**BAHRIA COLLEGE ISLAMABAD**

**TECHNICAL SPECIFICATION OF SOLAR PANEL**

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| **INSTALLATION OF SOLAR PANEL 30 KV WITH 30 KV INVERTER - BOYS WING** | | | | | |
| **S.NO** | **DESCRIPTION** | **BRAND** | **QUANTITY** | **UNIT PRICE** | **TOTAL PRICE** |
| 1. | **SOLAR PANEL**  Brand: A Grade Tier-1 Power: 570 – 595 KW  N Type  TUV certified and 12 years Manufacturing warranty & 30 year performance warranty |  |  |  |  |
| 2. | **INVERTER**  Product Power: 30 KV  Type: On-grid  Brand: 1 x Growatt (high MPPT, Official warranty 05 years) with built in SPD |  |  |  |  |
| 3. | **STRUCTUR**E  Standard elevated L2 ready frames for ground mounted rust free. Galvanized 145SWG |  |  |  |  |
| 4. | **DC WIRE**;  XLPO, Single Core, Red or Black, Pakistan Cable, FAST Cable, insulation, Fire retardant, UV protected brand |  |  |  |  |
| 5 | **AC WIRE**  AC power cable from Solar inverter to main DB (Distribution Board) and DC wires, Earthing wires, PVC conduit (water grade), Best PVC Trunking, Lighting Arrestor, Four Earthing rods and ‘U’ clamps, Disconnect Switch, DB Boxes and all related accessories. |  |  |  |  |
| 6 | UPVC Pipes including sockets, tees, elbows, bends etc.  UPVC ducts  Screws (High Quality)  Rowel Plugs  Cable Ties  Galvanized Nuts/ Bolts  Rowel Bolts  Ducts, cable tray with complete accessories |  |  |  |  |
| 7 | **SAFETY EQUIPMENTS**:  AC MCB 63A  AC MCCB 200A  AC SPD 60K  DC MCB 2 Pole Breaker 63A, 100 V  DC SPD 40K  Brand (CNC, CHINT) quantity as per system required  Distribution box for AC & DC safeties (Premium Quality)  All breaker/ SPD fire retardant & up to system rating. |  |  |  |  |
| 8 | **INSTALLATION**  Check feasibility, system designing, project execution, quality checks |  |  |  |  |
| 9 | Complete Standard installation, testing & commissioning |  |  |  |  |
| 10 | Transportation |  |  |  |  |
| 11 | **EARTHING**  Lightning arrestor antenna (brass) 4ft copper rod with size base (brass) earthling copper rod & U clamp, boring work where necessary. |  |  |  |  |
| 12. | Net Metering |  |  |  |  |

**BAHRIA COLLEGE ISLAMABAD**

**TECHNICAL SPECIFICATION OF SOLAR PANEL**

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| **INSTALLATION OF SOLAR PANEL 30 KV WITH 30 KV INVERTER - GIRLS WING** | | | | | |
| **S.NO** | **DESCRIPTION** | **BRAND** | **QUANTITY** | **UNIT PRICE** | **TOTAL PRICE** |
| 1. | **SOLAR PANEL**  Brand: A Grade Tier-1 Power: 570 – 595 KW  N Type  TUV certified and 12 years Manufacturing warranty & 30 year performance warranty |  |  |  |  |
| 2. | **INVERTER**  Product Power: 30 KV  Type: On-grid  Brand: 1 x Growatt (high MPPT, Official warranty 05 years) with built in SPD |  |  |  |  |
| 3. | **STRUCTUR**E  Standard elevated L2 ready frames for ground mounted rust free. Galvanized 145SWG |  |  |  |  |
| 4. | **DC WIRE**;  XLPO, Single Core, Red or Black, Pakistan Cable, FAST Cable, insulation, Fire retardant, UV protected brand |  |  |  |  |
| 5 | **AC WIRE**  AC power cable from Solar inverter to main DB (Distribution Board) and DC wires, Earthing wires, PVC conduit (water grade), Best PVC Trunking, Lighting Arrestor, Four Earthing rods and ‘U’ clamps, Disconnect Switch, DB Boxes and all related accessories. |  |  |  |  |
| 6 | UPVC Pipes including sockets, tees, elbows, bends etc.  UPVC ducts  Screws (High Quality)  Rowel Plugs  Cable Ties  Galvanized Nuts/ Bolts  Rowel Bolts  Ducts, cable tray with complete accessories |  |  |  |  |
| 7 | **SAFETY EQUIPMENTS**:  AC MCB 63A  AC MCCB 200A  AC SPD 40K  DC MCB 2 Pole Breaker 63A, 100 V  DC SPD 60K  Brand (CNC, CHINT) quantity as per system required  Distribution box for AC & DC safeties (Premium Quality)  All breaker/ SPD fire retardant & up to system rating. |  |  |  |  |
| 8 | **INSTALLATION**  Check feasibility, system designing, project execution, quality checks |  |  |  |  |
| 9 | Complete Standard installation, testing & commissioning |  |  |  |  |
| 10 | Transportation |  |  |  |  |
| 11 | **EARTHING**  Lightning arrestor antenna (brass) 4ft copper rod with size base (brass) earthling copper rod & U clamp, boring work where necessary. |  |  |  |  |
| 12. | Net Metering |  |  |  |  |

