

**Annexure-C+3**

**Rehabilitation of Govt Girls Primary School Pakha Ghulam, UC Pakha Ghulam, Tehsil Chamkani, District Peshawar**

**Water Supply System Rehabilitation including New Bore Well digging and Installation of solar PV system**

S.No	Description	Unit	Qty	Brand Offered	Rate	Total Amount
<b>1</b>	<b>Water Tank 500 Gallons</b>					
	Supplying and Fixing Polyethylene Water Tank made from food grade FDA Certified raw material, 3 layers UV stablized, inert with water, anti-fungus and anti-bacterial and have a service life of more than 10 years : 500 gallons (Vertical)	Each	1.00			
<b>2</b>	<b>Solar Panel Installation</b>					
	Supply and Erection of Solar PV Module Solar Panel Mono-crystalline A-Grade (per Watt) (As per KP Govt Approved Specifications)	Watt	6000.00			
<b>3</b>	<b>Inverter (6 kW Of-grid Three phase) without battery back up</b>					
	Type: Off-Grid Solar Inverter Operation Mode: Solar PV Direct Operation without Battery Backup, Configuration: Single Unit or Parallel Compatible, Phase: Single Phase or Three Phase (as required), Technology: Pure Sine Wave Mounting: Wall Mounted, Outdoor Rating: IP65 Minimum. Minimum 3 years repair/replacement warrenty and 5 year service warrenty Electrical Specifications: Rated Output Power: Minimum 6 kW, Recommended PV Capacity: 8–10 kWp, Maximum PV Input Power: ≥ 10 kW, AC Output Voltage 230V AC (Single Phase) / 400V AC (Three Phase) Frequency: 50/60 Hz, Output Waveform: Pure Sine Wave, Inverter Efficiency: ≥ 96% min, Peak Efficiency ≥ 98%, Total Harmonic Distortion (THD) < 3% MPPT Quantity: Minimum 2 Independent MPPTs, MPPT Voltage Range: 200–850 V DC, Maximum DC Input :Voltage 1000 V DC, Maximum Input Current: ≥ 25 A per MPPT Capacity: Minimum 2x rated load Protection Features The inverter shall include but not limited to:, Over-voltage protection, Under-voltage protection, Over-current protection, Short circuit protection, Reverse polarity protection, Over-temperature protection Earth fault protection, Surge protection, Anti-islanding protection, Arc Fault Circuit Interruption (AFCI), DC isolation switch Communication & Monito+ring Communication Ports: RS485 / CAN / Ethernet / Wi-Fi, Monitoring Mobile App & Web Portal Data Logging Minimum 1 Year, Monitoring Parameters Voltage, Current, Power, Frequency, Energy, Faults, Remote Monitoring Mandatory Environmental Conditions Operating Temperature -25°C to +60°C, Humidity 0–95% Non-Condensing, Cooling Method Smart Forced Air Cooling, Noise Level < 55 dB, Protection Class IP65 Minimum Certifications & Standards IEC 62109-1 / IEC 62109-2, IEC 61727, IEC 61683, IEC 62116, CE Certification, RoHS Compliance, EMC Compliance, UL 1741 (if applicable)	No	1			
4	Supply and Erection 1x16 sq.mm Copper cable Green and Blue	Rft	150.00			
5	Supply and Erection 1x10 sq.mm flexible copper cable Green and Blue	Rft	200.00			

