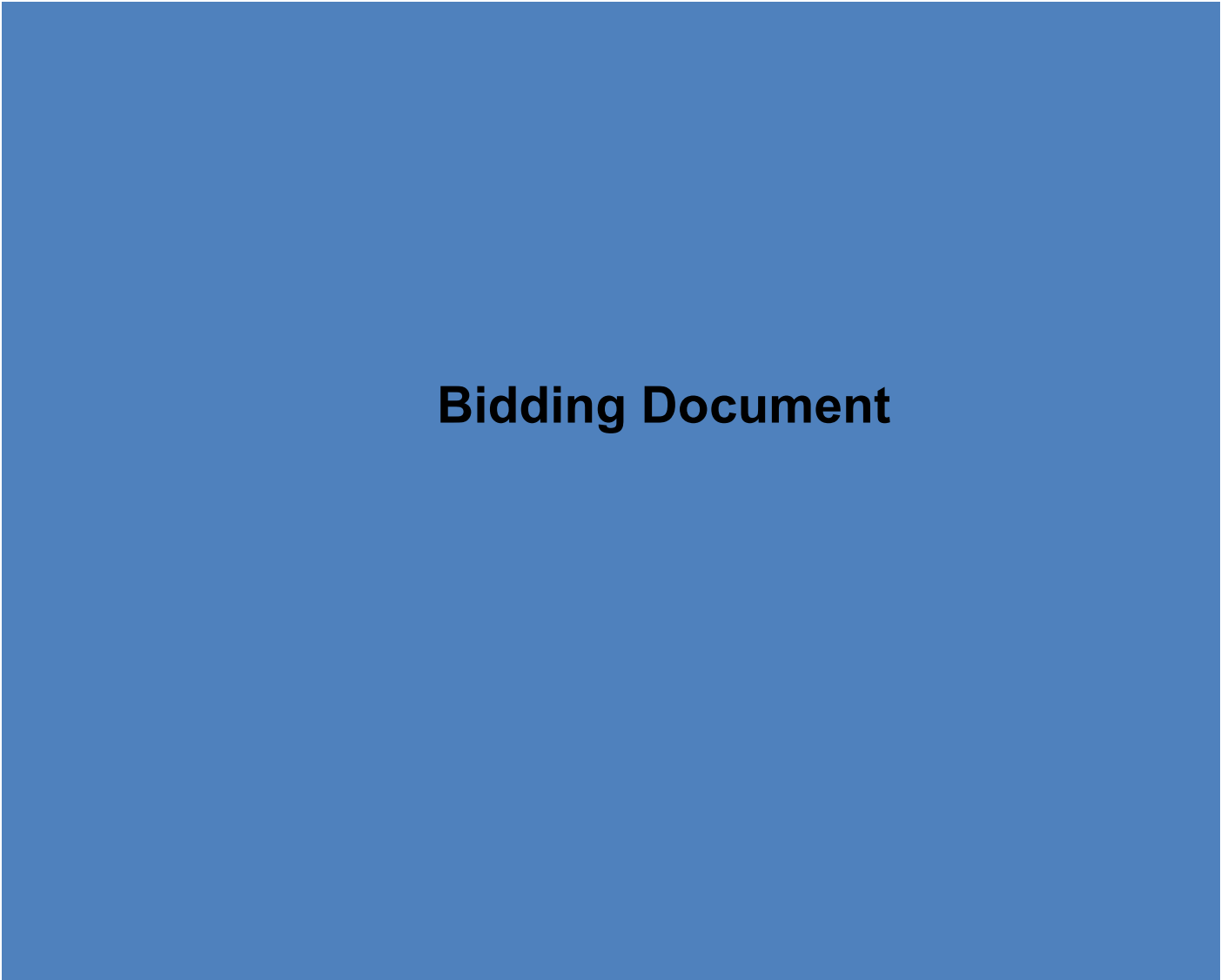




SOLARIZATION (MACRO PROJECT)

