

**LIST OF COMMUNITY/ PUBLIC FACILITIES TO BE SOLARISED - BALOCHISTAN - LOT#3**

Sr. No.	Facility Name	Province	District	Coordinates	Sector
1	University of Loralai (Admin and ICT deparment)	Balochistan	Loralai	30.4354 N, 68.4972 E	Education
2	Government Boys High School BANDAT MUSAZAI	Balochistan	Qilla Saifullah	30°41'48.97"N 68°21'49.61"E	Education
3	Government Girls High School Qillasaifullah	Balochistan	Qilla Saifullah	30°42'12.42"N 68°21'34.11"E	Education
4	Government Girls High School Chaman	Balochistan	Chaman	30°55'24.78"N 66°26'51.28"E	Education
5	Government Boys High School CHAMAN	Balochistan	Chaman	30°55'27.70"N 66°26'57.52"E	Education
6	Government Boys High School Cannt Lorlai	Balochistan	Loralai	30°21'54.83"N 68°35'56.38"E	Education
7	Government Girls High School Dalbandin	Balochistan	Chaghi	28°53'8.20"N 64°24'20.07"E	Education
8	Government Girls High School Killi khudai Raheem	Balochistan	Chaghi	28°53'16.58"N 64°24'54.69"E	Education
9	Government Boys High School CHAGHI	Balochistan	Chaghi	29°21'7.20"N 64°41'57.60"E	Education

**SOLARIZATION Of University of Loralai (Admin Department) Loralai**

**BILL OF QUANTITIES (BOQ)**

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 48 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 40 kVA</b>		
3	<b>Lithium Ion Battery: 52 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	48,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 50 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	360
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	810
	Providing and Fixing of Single Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,620
	Providing and Fixing of Single Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	180
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	360
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper , nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	5
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	48

**SOLARIZATION Of University of Loralai (ICT Depatment) Loralai**

**BILL OF QUANTITIES (BOQ)**

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 60 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 50 kVA</b>		
3	<b>Lithium Ion Battery: 50 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	60,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 50 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	2
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	360
	Providing and Fixing of Single Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	720
	Providing and Fixing of Single Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	180
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper , nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	6
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	60

## SOLARIZATION Of Government Boys High School BANDAT MUSAZAI, Qilla Saifullah

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 24 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 20 kVA</b>		
3	<b>Lithium Ion Battery: 31 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	24,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 40 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	10
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single-Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	630
	Providing and Fixing of Single-Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,260
	Providing and Fixing of Single-Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper, nails/Screw etc.: Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	5
	Net metering cost	No	
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	24

## SOLARIZATION Of Government Girls High School Qilla Saifullah

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 18 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 15 kVA</b>		
3	<b>Lithium Ion Battery: 26 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	18,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 35 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	10
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	540
	Providing and Fixing of Single Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,080
	Providing and Fixing of Single Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper , nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	4
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	18

## SOLARIZATION Of Government Girls High School Chaman

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 24 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 20 kVA</b>		
3	<b>Lithium Ion Battery: 31 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	24
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 50 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc.	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	810
	Providing and Fixing of Single Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,620
	Providing and Fixing of Single Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper , nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	6
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	24

## SOLARIZATION Of Government Boys High School Chaman

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 30 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 25 kVA</b>		
3	<b>Lithium Ion Battery: 43 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	30,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 55 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPPE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPPE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	810
	Providing and Fixing of Single Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,620
	Providing and Fixing of Single Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper , nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightning conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	6
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	30

## SOLARIZATION Of Government Boys High School Loralai Cantt.

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 24 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 20 kVA</b>		
3	<b>Lithium Ion Battery: 35 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	24,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 40 Outgoing Circuit Breakers of 10 A	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	630
	Providing and Fixing of Single Phase wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,260
	Providing and Fixing of Single Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper , nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	6
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	24



## SOLARIZATION Of Government Girls High School Dalbandin

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 18 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 15 kVA</b>		
3	<b>Lithium Ion Battery: 22 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	18,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 45 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	270
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	810
	Providing and Fixing of Single Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,620
	Providing and Fixing of Single Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	270
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper , nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	4
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	18

## SOLARIZATION Of Government Girls High School Killi Khudai Raheem Dalbandin

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 12 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 10 kVA</b>		
3	<b>Lithium Ion Battery: 9 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	12,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 20 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single-Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	360
	Providing and Fixing of Single-Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	720
	Providing and Fixing of Single-Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48" , 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper, nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	3
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	12

