



Request for Quotations.

Economic Revitalization of Khyber Pakhtunkhwa (ERKF) Contract Title: Solarization of Kalash Museum”

1. The Government of Khyber Pakhtunkhwa has received Grant from the International Bank for Reconstruction and Development (IBRD) towards the cost of Project Management Unit Economic Revitalization Khyber Pakhtunkhwa. It is intended that part of the proceeds of this grant will be applied to eligible payments under the contract Solarization of Kalash Museum”

2. The Project Management Unit Economic Revitalization Khyber Pakhtunkhwa (ERKF) now invites sealed quotations from eligible bidders for the **Solarization of Kalash museum** as per details given below. **25 KW SOLAR POWER GENERATION SOLUTION FOR KILASH MEUSEUM.**

ID	Item (Unit)	Technical Assumption(s) and/or Customer Need(s)	Features availability	Qty	
1	INVERTER	<u>INVERTER SPECIFICATION</u>		6	
		Nominal Output Power	5000 W		
		Capacity Range	5.7 / 11.4 kWh (96% DoD)		
		IP Protection	IP21 / IP65		
		Warranty	2-Year		
		Max. input current (A)	12X2 OR Above		
		Short circuit current (A)	14x2 OR Above		
		Max. Charge Current	100 A		
		Max. Discharge Current	100 A		
		Max. Charge/Discharge Power	5000 W		
		Rated Input/output Voltage	230 Vac		
		Grid Voltage Range	230 V (±2%)		
		Rated Frequency	50/60 Hz		
		Phase Backup	Single-Phase UPS		

		Display	LED & APP	
		Communication	WiFi, RS485, CAN	
		Humidity	0% ~ 95% (No Condensing)	
2	POWER BACKUP	<u>BATTERY BANK SPECIFICATION</u>		
		Compliance with Inverter have AC-Coupling with Built-in battery Modular design		
		Module Capacity	5.4 kWh -5.7kWh	
		Usable Capacity	5.2 kWh or Above	
		Module Nominal Voltage Max.	51.2 V	
		Short-circuit Current	200 A	
		Cycle Life Max.	10 000 **	
		Charge/Discharge Current	56 A (1C)	
		External Battery Expansion	1 ~ 5 M4856-P / BAT in parallel	
		Warranty	2-Year	
		Certification	UN38.3, IEC 62619 (Cell), IEC 62619 (Pack) or Equivalent	
				5
3	SOLAR PANEL	<u>SOLAR PANNEL FOR MINIMUM TIME SHIFT (5-6 HR) SUNLIGHT</u>		
		Cells Grade	Slight Bend standard $\geq 2.0\text{mm}$	
		Low NMOT:	$41 \pm 3 \text{ }^\circ\text{C}$	
		Low temperature coefficient (Pmax):	$-0.37 \text{ \% / }^\circ\text{C}$	
		Shading tolerance with 43% Minimum O/P Capacity		
		PTC rating of up to:	93.13 %	
		Heavy snow load up to 5000 Pa, Or Above		
		wind load up to 3300 Pa* Or Above		
		Heavy snow load up to 5400 Pa, wind load up to 3600 Pa*		
		Cell Type	Mono-crystalline	
		Cell Arrangement	144 [2 X (12 X 6)]	
		Dimensions	2000 X 992 X 35 mm (78.7 X 39.1 X 1.38 in)	
		Front Cover	3.2 mm tempered glass	
		Frame	Anodized aluminum alloy,	
		Cross bar	enhanced J-Box IP68,	
		Dual Efficiency with Absorption & reflection of dual band Material design , Connector T4 series		
		Warranty	25-Year	
		Certification		
		ISO 9001:2015 / Quality management system		
		ISO 14001:2015 / Standards for environmental management system		
		26520		