6 x CANTONMENT BOARDS



Bidding Document

Table of Contents

Section I – Invitation for Bids	3
Section II - Instructions to Bidders (ITB)	5
Section III – Bid Data Sheet (BDS)	9
Section IV – Eligible Countries.....	11
Section V – Evaluation Criteria	12
5.1 Evaluation Criteria	13
5.1.1 Relevant Experience and Past Performance (25 Marks)	13
5.1.2 Capabilities with respect to Personnel, Equipment, and Plant (20 Marks)	14
5.1.3 Financial Capability (25 Marks).....	15
5.1.4 Managerial Capability (10 Marks)	16
5.1.5 Engineering Design & Methodology (20 Marks).....	17
5.2 Cumulative Evaluation Formula for Most Advantageous Bid	18
Section VI - Works Requirements, Technical Specifications and Other Information	19
1. Detailed Specifications and Scope Of Work	19
A. Site Survey, Assessment & Data Collection	19
B. Load Detail & System Design Engineering	20
C. Supply of Equipment.....	20
D. Electrical & Protection Works.....	21
E. Testing, Commissioning & Performance Validation	21
SECTION VII - Tender Notice and Estimated Cost.....	22
Section VIII – Bill of Quantity (BOQ)	25
Letter of Bid.....	39
Form of Bid Security	41
Form of Performance Security	43
Section IX - DEED OF WARRANTY NOVATION	46
Section X – General Conditions of Contract	66
1. GENERAL PROVISIONS	66
2. The Employer	68
3. Employer's Representatives	69
4. The Contractor	69
5. DESIGN OF THE PROJECT	70
6. EMPLOYER'S RISKS.....	72
7. TIME FOR COMPLETION.....	72
8. TAKING OVER.....	73
9. REMEDYING DEFECTS	74
10. VARIATIONS AND CLAIMS.....	74
11. CONTRACT PRICE AND PAYMENT TERMS	75

12. DEFAULT	75
13. RISKS AND RESPONSIBILITIES	76
14. INDEMNITY.....	77
15. RESOLUTION OF DISPUTES	78
16. Integrity Pact and Anti-Corruption	78
17. Priority of Contract Documents.....	79
18. ADVANCE PAYMENT / MOBILIZATION ADVANCE	79
19. Taxation.....	80
20. Procurement Supremacy.....	80
21. Site Safety & Indemnity	80
Section XI – Special Conditions of Contract	81

Solarization Projects of 6 x Cantonment Boards (Offices & Tube Wells)
640 kW Hybrid/On-Grid Solar PV System with 250 kWh BESS

The procurement process covered under this Standard Bidding Document (SBD) shall be undertaken by Headquarters Military Lands & Cantonments (ML&C), Ministry of Defence, Government of Pakistan, on behalf of the 6 x Cantonment Boards in accordance with Rule 45A of the Public Procurement Rules, 2004 (as amended). Under the said Rule, the Procuring Agency has partially assigned the procurement process (upto the issuance of Letter of Intent) to Headquarters ML&C, which shall conduct the procurement in accordance with the applicable provisions of the Federal Public Procurement Rules, 2004.

Section I – Invitation for Bids

- ML&C intends to procure On-grid and Hybrid Solar Photovoltaic (PV) Systems for 6 x Cantonment Boards under a standardized procurement framework.
- ML&C, acting as the Procuring Agency, invites electronic bids from eligible, qualified, experienced, and financially sound firms, duly registered with the Pakistan Engineering Council (PEC) in the appropriate category (at least C-3), for the execution of the solarization works.
- The procurement shall be conducted **through the Single Stage – Two Envelope bidding procedure** in accordance with Rule 36(b) of the Public Procurement Regulatory Authority (PPRA) Rules, 2004 (as amended), using the PPRA e-Pak Acquisition and Disposal System (**EPADS**) on the basis of “**most advantageous bid – Quality and cost based selection method**” as per PPRA Rules 2004.
- All Bids must be accompanied by a Bid Security amount described in Bid Security Section in Bidding Document in the form of Call Deposit Receipt (CDR) in favor of **Director CIMLA Lahore**.
- E-Bidding documents, containing detailed terms & conditions, specifications and requirements etc. are available on **EPADS** for all the interested bidders registered on EPADS v2.0. Bidders are required to get themselves registered on EPADS v2.0 to participate in bidding process.

- The e-bids, prepared in accordance with the instructions in the e-Bidding documents, must be submitted through EPADS v2.0 on or before ____ September 2026 at 1100 hours. E-bids will be opened by using EPADS v2.0 on the same day i.e. ____ September 2026 at 1130 hours.
- Manual submission of Bids shall not be entertained. Those vendor who have not yet registered on the new version of EPADS v2.0, may register themselves on <https://vendors.epads.gov.pk/>. A tutorial to explain the registration process is available at <https://www.youtube.com/watch?v=MNW6T38v7tc>
- The works generally comprise the complete Engineering, Procurement, Construction, Installation, Testing, Commissioning, and successful handing over of On-grid and Hybrid Solar PV Systems with completion of net billing procedure as per NEPRA Rules.
- The scope of work shall include, but not be limited to:
 - Detailed engineering and system design compatible with existing electrical infrastructure of respective Cantonment Boards.
 - Procurement of all equipment, materials, accessories, and consumables.
 - Installation, testing, commissioning, and synchronization with the utility grid & generator where applicable.
 - Civil, structural, and electrical works.
 - Net-billing support and approvals.
 - Performance testing and acceptance.
 - Training of Employer's representatives.
 - Submission of as-built drawings, operation manuals, and maintenance manuals.
 - Warranty obligations, defect liability responsibilities and maintenance / after sale service obligations for 2 years.