**BAHRIA COLLEGE ISLAMABAD**

**TECHNICAL SPECIFICATION OF SOLAR PANEL**

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| **INSTALLATION OF SOLAR PANEL 60 KV WITH 70 KV INVERTER - ADMIN BLOCK** | | | | | |
| **S.NO** | **DESCRIPTION** | **BRAND** | **QUANTITY** | **UNIT PRICE** | **TOTAL PRICE** |
| 1. | **SOLAR PANEL**  Brand: A Grade Tier-1 Power: 570 – 595 KW  N Type  TUV certified and 12 years Manufacturing warranty & 30 year performance warranty |  |  |  |  |
| 2. | **INVERTER**  Product Power: 70 KV  Type: On-grid  Brand: 1 x Growatt (high MPPT, Official warranty 05 years) with built in SPD |  |  |  |  |
| 3. | **STRUCTUR**E  Standard elevated L2 ready frames for ground mounted rust free. Galvanized 145SWG |  |  |  |  |
| 4. | **DC WIRE**;  XLPO, Single Core, Red or Black, Pakistan Cable, FAST Cable, insulation, Fire retardant, UV protected brand |  |  |  |  |
| 5 | **AC WIRE**  AC power cable from Solar inverter to main DB (Distribution Board) and DC wires, Earthing wires, PVC conduit (water grade), Best PVC Trunking, Lighting Arrestor, Four Earthing rods and ‘U’ clamps, Disconnect Switch, DB Boxes and all related accessories. |  |  |  |  |
| 6 | UPVC Pipes including sockets, tees, elbows, bends etc.  UPVC ducts  Screws (High Quality)  Rowel Plugs  Cable Ties  Galvanized Nuts/ Bolts  Rowel Bolts  Ducts, cable tray with complete accessories |  |  |  |  |
| 7 | **SAFETY EQUIPMENTS**:  AC MCB 63A  AC MCCB 200A  AC SPD 60K  DC MCB 2 Pole Breaker 63A, 100 V  DC SPD 40K  Brand (CNC, CHINT) quantity as per system required  Distribution box for AC & DC safeties (Premium Quality)  All breaker/ SPD fire retardant & up to system rating. |  |  |  |  |
| 8 | **INSTALLATION**  Check feasibility, system designing, project execution, quality checks |  |  |  |  |
| 9 | Complete Standard installation, testing & commissioning |  |  |  |  |
| 10 | Transportation |  |  |  |  |
| 11 | **EARTHING**  Lightning arrestor antenna (brass) 4ft copper rod with size base (brass) earthling copper rod & U clamp, boring work where necessary. |  |  |  |  |
| 12. | Net Metering |  |  |  |  |

**BAHRIA COLLEGE ISLAMABAD**

**TECHNICAL SPECIFICATION OF SOLAR PANEL**

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| **INSTALLATION OF SOLAR PANEL 25 KV WITH 30 KV INVERTER - SPECIAL CHILDREN SCHOOL** | | | | | |
| **S.NO** | **DESCRIPTION** | **BRAND** | **QUANTITY** | **UNIT PRICE** | **TOTAL PRICE** |
| 1. | **SOLAR PANEL**  Brand: A Grade Tier-1 Power: 570 – 595 KW  N Type  TUV certified and 12 years Manufacturing warranty & 30 year performance warranty |  |  |  |  |
| 2. | **INVERTER**  Product Power: 30 KV  Type: On-grid  Brand: 1 x Growatt (high MPPT, Official warranty 05 years) with built in SPD |  |  |  |  |
| 3. | **STRUCTUR**E  Standard elevated L2 ready frames for ground mounted rust free. Galvanized 145SWG |  |  |  |  |
| 4. | **DC WIRE**;  XLPO, Single Core, Red or Black, Pakistan Cable, FAST Cable, insulation, Fire retardant, UV protected brand |  |  |  |  |
| 5 | **AC WIRE**  AC power cable from Solar inverter to main DB (Distribution Board) and DC wires, Earthing wires, PVC conduit (water grade), Best PVC Trunking, Lighting Arrestor, Four Earthing rods and ‘U’ clamps, Disconnect Switch, DB Boxes and all related accessories. |  |  |  |  |
| 6 | UPVC Pipes including sockets, tees, elbows, bends etc.  UPVC ducts  Screws (High Quality)  Rowel Plugs  Cable Ties  Galvanized Nuts/ Bolts  Rowel Bolts  Ducts, cable tray with complete accessories |  |  |  |  |
| 7 | **SAFETY EQUIPMENTS**:  AC MCB 63A  AC MCCB 200A  AC SPD 60K  DC MCB 2 Pole Breaker 63A, 100 V  DC SPD 40K  Brand (CNC, CHINT) quantity as per system required  Distribution box for AC & DC safeties (Premium Quality)  All breaker/ SPD fire retardant & up to system rating. |  |  |  |  |
| 8 | **INSTALLATION**  Check feasibility, system designing, project execution, quality checks |  |  |  |  |
| 9 | Complete Standard installation, testing & commissioning |  |  |  |  |
| 10 | Transportation |  |  |  |  |
| 11 | **EARTHING**  Lightning arrestor antenna (brass) 4ft copper rod with size base (brass) earthling copper rod & U clamp, boring work where necessary. |  |  |  |  |
| 12. | Net Metering |  |  |  |  |