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6	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PCV sheathed) flexible copper cable Green and Blue.	Rft	200.00			
7	Supply and Erection 1x4 sq.mm double insulated flexible copper cable Green and Blue	Rft	25.00			
8	Supply and Erection PVC flexible pipe : 1" i/d	Rft	300.00			
9	Supply and Erection MC4 connector (TUV Approved)	Pair	4.00			
10	Supply and Erection MC4 Branch connector	Pair	3.00			
11	Supply and Installation of 20 to 63A DC Circuit 2breaker 2P - MCB Type	No	1.00			
12	Supply and Installation of AC surge protection device 2P, 385V, In = 20kA & I <sub>max</sub> = 40kA	No	1.00			
13	Supply and installation of distribution board (for DC & AC system)	No	1.00			
14	Supply and Installation of 70 to 80A DC Circuit breaker 2P - MCB Type	No	1.00			
15	Supply and Erection of hot dipped galvanized steel of minimum thickness of 14 SWG Channel or 16 SWG rectangle Pipe size 3"x1.5" for solar plates (Purlin) support and Support beam/ Cross beam/ Runner holding purlin size 3"x 1.5" x 16SWG at 6-7 ft, Column / Post 4"x4"x 16SWG at 6-7 ft . Structure shall include all necessary clamps, nuts, bolts, washers, base plates and anchoring arrangement. Complete in all respects as per direction of the Engineer incharge.	No	10.00			
16	Supply and Erection of Copper Conductor of 10 AWG	Meter	6.00			
17	Supply and erection of 10 ft long, 16mm (5/8") diameter, Copper Bonded Earth Rod complete with Bentonite/ Chemical Backfill compound, 25x3mm Copper Tape, Brass Clamps, and installation by digging, driving rod to required depth, backfilling, and connecting to main earthing busbar. complete in all respects.	Each	1.00			
<b>Sub Total Amount for the Installation of Solar PV System: 4. A</b>						
<b>4. B Construction of Staffroom on the Ground floor</b>						
<b>1</b>	<b>Excavation Work</b>					
	Excavation in foundation of building, bridges etc. complete : in ordinary soil	Cft	568.13			
<b>2</b>	<b>PCC 1:4:8 in Flooring</b>					
	Plain Cement Concrete including placing, compacting, finishing & curing (Ratio 1:4:8)	Cft	160.50			
<b>3</b>	<b>1st Class Brick Masonary in Foundation</b>					
	Providing and laying 1st class brick work in foundation and plinth in Cement, sand mortar 1:5, including curing, placing complete in all respect.	Cft	202.31			
<b>4</b>	<b>Backfilling</b>					
	Filling, watering and ramming earth under floor with surplus earth from foundation/ flooring, etc	Cft	810.00			
<b>5</b>	<b>DPC 1:2:4</b>					
	Damp proof course of cement concrete 1:2:4 including bitumen coat, 1 layer polythene & 1 coat bitumen (2" thick).including shuttering, placing, finishing , curing complete with all respect.	Sft	62.25			
<b>6</b>	<b>Brick Masonary in super structure</b>					
	Providing and laying 1st class brick work upto 20 ft.height : Cement, sand mortar 1:6 including Grooved / V-Pointing, scaffolding and curing. Complete in all respect.	Cft	1423.50			
<b>7</b>	<b>RCC Concrete 1:2:4</b>					