Section II - Instructions to Bidders (ITB)

ITB Clause	Clause Title	Employer's Requirement / Provision
ITB.1	Scope of Bid	The Employer invites bids for the Engineering, Procurement, Construction, Installation, Testing, Commissioning, and completion of the Works (solarization systems) as described in the Bidding Documents. The successful bidder shall complete the Works within the time specified in the Bidding Data.
ITB.2	Source of Funds	The Works shall be financed from the source(s) specified in the Bidding Data, and payments under the Contract shall be made from the allocated funds.
ITB.3	Eligible Bidders	Bidders shall be eligible in accordance with the PPRA Rules and shall possess following; • A valid PEC Registration (minimum Category C-3) with relevant Solar Specialization Code EE-11 (i, ii, iii & vi) • A valid certificate from Alternative Energy Development Board (AEDB) • Active PPRA EPADS registration • Active FBR Active Taxpayer List (ATL) • Affidavit on judicial stamp paper stating: ○ Firm is not blacklisted by any government / semi-government body ○ Firm is not involved in litigation that may affect performance ○ Information provided is true and verifiable Failure to meet any mandatory requirement shall render the bid non-responsive.
ITB.7	Contents of Bidding Documents	Bidders shall carefully examine all instructions, conditions, specifications, drawings, schedules, and other bidding documents before submitting their bids. Submission of a bid

		shall be deemed as unconditional acceptance of all terms and conditions of the Bidding Documents.
ITB.8	Clarification of Bidding Documents	Requests for clarification shall be submitted in writing through EPADS within the time specified in the Bidding Data. Responses shall be issued in accordance with PPRA Rules.
ITB.23.3	Procedure for Submission of Bids	• Procurement shall follow the Single Stage – Two Envelope Procedure (most advantageous bid – Quality and cost-based selection method) • Technical and Financial Proposals shall be submitted separately through EPADS (or as specified in the Bidding Data). • Financial proposals shall only be opened for technically responsive bidders.
ITB.18	Bid Validity Period	Bids shall remain valid for the period specified in the Bidding Data. The Employer may request an extension of the bid validity period in accordance with PPRA Rules, and the bidder may accept or decline such request without forfeiture of Bid Security.
ITB.19	Bid Security	• Bid Security shall be 5% of the estimated cost in the form of a Call Deposit Receipt (CDR) issued by a scheduled bank in favour of Director CIMLA Lahore. • Non-submission, insufficient amount, or invalid Bid Security shall render the bid non-responsive.
ITB.24	Deadline for submission of bid	Bids shall be received to the procuring agency no later than the date and time mentioned in BDS.
ITB.25	Late Bids	Any bid received after the prescribed deadline for submission shall be rejected and returned unopened (where applicable) in accordance with PPRA Rules.
ITB.36	Determination of the Most Advantageous Bid	The Employer shall determine the Most Advantageous Bid - Quality and cost-based selection method from among the substantially responsive bids based on compliance with the eligibility, qualification, technical requirements, and the

		evaluated bid price in accordance with the evaluation criteria specified in the Bidding Documents. A bid shall not be selected solely on the basis of the lowest price rather cumulative technical and financial bid evaluation shall be carried out in the quality and cost-based selection method to determine the highest ranked most advantageous bid.
	Qualification Requirement <i>(Bidding Data / Evaluation Criteria)</i>	Bidders shall demonstrate adequate financial capability by submitting: i. audited financial statements for the last three financial years, ii. A bank solvency certificate issued by a scheduled bank.
	Clarification of Bidding Document and Pre-bid Meeting	i. A prospective bidder requiring any clarification of the bidding document may notify the Procuring agency/Employer through EPADS. ii. The Procuring agency/Employer shall respond to the request for clarification in accordance with Rule 31 of the Public Procurement Rules 2004. iii. During pre-bid meeting, prospective bidders may request clarification of the schedule of requirement, the evaluation criteria or any other aspects of the bidding documents. iv. The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the bidder's own expense. v. The bidder and any of its authorized personnel will be granted permission by the Procuring agency/Employer to enter upon its premises and lands for the purpose of

	such visit, but only upon the express condition that the bidder and its personnel will release and indemnify the Procuring agency/Employer from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
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Section III – Bid Data Sheet (BDS)

