



**FATA UNIVERSITY**



**TRIBAL SUB DIVISION DARRA , KOHAT**

Web site: [www.fu.edu.pk](http://www.fu.edu.pk)

**TENDER DOCUMENTS  
FOR  
Solarization of Academic Sc. Block (A.Q Khan  
Block )**

**CONTRACT DOCUMENTS  
Bill Of Quantities(BOQ)**



BILL OF QUANTITY						
		Total Estimated		Rs.	26.175 Million	
		Total Bid Cost		Rs.		
		Earnest Money :				
		Time Limit :				
<p align="center"><b>NAME OF PROJECT : SOLARIZATION OF ACADEMIC SCIENCE BLOCK (A.Q KHAN BLOCK) AT FATA UNIVERSITY DARA ADAM KHEL, FR KOHAT</b></p>						
S.No	Descriptions	No	Estimated Cost (Rs.)		Bid Cost (Rs.)	
			MRS- 2022 (Bi)	N.S.I	MRS-2022 (Bi)	NSI
1	Academic (Science Block)	1	7,552,145.38	18,622,919.66		
TOTAL COST		Rs.	26,175,065.04			
In Million		Rs.	26.175			

Total Bid Amount in Words: \_\_\_\_\_

Sign & Seal of the Bidder: \_\_\_\_\_

**NAME OF PROJECT: SOLARIZATION (ON-GRID SOLAR SYSTEM) OF THE ACADEMIC SCIENCE  
BLOCK (Dr. A.Q Khan Block).**

**BILL OF QUANTITIES (BOQ)**

**01 : SOLAR SYSTEM**

S.No	MRS 2022 bi Item No.	Description of Items	Units	Quantity	Item Rate (Rs)	Total Amount (Rs)
<b>SCHEDULE ITEMS</b>						
1	26-01-g-04	Supply and Erection of DC Cables (10mm600/1000V 1C)	m	1,700.00	574.93	<b>977,381.00</b>
2	15-02-b-03	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 1" i/d	m	1,500.00	302.56	<b>453,840.00</b>
3	15-02-b-06	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls including chase etc : 2" i/d	m	200.00	443.30	<b>88,660.00</b>
4	26-01-i-03-d	On-Grid PV Inverter, On-Grid, Optimized multipleMPPT Pure Sine wave, with Wi-Fi monitoring module, Efficiency more than 98%, three phase, IP-66 or above, Brand: Huawei/ Fox or or Equivalent Quality Complete inAll Respect, 10 years replacement warranty.	per watt	170,000.00	26.78	<b>4,552,600.00</b>
5	26-01-h-01	Supply and Erection MC4 connector (TUV Approved)	Pair	80.00	342.92	<b>27,433.60</b>
6	26-01-h-02	Supply and Erection MC4 Branch connector	Pair	80.00	1,468.31	<b>117,464.80</b>
7	15-105-h	Providing & fixing of Plate type Earthing compressed with excavated hole 6"up 63 feet, GI pipe 2"(50mm)with Tees , Sockets , Endcap of 60 (RFT) Copper Plate of 1/2"x 2"x48", 2x 70mmsq S/Core copper bare conductor 125 (Rft) Earth Connection Point of 1200 x 50 x50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) completed with all respect.	Job	8.00	124567.4	<b>996,539.20</b>
8	15-43-b	Supply and Erection copper tape, including copper staple & copper nails etc : Size 2"x1/8"	m	120.00	1353.99	<b>162,478.80</b>
9	15-44	Supply and Erection 1" dia & 1m long lightning conductor copper rod with 5 spikes ball & base etc.	m	10.00	16092.52	<b>160,925.20</b>
10	15-68-f	Supply and Fixing of 24" dia Direct axial Wall Bracket fan, 1450Rpm, Max 50db sound level Fan shall be made with 99% purity Copper windings	Each	1.00	8598.38	<b>8,598.38</b>
11	15-69-c	Supply and Erection best quality exhaust fan complete with shutter & regulator : 18"sweep	Each	1.00	6224.40	<b>6,224.40</b>
<b>TOTAL COST OF (S.I)</b>					<b>= Rs.</b>	<b>7,552,145.38</b>
<b>(A) MRS Items _____ Above % / Below %</b>					<b>= Rs.</b>	
<b>(A) Contractor Bid on MRS Items</b>					<b>= Rs.</b>	

