox"/>
32	Panel board with Changeover Switch 60 Amp, Digital volt meter and Bus bar.	<input type="checkbox"/>	<input type="checkbox"/>
33	Generator switch off Light, Complete in all respect and as per instructions of Engineer Incharge	<input type="checkbox"/>	<input type="checkbox"/>
34	<b>Civil Base</b>	<input type="checkbox"/>	<input type="checkbox"/>
35	3'x3'x4' PCC (1:2:4), base for structure mounting for each pole on ground to support 4 or more PV modules above each structure	<input type="checkbox"/>	<input type="checkbox"/>
36	Height of the structure will be about 30'' from the ground level.	<input type="checkbox"/>	<input type="checkbox"/>
37	All iron works should be dually painted 3 coats (Based with red coating colour) as per job complete in all respect and as per instructions of Engineer Incharge.	<input type="checkbox"/>	<input type="checkbox"/>
38	<b>Earthing system</b>	<input type="checkbox"/>	<input type="checkbox"/>
39	Complete Ground System for Electrostatic Discharge Protection (Including digging) etc. complete in all respect and as per instructions of Engineer Incharge.	<input type="checkbox"/>	<input type="checkbox"/>
40	<b>Transportation and Installation.</b>	<input type="checkbox"/>	<input type="checkbox"/>
41	Transportation up to the site of work i.e. PFI Field Station Shinkiari, and Installation complete with all respect and as per instructions of Engineer Incharge.	<input type="checkbox"/>	<input type="checkbox"/>
42	<b>Additional wiring (100 points) in Rooms etc.</b>	<input type="checkbox"/>	<input type="checkbox"/>
43	Additional wiring as Load distribution in 200 meter Radius of premises for solar power in 7/0.044, 7/0.036, 7/0.029, 3/0.029, concealed with duct patti of good quality for certain load (Using cable Registered with Government) complete in all respect and as per instructions of Engineer Incharge.	<input type="checkbox"/>	<input type="checkbox"/>