BDS Clause No.	ITB Clause No.	Amendments of, and Supplements to, Clauses in the Instructions to Bidders
1	1.1	Employer: Headquarters Military Lands & Cantonments (ML&C), Ministry of Defence, on behalf of 6 x Cantonment Boards Subject of Procurement: Engineering, Procurement, Construction, Installation, Testing, Commissioning and successful completion of On-grid/Hybrid Solar PV Systems at 6 x Cantonment Boards Completion Period: As specified in the Work Schedule. Commencement: Within Seven (07) days of issuance of Letter of Acceptance and signing of Contract. Procurement Method: National Competitive Bidding (NCB) under PPRA Rules (Single Stage Two Envelope bidding method)
2	2.1	Financial Year: FY 2026–27. Project Name: Solarization of 6 x Cantonment Boards. Source of Funds: Relevant Cantonment Boards
3	3.1	Maximum number of members in a Joint Venture (JV)/Consortium shall be two (02).
5	8.1 & 8.5	Requests for clarification shall be submitted through EPADS. Pre-Bid Meeting will be held in HQ ML&C, Rawalpindi on ____ September 2026 at 1100 hrs.
6	10.1	The language of the Bid and all correspondence shall be English.
7	11.1(i)	The bidders shall submit all documents required including PEC Registration, AEDB certification, EPADS Registration, FBR ATL status, Affidavit, Technical Proposal, Financial Proposal, Manufacturer's Authorizations (where applicable), Brochures, Data Sheets and other supporting documents.
9	15.5	Price Adjustment shall not apply.
11	16.1	The currency of the Bid shall be Pakistani Rupees (PKR).
12	18.1	The Bid Validity Period shall be 180 days from the date of bid opening. Completion Time of the project 90 Days
13	19.1	Bid Security shall be 5% of the Estimated cost.
14	19.3	Bid Security shall be in the form of a Call Deposit Receipt (CDR) issued by a Scheduled Bank in favour of Director CIMLA Lahore.

18	22.1	One (01) electronic copy shall be submitted through PPRA EPADS. The original Bid Security shall be submitted in hard copy before the bid submission deadline.
19	22.2	Authorization to sign the Bid shall consist of a valid Power of Attorney, as applicable.
20	23.2(a)	Original Bid Security shall be delivered to: Headquarters Military Lands & Cantonments , Murree Road, Saddar, Rawalpindi.
22	24.1	Deadline for Bid Submission on _____ September 2026 at 1100 hours
23	27.1	Technical Bids shall be opened electronically through PPRA EPADS on _____ September 2026 at 1130 hours The address of Procuring Agency is Headquarters Military Lands & Cantonments , Saddar, Rawalpindi, Pakistan.
26	34	Evaluation Method: Most Advantageous Bid – Quality and Cost based selection method under Single Stage – Two Envelope Procedure in accordance with Rule 36(b) of the PPRA Rules, 2004 (as amended). Technical proposals shall be evaluated first. Only bidders obtaining the minimum qualifying score specified in the Evaluation Criteria shall qualify for financial evaluation. The Contract shall be awarded to the bidder determined as the Most Advantageous Bid on the basis of the cumulative technical and financial bid evaluation in the quality cum cost based selection method to determine the highest ranked most advantageous bid.
31	48	Performance Security shall be 10% of the Accepted Contract Price.
32	48	Performance Security shall be in the form of a) bank guarantee from any Scheduled Bank in Pakistan or (b) an insurance company having at least AA rating from PACRA/JCR
33	53.6	Appeals shall be submitted to: Grievance Redressal Committee, Headquarters Military Lands & Cantonments, Murree Road, Saddar, Rawalpindi. • Additional DG, ML&C - Convener • Director (Finance & Planning) • Director Headquarter • Director Legal

		• Director Cantt Admin
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Section IV – Eligible Countries

Participation in this bidding process shall be limited to firms incorporated or registered in the **Islamic Republic of Pakistan** and duly registered with the **Pakistan Engineering Council (PEC)** as mentioned in ITB.3. Joint Ventures (JVs) between eligible Pakistani firms are permitted, provided that all constituent members are registered with the Pakistan Engineering Council (PEC) and comply with the eligibility and qualification requirements specified in this Bidding Document. The Joint Venture shall submit a valid Joint Venture Agreement or Letter of Intent to form a Joint Venture, clearly identifying the Lead Partner, who shall be authorized to act on behalf of all members during the bidding process and execution of the Contract.

Section V – Evaluation Criteria

Only bidders meeting the following minimum qualification requirements shall be considered for detailed technical evaluation. Non-compliance with any mandatory requirement shall result in rejection of the bid without further evaluation.