## SOLARIZATION Of Government Boys High School CHAGHI

### BILL OF QUANTITIES (BOQ)

Sr. No	Description	Unit	Qty
1	<b>PV System Capacity: 30 kW</b>	<b>TO BE PROVIDED BY UNHCR</b>	
2	<b>OFF-GRID HYBRID INVERTERS: 25 kVA</b>		
3	<b>Lithium Ion Battery: 36 kWh</b>		
4	<b>Elevated PV MOUNTING STRUCTURE with Foundation, Pedestals and Allied Civil Works</b>		
	Supply and Erection of hot dipped (80 microns Average) galvanized steel of minimum thickness of 12 SWG / 2.64 mm Channel / Pipe or 8 SWG / 4.06 mm Angle	Per Watt	30,000
5	<b>AC DISTRIBUTION BOX</b>		
	Supply, Installation and Commissioning of AC Distribution Box made of 16 SWG, Galvanized Iron with Digital Multimeter (Voltmeter and Ammeter), Selectable Switches showing Current and Voltage of Phase and, if required, Separate Bus Bars for Phase, Neutral and Earth Connection and having 5 Incoming Circuit Breakers and at least 50 Outgoing Circuit Breakers of 10 A rating for connection of critical and non-critical load specified in electrical load section, AC Voltage Protection device, complete in all aspects. <b>Note:</b> All outgoing circuits must be properly tagged as per site installations	No.	1
6	<b>DC Flexible Copper Cable from PV Module to DC Combiner and Inverter</b>		
	Supply and Erection 1x6 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	180
7	<b>DC Flexible Copper Cable from Inverter to Batteries</b>		
	Supply and Erection 1x25 sq.mm single core (XPLE/XPLO insulated/PVC sheathed) flexible copper cable	Meter	20
8	<b>DC Disconnect Switch Box</b>		
	Supply, Installation and Commissioning of Hot Dipped Galvanized IP-65 DC Combiner Box including at least three (03) 32 A, one (01) 63 A, & one (01) 125 A DC Circuit Breakers, DC Surge Protective Devices, Neutral Busbar and Grounding Busbar with lugs, shrouds, thimbles etc..	No	1
9	<b>AC Wiring for Internal Circuits</b>		
	Providing and Fixing of Single-Phase Wiring of Size 2.5 mm sq in PVC Duct Patti (where required) from main power access point to Critical and Normal Loads on Each Floor as per the directions/instructions of The Employer/Engineer	Meter	900
	Providing and Fixing of Single-Phase Wiring of Size 4 mm sq in PVC Duct Patti (where required) from inverter to main power access points on each floor as per the directions/instructions of The Employer/Engineer	Meter	1,800
	Providing and Fixing of Single-Phase Wiring of Size 6 mm sq in PVC Duct Patti (where required) from main power access points to air conditioning units on each floor as per the directions/instructions of The Employer/Engineer	Meter	90
10	<b>HDPE Pipe for DC Cable Laying</b>		
	Providing, laying, cutting, jointing, testing and disinfecting High, Density Polyethylene Pipe (HDPE) Din-8074/Din- 8075/ISO-4427 in trenches, complete in all respects except excavation. (75 mm diameter) PN-8	Meter	180
11	<b>Power System Earth</b>		
	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" x 48", 2x 70mmsq S/Core copper bare conductor 125 (Ft) Earth Connection Point of 1200 x 50 x 50mm (L x W x T) Inspection Pit of 300 x 300 x 450 mm (L x W x D) compiled with all respect.  6 mm sq (Bare Copper Conductor) 99% Pure Copper for earthing of PV Modules including grounding nuts (imported) made of pure copper (tin coated) complete in all respects <b>Note:</b> Bore Type Earth having similar specification can also be installed as per the permission/direction of The Employer/Engineer.	Job	1
12	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - COPPER TAPE</b>		
	Supply and Erection copper tape, including copper staple & copper, nails/Screw etc. : Size 1.5"x1/8" copper Tape 1.5"x1/8" Staple & Nails	Meter	20
13	<b>SUPPLY, INSTALLATION OF LIGHTNING PROTECTION SYSTEM - LIGHTENING ROD</b>		
	Supply and Erection 1" diameter & 1m long lightening conductor copper rod with 5 spikes ball & base etc.	Meter	0.4
14	<b>Miscellaneous</b>		
	Protection cages for inverters and batteries placed under staircases made of mild steel 16 SWG powder coated paint and should ensure proper mechanism for ventilation and proper locking arrangement suitable for housing backup Battery.	No	6
	Additional Electrical Works	No	1
	Installation and transportation of equipment to site	Per kW	30