**NON-SCHEDULE ITEMS**

<b>1</b>	NSI	Supply/Providing and Errection/Fixing of solar PV module (Solar Panel) N-Type Bi-facial A- Grade (Per Watt) (Jinko, Longi, Canadian or equivalent) 12 years product warranty & 25 years performance warranty also i/c Stainless Steel Nuts and Bolts for fixing in stand complete in all respect as per approved design and directions of Engr.Incharge	Watt	170,000.00	59.20	<b>10,064,000.00</b>
	NSI	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 14 SWG (commercial) Channel / Pipe or 10 SWG (commercial) Angle and can resist the wind speed upto 150km/h complete in all respect as per design, drawing and provision of elevation where required also as directed by engineer Incharge.	Per Watt	170,000.00	26.01	<b>4,421,700.00</b>
	NSI	Providing and Fixing of DC Inverter Air conditioner having capacity of 1.50 Tons (18000 BTU) i/c copper pipe, tape, foam, wifi module (Gree, Kenwood, Haier, TCL, Dowlance or equivalent) with T3 Compressor complete in all respect as per directions of Engr.Incharge.	Job	1.00	220000.00	<b>220,000.00</b>
	NSI	Providing and fixing of Temperature, Humidity Sensors and Smoke detectors (One each with wiring) for Inverter room, and Changeover switches for connecting/ disconnecting generator(one each), Fire extinguisher rated for electrical fires (02 #) Water pressure gun and tool kit (One Kit) for cleaning Drainage clips for solar panels (in appropriate quantity) Cosumable items (lux, thimbles, etc) complete in all respect as specified and directed by Engr.Incharge	Job	1.00	220000.00	<b>220,000.00</b>
<b>2</b>	NSI	Supply at site, fabrication and installation of GI perforated cable tray 4**3" 16 SWG.	m	94.572	2,132.65	<b>201,689.80</b>
<b>3</b>	NSI	AC Cable Between Inverter to DB 50 Sq.mm PU / PVC /4C) 4 core, (Voltage drop should not be more than 1.5% end to end), Cu, XLPE/PVC 0.6/1KV with thimble for connections etc complete in all respect as per directions of Engr.Incharge.	m	50.00	6,000.00	<b>300,000.00</b>
<b>4</b>	NSI	Supply at site, installation, testing and commissioning of PVC insulated un-armoured copper conductor cable 600 / 1000 Volt grade (or otherwise mentioned in cable description ) in prelaid conduits /trenches to be installed as per routes shown on drawings including cost of all necessary materials, connections, identification tags, cables lugs properly crimped at both ends for the following sizes complete in all respects. 120 sq mm , 4 core PVC/PVC Stranded Copper Conductor.	m	60.00	10,500.00	<b>630,000.00</b>
<b>5</b>	NSI	P/F Zero Export Device, till the time of Net Metering is done	Each	1.00	65,000.00	<b>65,000.00</b>

6	NSI	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including Circuit Breakers, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles, Two-Pole DC Circuit Breakers , Two-pole DC Surge Protection Device of suitable rating, e.t.c , complete in all aspects and to the entire satisfaction of The Engineer/Employer. Actual no of breakers may vary on site . Note: All circuits must be properly tagged as per site installations. (For 170 KWp System)	Job	1.00	258,000.00	<b>258,000.00</b>
7	NSI	Supply, Installation, and Commissioning of AC Combiner Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase , LED indication lights (Red, Yellow, Blue, ON, OFF & Trip) and, if required, Separate Copper Bus Bars for Phase, Neutral, and Earth Connection including CTs and having, MCCBs of required load, main Circuit Breaker, two-Pole AC Circuit Breakers, Single pole AC Circuit Breakers, Two- pole AC Surge Protection Device, Change Over, AC Voltage Protection device of suitable rating, interphase protection relay, Energy analyser and AC SPD etc complete in all aspects and to the entire satisfaction of The Engineer/Employer. The actual no of breakers and other accessories/items may vary on-site. Note: All outgoing circuits must be properly tagged as per site installations (For 160 KWp System)	Job	1.00	258,000.00	<b>258,000.00</b>
16	NSI	Providing and Installation of Net Meter for 430 Kw Solar System Including Complete Documnetation in all Respect	Job	1.00	1,984,529.86	<b>1,984,529.86</b>
<b>(SUB TOTAL OF (N.S.I))</b>					<b>= Rs.</b>	<b>18,622,919.66</b>
<b>NSI/Non MRS Items _____ At Par / Below %</b>					<b>= Rs.</b>	
<b>(B) Contractor Bid on NSI/Non MRS Items</b>					<b>= Rs.</b>	
<b>Contractor Bid (A + B)</b>					<b>= Rs.</b>	
<b>in Million</b>					<b>= Rs.</b>	
<b>Note:- Following information is to be provided by the bidder, otherwise bid shall be declared as non-responsive. (Must be duly supported by evidence of exemption.)</b>						
<b>Amount exempted from Federal GST</b>					<b>= Rs.</b>	
<b>Amount Chargeable to % Federal (FBR) Sales Tax on Goods</b>					<b>= Rs.</b>	
<b>Federal (FBR) Sales Tax on Goods @ %</b>					<b>= Rs.</b>	
<b>Amount Chargeable to % Provincial (KPRA) Sales Tax on services.</b>					<b>= Rs.</b>	
<b>Provincial (KPRA) Sales Tax on Services @ %.</b>					<b>= Rs.</b>	
<b>Any other applicable Tax</b>					<b>= Rs.</b>	
<b>Total Amount</b>					<b>= Rs.</b>	

The contractor Bid will be applicable on all items of MRS 2022 Bi annual in case of Any additional Item which is not available in MRS / BOQ if carried out at site by the contractor with the instructions of Engr.Incharge shall be paid as per Market rate analysis.