The Bidder shall:

- a. Verified Proof of at least five (5) years of experience of successfully completion of solar system (Hybrid Projects) above 200KW (at least 5 projects)
- b. Registration with Pakistan Engineering Council at least in C3 category is mandatory.
- c. Certification from AEDB
- d. Be registered with the Federal Board of Revenue (FBR) and appear on the Active Taxpayers List (ATL).
- e. Be registered as a Vendor on the PPRA e-PADS.
- f. Bid Security
- g. Not be blacklisted, suspended, or debarred by any Government, Semi-Government, Autonomous, or Regulatory Authority

Ser	Requirement	Status
a.	Verified Proof of at least five (5) years of experience of successfully completion of solar system (Hybrid Projects) above 200KW	Pass/Fail
b.	PEC Registration	Pass/Fail
c.	AEDB Certification	Pass/Fail
d.	Registration of Federal Board of Revenue (FBR) and Active Taxpayers List (ATL).	Pass/Fail
e.	EPADS Registration	Pass/Fail
f.	Bid Security	Pass/Fail
g.	Affidavit	Pass/Fail
h.	Complete Technical Proposal	Pass/Fail

The bidders must secure total minimum score of **70 marks out of 100** and at least 50% marks in each category to qualify in the Technical Evaluation. The Financial Proposals (Envelope-II) of only those technically qualified bidders shall be opened and evaluated.

5.1 Evaluation Criteria

5.1.1 Relevant Experience and Past Performance (25 Marks)

Marks for working experience and past performance of firm for “Hybrid Projects” shall be awarded on basis of following criteria:

Ser	Sub-Criteria	Max Marks	Remarks
a.	Successful completion of similar nature projects (Hybrid projects) in last five years: 10 marks for 5 or more projects 2 marks for 1 project	10	No marks if performance certificate of respective projects is not attached.
b.	In hand projects of similar nature (Hybrid projects): 5 marks for 2 or more projects 2.5 marks for 1 project	5	No marks if acceptance letter / Award letter of respective project is not attached.
c.	Financial outlay of projects at Sr. No. (i) (at least two projects having cost more than Rs. 150 M): 5 marks for cost more than Rs. 150M - No mark for cost less than Rs. 150M	5	No marks if Taking Over Certificate from concerned authority is not attached
d.	Satisfactory report from executing agency/organization for works already performed and listed at Sr. No. (i) above: 2 marks for each project performed as "good" and 1 mark for each project performed as "satisfactory (upto a max. of 5 marks)	5	No marks if Taking Over Certificate from concerned authority is not attached
Total Marks		25	

5.1.2 Capabilities with respect to Personnel, Equipment, and Plant (20 Marks)

5.1.2.1 Personnel Capabilities (12 Marks)

Credit Marks for Personnel Capabilities of the firm shall be awarded on the basis of the following criteria:

Ser	Position / Qualification	Req. No	Minimum Experience	Marks	Remarks
a.	Project Manager BSc /MSc Electrical	01	MSc – 10 Years BSc - 15 Years	3	- All Engineers must be registered with PEC. - Bidder must provide educational certificates, PEC Reg, certificates & pay slips at last six months.
b.	Design Engineer	01	07 Years	3	
c.	Electrical / Site Engineer	02	05 Years	2	
d.	Solar Installation Supervisor/ Foreman	02	05 Years	2	
e.	Electricians/ Technicians	04	03 Years	2	
Total Marks of Personnel Capabilities				12	

5.1.2.2 Equipment and Plants (8 Marks)

Credit Marks for Tools and Plants Capabilities of the firm shall be awarded on the basis of the following criteria:

Ser	Equipment and Plants	Minimum Requirement	Marks	Remarks
a.	Installation Tools	Complete set of insulated electrician tools, hydraulic cable crimping tools, cable cutters, MC4 crimping tools, torque wrenches and hand tools	4	Documentary evidence required.
b.	Testing & Commissioning Equipment	Digital Multimeter, Clamp Meter, Insulation Resistance Tester (Megger), Tester and Infrared	4	Calibration certificates (where

		Thermal Camera Earth Resistance Tester and Phase Sequence Meter		applicable) shall be submitted. Documentary evidence required.
	Total Marks		8	

5.1.3 Financial Capability (25 Marks)

Credit Marks for financial position of the firm shall be awarded on the basis of the following criteria.

Ser	Description	Max Marks	Remarks
a.	Average Working Capital a. Full Marks if the average working capital during the last three (03) financial years is more than Rs. 150 Million. b. For the average working capital more than Rs. 75 Million but less than Rs. 150 Million, use the following weightage: Marks = 6 + (A/150) × 6.5 A = Average Working Capital during the last three (03) financial years.	13	Audited Financial Statements for the last three (03) financial years shall be submitted. No marks shall be awarded if the required documentary evidence is not provided.
b.	Bid Capacity a. Full Marks if the Net Bid Capacity is more than Rs. 150 Million.	12	Net Bid Capacity = Available Capital – 20% of the cost of all balance works in hand.

	b. For Net Bid Capacity more than Rs. 75 Million but less than Rs. 150 Million, use the following weightage: Marks = 6 + (A/150) × 6.5 A = Bid Capacity		Available Capital = Average Working Capital of the last three (03) years.
	Total Marks of Financial Position	25	