**BAHRIA COLLEGE ISLAMABAD**

**TECHNICAL SPECIFICATION OF SOLAR PANEL**

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| --- | --- | --- | --- | --- | --- |
| **INSTALLATION OF SOLAR PANEL ON GIRD 70 KV WITH 80 KV INVERTER - PRIMARY WING** | | | | | |
| **S.NO** | **DESCRIPTION** | **BRAND** | **QUANTITY** | **UNIT PRICE** | **TOTAL PRICE** |
| 1. | **SOLAR PANEL**  Brand: A Grade Tier-1 Power: 570 – 595 KW  N Type  TUV certified and 12 years Manufacturing warranty & 30 year performance warranty |  |  |  |  |
| 2. | **INVERTER**  Product Power: 100 KV  Type: On-grid  Brand: 1 x Growatt (high MPPT, Official warranty 05 years) with built in SPD |  |  |  |  |
| 3. | **STRUCTUR**E  Standard elevated L2 ready frames for ground mounted rust free. Galvanized 145SWG |  |  |  |  |
| 4. | **DC WIRE**;  XLPO, Single Core, Red or Black, Pakistan Cable, FAST Cable, insulation, Fire retardant, UV protected brand |  |  |  |  |
| 5 | **AC WIRE**  AC power cable from Solar inverter to main DB (Distribution Board) and DC wires, Earthing wires, PVC conduit (water grade), Best PVC Trunking, Lighting Arrestor, Four Earthing rods and ‘U’ clamps, Disconnect Switch, DB Boxes and all related accessories. |  |  |  |  |
| 6 | UPVC Pipes including sockets, tees, elbows, bends etc.  UPVC ducts  Screws (High Quality)  Rowel Plugs  Cable Ties  Galvanized Nuts/ Bolts  Rowel Bolts  Ducts, cable tray with complete accessories |  |  |  |  |
| 7 | **SAFETY EQUIPMENTS**:  AC MCB 63A  AC MCCB 200A  AC SPD 60K  DC MCB 2 Pole Breaker 63A, 100 V  DC SPD 40K  Brand (CNC, CHINT) quantity as per system required  Distribution box for AC & DC safeties (Premium Quality)  All breaker/ SPD fire retardant & up to system rating. |  |  |  |  |
| 8 | **INSTALLATION**  Check feasibility, system designing, project execution, quality checks |  |  |  |  |
| 9 | Complete Standard installation, testing & commissioning |  |  |  |  |
| 10 | Transportation |  |  |  |  |
| 11 | **EARTHING**  Lightning arrestor antenna (brass) 4ft copper rod with size base (brass) earthling copper rod & U clamp, boring work where necessary. |  |  |  |  |
| 12. | Net Metering |  |  |  |  |

**SUMMARY**

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| **S. No** | **Description** | **Amount (Million)** |
| 1. | Installation of Solar Panel 30 KV with 30 KV Inverter - Boys Wing |  |
| 2. | Installation of Solar Panel 30 KV with 30 KV Inverter – Girls Wing |  |
| 3. | Installation of Solar Panel 60 KV with 70 KV Inverter – Admin Block |  |
| 4. | Installation of Solar Panel 70 KV with 100 KV Inverter - Primary Wing |  |
| 5. | Installation of Solar Panel 25 KV with 30 KV Inverter – Special Children School |  |
| **Grand Total** | |  |

**NOTE:** 1. Site may be visited on any day before submission of Quotation from 0900 – 1400 hrs.

2. Multiple power points are to be installed separately, the same will be highlighted upon visit.