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	RCC in roof slab, beam, column & other structural members, insitu or precast. (1:2:4). including shuttering, scaffolding, placing, finishing, competing, and curing complete in all respect.	Cft	627.34			
<b>8</b>	<b>Steel grade 40</b>					
	Supply & fabricate M.S. reinforcement for cement concrete (Hot rolled deformed bars Grade 40). including cutting, binding and laying complete in all respect.	Kg	1136.00			
<b>9</b>	<b>Plaster Ratio 1:5</b>					
	Cement Plaster 1:5, upto 20' height 3/4" thick including curing, good finishing, scaffolding complete in all respect.	Sft	1942.00			
<b>10</b>	<b>Porcelain Floor Tile 24" x 24"</b>					
	Providing and Fixing of Porcelain Floor Tile 24" x 24" of approved quality, (CM 1:2), setting in neat cement paste, grouting with white and coloured cement, joint using spacers and cleaning complete in all respects as per direction of Engineer-in-charge.	Sq.m	35.13			
<b>11</b>	<b>Wall Tile</b>					
	Providing and Fixing of Bath Room floor & Wall Tiles 12"x18" of approved quality. Compete in all respects	Sq.m	23.14			
<b>12</b>	<b>Distemper and Paint etc</b>					
a.	Distemping New surface : Two coats	Sft	1142.00			
<b>b.</b>	<b>Snowcem / Weathershield work</b>					
	Preparing surface & painting with snowcem / weathershield paint : 2nd & subsequent coats	Sft	611.00			
<b>13</b>	<b>Steel Door and Window</b>					
	Providing and fixing single leaf steel door fully panelled with M.S sheet 16 gauge painted with two coats of red oxide paint, and one coat of oil paint with brass fitting of approved make including cost of fabrication, iron lugs, cutting holes and making good the damages to walls. with complete in all respect.	Sft	64.00			
<b>14</b>	<b>Steel Chowkats frame</b>					
	Supply and fix steel chowkats press moulded 16 SWG for 115mm walls complete, incl hold fast, ties for lateral movement PCC type B cavity filling incl one coat of anti-crusit paint internal surface.complete in all respect.	Rft	47.00			
<b>15</b>	<b>Electrification work</b>					
i.	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls and slab including chase etc : 1/2" i/d including all charges for conduit fittings (boxes, elbows)etc.	Rft	140.00			
ii.	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls and slab including chase etc : 3/4" i/d including all charges for conduit fittings (boxes, elbows)etc.	Rft	70.00			
iii.	Supply and Erection PVC pipe for wiring purpose complete Recessed in walls and slab including chase etc :1" i/d including all charges for conduit fittings (boxes, elbows)etc.	Rft	70.00			
iv.	Wiring of light/fan/call-bell point in 3/0.029" PVC insulated bare cable in PVC pipe/duct recessed	Each	11.00			
v.	Supply and Erection single core PVC insulated copper conductor 250/440 V grade cable : 7/0.029"	Rft	200.00			
vi.	Supply & Erection of UPVC board 7" x 4" with all aspects	Each	2.00			
vii.	Supply at site, installation, testing and commissioning of the Eight gang light control switches 10 Amps, 250Volts one way, including appropriate size concealed/ MS, powder coated back box, complete in all respects.	Each	2.00			

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viii.	Supply and Installation of The AC energy-efficient ceiling fan shall have a rated power between 45 watts and a sweep size of 54" to 56", operating at 220–230 VAC (±10V). It must deliver a service value of = 4.5 m <sup>3</sup> /min/W, with an insulation class of at least 155 (F-Class) and noise levels within acceptable comfort limits. A ±10% variation in power consumption is permissible as per PSQCA/NEECA standards. The motor core shall be made of electrical steel sheet, and the winding wire shall consist of 99.9% super enameled copper (CA wire) or 99.9% pure copper wire. The fan must be NEECA certified and clearly marked with the manufacturer's model number, rated voltage, and wattage in accordance with NEECA guidelines. complete in all respect.	Each	2.00			
ix.	Supply and fixing of concealed type UPVC fan box including ceiling hook complete in all respect.	Each	2.00			
x.	Supply and installation of Ceiling fan hook-J hook with anchor fasteners for RCC, nut-bolt type for wooden beams, and concealed or claim-type for false ceilings or steel trusses, as per site requirements	No	2.00			
xi.	S/F light filling complete with fluorescent tube 4ft/1.2 meter 36 watts tube, started, and plastic cover. Complete in all respect.	Each	3.00			
<b>16</b>	<b>steel Inauguration Plaque</b>					
	Supply and fixing of steel Inauguration Plaque, size 24" x 24" with standard text and Logo's as per approved design and minimum 5x numbers of wall chalking/weather shield paint of given data with IR logo complete 5' X 8' size on the near by walls or as directed by Engineer.	No	1.00			
<b>Sub Total Amount for the Construction of Staffroom: 4. B</b>						
<b>Grand Total : (4.A +4.B) (Inclusive of All Govt. Applicable Taxes, labour, material supply, loading/unloading, Transportation and Installation, if any)</b>						