5.1.4 Managerial Capability (10 Marks)

Credit Marks for Managerial Capability of the firm shall be awarded on the basis of the following criteria:

Ser	Description	Requirement	Marks	Remarks
a.	Organization Structure	Organization chart showing key management personnel and reporting hierarchy for execution of the project.	2	Organization chart shall be submitted.
b.	Project Execution & Monitoring Plan	Submission of project execution methodology including work schedule, resource allocation, implementation strategy, and monitoring mechanism (Gantt Chart/MS Project or equivalent).	3	Documentary evidence shall be provided.
c.	Net Billing / Utility Coordination Experience	Documentary evidence of successful coordination with DISCOs/NEPRA for Net Metering/Net Billing approvals, including submission of approval letters, commissioning certificates, or completion certificates for similar projects (Hybrid Projects).	5	Documentary evidence shall be submitted.
Total Marks of Managerial Capability			10	

5.1.5 Engineering Design & Methodology (20 Marks)

Credit Marks for Engineering Design & Methodology of the firm shall be awarded on the basis of the following criteria:

Ser	Description	Requirement	Marks	Remarks
a.	System Design & Load Analysis	Adequacy of load assessment, PV array sizing, inverter sizing, battery sizing (where applicable), cable sizing, voltage drop analysis and annual energy yield calculations.	7	Documentary evidence shall be submitted.
b.	Simulation & Design Software	Submission of simulation results generated through PVsyst, Helioscope, ETAP, DlgSILENT, Homer Pro or equivalent software demonstrating system performance, annual energy generation, Performance Ratio (PR), system losses and payback calculation based on Net billing	7	Documentary evidence shall be submitted.
c.	Electrical Design & Protection Philosophy	Single Line Diagram (SLD), DC/AC protection coordination, ACDB/DCDB design, earthing calculations, lightning protection system, surge protection devices and compliance with IEC/IEEE/NEC standards.	6	Documentary evidence shall be submitted.
Total Marks			20	
Total Technical Marks			100	

5.2 Cumulative Evaluation Formula for Most Advantageous Bid

Description	Requirement
Minimum Qualifying Technical Score (TS)	The bidders must secure total minimum score of 70 marks out of 100 and at least 50% marks in each category to qualify for opening of financial bid.
Financial Evaluation	Only the Financial Proposals of technically qualified bidders shall be opened and evaluated.
	Bid prices shall be quoted in Pakistani Rupees (PKR) and shall be inclusive of all applicable taxes, duties, levies, transportation, installation, testing, commissioning, and all other costs necessary for completion of the Works.
Evaluation Method	The Contract shall be awarded on the basis of the Most Advantageous Bid (Quality and Cost Based Selection method) by applying a weighted combination of Technical and Financial Scores.
Technical Weightage	70%
Financial Weightage	30%

The Financial Score (FS) shall be calculated as:

$$\text{“FS} = (\text{Lowest evaluated bid price} / \text{Bidder's evaluated bid price}) \times 100\text{”}$$

The Combined Score (CS) shall be calculated as:

$$\text{“CS} = (\text{Technical Score} \times \text{Technical Weightage}) + (\text{Financial Score} \times \text{Financial Weightage})\text{”}$$

Section VI - Works Requirements, Technical Specifications and Other Information

1. Detailed Specifications and Scope Of Work

The Contractor shall carry out all activities necessary for the complete design, supply, installation, testing, commissioning, and successful operation of the Solar PV Systems of respective Cantonment Boards. The scope of work shall include, but shall not be limited to, the following:

A. Site Survey, Assessment & Data Collection

The Contractor shall conduct a comprehensive site survey of respective Cantonment Boards prior to commencement of design and installation works. The survey shall include, but not be limited to, the following:

- Physical inspection and assessment of project site.
- Assessment of connected load, demand profile, transformer capacity, daily energy consumption, future load requirements and existing distribution system.
- Assessment of operating hours, pumping schedule, for tubewell installations (where applicable).
- Identification of suitable locations for installation of Solar PV arrays, inverters, batteries, and associated equipment.
- Evaluation of rooftop, ground-mounted, or elevated mounting options, including structural suitability and shading analysis.
- Assessment of available installation area, orientation, tilt angle, accessibility, and maintenance requirements.
- Treatment of rooftop, waterproofing
- Identification of existing underground and overhead utilities that may affect installation.
- Assessment of interconnection point and feasibility for Net Billing in accordance with NEPRA and the concerned DISCO requirements.
- Identification of any deficiencies in the existing electrical infrastructure requiring modification or upgradation, including transformers, switchgear, distribution boards, protection systems, cables, and metering arrangements.
- Collection of all technical data required for detailed engineering design, energy simulation, and preparation of construction drawings.