		UL 1703 / IEC 61215 performance	
4	LOGGING / MONITORING MODULE	DL-DMS (Logging and Monitoring)	5
		Ethernet with RJ-45	
		RS-485,RS-232	
		Modbus,USS,SunSpec,Custom Protocols	
		Irradiance and cell temperature sensors with RS-485 output.	
		Energy meters/Multi function meters with Modbus RTU protocol.	
		Internet connectivity though GPRS.	
		Portal connectivity with Wired LAN with internet connection if available.	
		Supported Networks GSM/GPRS/2G/3G/4G.	
5	DISTRIBUTION PANNEL	AC/DC Power Distribution Panel	5
		Material Mild Steel	
		IP Rating IP54	
		Phase Single Phase	
		Voltage 220V	
		Mounting Type Wall Mounted	
		DC Breakers 5*50A AC Breakers 30*16A	
		Phase Single Phase	
		Input 1	
		Output 6	
Short Circuit Protection Yes (For both inflow & Out Flow)			
6	PANNEL FRAMES	FRAME STRUCTURE	68
		Material GI	
		Weather Proof Rust free	
		Size according to Solar Panels	
		Mounting Accessories Galvanized (Bolts, Washers, Nuts)	
7	ELECTRICAL CABLES	ELECTRICAL WIRES	
		Supply & Installation of 4mm Pure Copper 2 Core single PVC (Meter)	180
		Supply & Installation of 2.5mm Pure Copper 2 Core Single PVC (Meter)	500
		Supply & Installation of 10 mm Pure Copper Soft PVC (DC Cable) (Meter)	1000
		Supply Earth Wire 6mm Copper with Silver Coating (Meter)	200
		Supply & Installation of 1.5mm Pure Copper 2 Core Single PVC (Meter)	400
8	PVC	Mixed of Different Size (Ducts & Pipes) adamjee or eqv	900
9	Earthing / Grounding	dimensions of 4" x 96" x 0.0625"	1

		25-foot continuous length		
		6 AWG solid bare copper wire		
		ground plate is to be installed at depth of 15"		
		12" wide trench Copper Plate		
		"recommended practice" of IEEE Standard 1100-1999		
		Power wiring (120 VAC or 240 VAC)		
		SYSTEMIZATION		
10	INSTALLATION SERVICES	Installation, Testing & Commissioning of Solar Panel		26400
		Installation, Testing & Commissioning of Inverter With Backup & DMS Module		5
		Installation, Testing & Commissioning of Distribution Panel		5
11		Delivery, Transportation, Residence & food As one unit Cost		1

3. Following is the qualification criteria:

- I. The bidders must be Sales Tax and Income Tax registered and must be on active Tax payer list of FBR.
- II. The bidder must be a manufacturer or authorize agent of the manufacturer of required equipment in Pakistan. Valid authorization certificate of manufacture must be provided.
- III. With a minimum of Five (05) years of experience in supplies of similar Items. Should have a documented track of completing at least five (05) assignments of not less than 10 KVA.
- IV. The bidder must provide quality assurance certificates of the offered item, along with performance satisfactory report from the last supplies made.
- V. The bidder must not be blacklisted by any Government/Semi Govt organization in Pakistan and no litigation is under way by any organization.

- VI. The bidder should have after-sale services facility with technical support staff for services support in Pakistan. Details of facility and staff to be provided.
- VII. Offered Brand must be ISO certified and environment friendly. ISO certificate to be provided.
- VIII. Item must be delivered and installed within two months' time from issuance of purchase order.
- IX. Bid must be signed and stamped.
- X. Amount of bid security shall be 2% of the bid amount in form of bank guarantee or CDR issued by a schedule bank
- XI. One year warrantee of entire system should be provided.
- XII. Non-Compliance of any of the above will result in rejection of bid.
- XIII. Catalogue, Brochure technical specification, literature of the offer brand must be provided.

4. Bidders may obtain further information from Project Director, Project Management Unit ERKF. Ph. 091-9212051/-

5. Process will be conducted through shopping mode as specified in World Bank Guidelines: Procurement of goods, Works and non-consulting services under IBRD loans and IDA Credits and Grants by World Bank Borrowers (Procurement Guidelines) and is open to all eligible bidders as defined in the Procurement Guidelines. In addition, please refer to paragraph 1.6 & 1.7 setting forth the World Bank Policy on conflict of interest.

4. 6. The last date of bid submission is January 10, 2019 at 14:30 hrs and will be opened on same day in the presence of bidders'

representative who chooses to attend at 14:30 hrs. at the address given below. Pre bid meeting will be held on January 02, 2019 at 1100 hrs at the same address.

7. The bidders are requested to give their best and final prices including all permissible taxes as no negotiations will be allowed at later stage. In complete and late bids will not be entertained.

8. The successful vender has to install the solarisation project at Kalash museum Chitral.

This RFQ can be downloaded from www.reconnectpakistan.com.pk and www.kptourism.com

The Address (es) referred to above is:

Project Director -

Project Management Unit (PMU-ERKF)

House No 358, Khyber Colony No 2.

University Road Peshawar.

Ph. No: 091-9218051

Email: pmuerkf@gmail.com