B. Load Detail & System Design Engineering

The PV systems have been proposed based on the existing electrical loads, operational requirements, site conditions, and energy consumption patterns of the respective Cantonment Boards. The Contractor shall verify the load requirements, conduct a detailed site survey as mentioned above, and validate the proposed system configuration before commencing the detailed engineering design. Any modifications required to ensure optimum system performance, safety, reliability, and compliance with the technical specifications shall be incorporated by the Contractor, subject to the approval of the Employer.

The contractor shall be fully responsible for design and shall submit it for approval from competent authority. No installation shall commence without written approval of designs.

- Solar PV system sizing based on:
 - Connected load
 - Energy demand
 - Seasonal variations
- Electrical design including:
 - Single Line Diagrams (SLDs)
 - Protection and control schemes
- Structural design calculations for mounting systems
- Earthing and lightning protection layouts

C. Supply of Equipment

- i. **Solar PV Modules (Bi Facial Panels)**
 - Tier-1 manufacturers only
 - IEC 61215 & 61730 certified
 - PID resistant
 - Minimum efficiency: **21%**
 - Performance warranty: 25 years
- ii. **Inverters**
 - Hybrid inverters supporting minimum of 6 hours of backup
 - Minimum efficiency: 97%
 - Power factor ≥ 0.99
 - THD $\leq 3\%$

- Anti-islanding protection
- Minimum 10-Year Manufacturer's Warranty

iii. **Battery Energy Storage System**

- Lithium (LiFePO₄) Technology
- Sodium-ion Batteries as an option in addition to Lithium-ion Batteries
- Minimum Storage 6 Hours
- Round-Trip Efficiency $\geq 95\%$
- Cycle Life $\geq 6,000$ Cycles at 80% DoD
- Usable Depth of Discharge (DoD) $\geq 80\%$
- Integrated Battery Management System (BMS)
- Minimum 10-Year Manufacturer's Warranty

iv. **Mounting Structures**

- Hot-dip galvanized steel frame structure to be approved by procuring agency's Structural Engineer.
- Designed for wind speeds ≥ 160 km/h
- Suitable for long-term outdoor exposure

D. Electrical & Protection Works

- Protection equipment:
- DC/AC isolators
- Surge Protection Devices
- Circuit breakers
- Earthing resistance: ≤ 3 ohms

E. Testing, Commissioning & Performance Validation

- Insulation resistance testing
- Synchronization tests
- Full-load operational testing
- Performance Ratio (PR) $\geq 75\%$
- Continuous 72-hour trial run

F. After Sales Service

After-Sales Services & Maintenance to ensure solar system continues to operate at peak efficiency for years to come. Consistent maintenance is the key to maximizing energy output, system life, and return on investment. Availability of Expert Technicians to monitor, inspect, and maintain solar system ensuring smooth operation, quick troubleshooting, and complete peace of mind.

SECTION VII - Tender Notice and Estimated Cost

Notice Inviting E-Bidding Single Stage Two Envelop **Through E-Pads**

The Military Lands & Cantonment Department (Ministry of Defence), being the procuring entity on behalf of 6 x Cantonment Boards, invites sealed Technical and Financial Bids from eligible contractors/firms for following works under **Single Stage – Two Envelope bidding procedure** in accordance with Rule 36(b) of the Public Procurement Regulatory Authority (PPRA) Rules, 2004 (as amended), using the PPRA e-Pak Acquisition and Disposal System (EPADS) on the basis of “**most advantageous bid – Quality and cost based selection method**” as per PPRA Rules 2004. Bids shall be quoted on the basis of percentage above / below / at par with MES Schedule of Rates 2025 for “Schedule Items” and market rates for “Non-Schedule Items” as per BOQ/ estimated cost. Bids are invited from contractors/firms having valid registration with the Pakistan PEC Registration (minimum Category C-3) with relevant Solar Specialization Code EE-11 (i, ii, iii & vi), valid certificate from Alternative Energy Development Board (AEDB), Active PPRA EPADS registration, and Active FBR Active Taxpayer List (ATL) for the following works to be executed during the Financial Year 2026–27:

Ser	Name of CB	System Size (KW)	Hybrid Inverters	BESS	Estimated Cost (in Million)		
					Sch Items	Non-Sch Items	Total
1	Rawalpindi	80	80 kW	80 KWh	22.19 (11% Above)	6.81	29.00
2	Peshawar	160	160 kW	60 KWh	35.5 (10% Above)	4.5	40.00
3	Karachi	100	100 kW	40 KWh	16.00 (10% Above)	2.00	18.00
4	Chaklala	120	100 kW	30 kWh	14.04 (At Par)	5.96	20.00
5	Lahore	100	100 kW	-	15.0 (15% Above)	1.50	16.50
6	Multan	80	80 kW	40 KWh	14.4 (10% Above)	1.80	16.20
Total		640	620 KW	250 KWh	117.13	22.57	139.70

TERMS & CONDITIONS

1. E-Bidding documents, containing detailed terms & conditions, specifications and requirements etc. are available on **e-Pak Acquisition and Disposal System (EPADS)** for all the interested bidders registered on **EPADS v2.0**. Bidders are required to get themselves registered on **EPADS v2.0** to participate in Bidding process.
2. Only bidders registered as active vendors on **PPRA e-PADS 2.0** shall be eligible to participate. Bids shall be prepared, digitally signed (where applicable), and submitted electronically through <https://eprocure.gov.pk> in accordance with Rule 36(b) of the PPRA Rules, 2004.
3. The procurement shall follow the **Single Stage – Two Envelope (most advantageous bid – Quality and cost based selection method)**. The Technical and Financial Proposals shall be submitted separately through e-PADS. Initially, only the Technical Proposals shall be opened and evaluated. Financial Proposals of only technically qualified bidders shall be opened on a date and time to be communicated through e-PADS.
4. Bid Security shall be **5% of the estimated cost**, in the form of a **Call Deposit Receipt (CDR)** issued by a scheduled bank in favour of **Director CIMLA Lahore**. A scanned copy shall be uploaded with the electronic bid, while the original CDR shall be submitted to the Procuring Agency **before the bid opening**.
5. Bidders shall submit an Affidavit on Judicial Stamp Paper affirming that:
 - the firm has not been blacklisted by any Government, Semi-Government, Autonomous or Local Body;
 - the firm is not involved in any litigation that may adversely affect its performance under the Contract; and
 - all information furnished in the bid is true, complete, and verifiable.
6. All documents comprising the bid shall be duly signed, stamped, and uploaded in PDF format through e-PADS.
7. Bids shall be submitted electronically **on or before _____ September 2026 at 1100 hrs**. Technical Proposals shall be opened electronically through e-PADS on the same day at 1130 hours in the presence of bidders or their authorized representatives who wish to attend.
8. All quoted prices shall be inclusive of all applicable Federal and Provincial taxes, duties, levies, transportation, insurance, installation, testing, commissioning, Net

Billing facilitation, and all incidental costs required for complete execution of the Works.

9. The successful bidder shall execute the Contract Agreement and furnish the prescribed Performance Security within the period specified in the Letter of Acceptance. All terms and conditions contained in the Bidding Documents shall form an integral part of the Contract.
10. Firms that have been blacklisted by any Government Department, Autonomous Body, or Public Sector Organization, or are found to have submitted false information or engaged in corrupt, fraudulent, collusive, or coercive practices, shall be declared non-responsive and dealt with in accordance with the PPRA Rules.
11. A Pre-bid meeting will be held on _____ **September 2026** at 1100 hours in the office of the **Headquarters Military Lands & Cantonments, Murree Road, Saddar, Rawalpindi**, for any clarification on tender documents for interested bidders.
12. If the bid opening date is declared a public holiday or the office remains closed due to unforeseen circumstances, the bids shall be opened on the next working day at the same time and venue.
13. Any attempt to influence the bid evaluation process or submission of false, misleading, or forged documents shall result in disqualification and may lead to legal proceedings under the applicable laws.
14. Further information, technical details, and site-related clarifications may be obtained from **Headquarters Military Lands & Cantonments, Murree Road, Saddar, Rawalpindi** or the respective Cantonment Board during office hours.
15. Successful bidder shall be bound to execute an agreement with the procuring entity and all terms and conditions including tender notice shall be binding on the bidder.
16. As per PPRA Rule 33, the procuring agency may reject all bids or proposals at any time prior to the acceptance of a bid or proposal. The procuring agency shall upon request communicate to any supplier or contractor who submitted a bid or proposal, the grounds for its rejection of all bids or proposals, but is not required to justify those grounds.

Section VIII – Bill of Quantity (BOQ)

1. The BOQ for each Cantonment Board has been prepared by the respective design consultant based on site-specific requirements and system configurations. Accordingly, the format, nomenclature, equipment ratings, quantities, and item descriptions may vary from one BOQ to another.
2. The BOQs shall be read in conjunction with the Technical Specifications, Scope of Work, Employer's Requirements, and all other provisions of the Bidding Documents.
3. Bidders are strongly advised to visit the respective project sites and satisfy themselves regarding site conditions, available installation area, existing electrical infrastructure, cable routing, structural constraints, accessibility, and all other factors that may affect the execution of the Works.
4. Submission of a Bid shall be deemed to constitute confirmation that the Bidder has examined the site conditions, reviewed the Bidding Documents, and included all costs necessary for the complete execution, testing, commissioning, Net Billing/Grid Interconnection, and successful operation of the Solar PV System.
5. The quantities indicated in the BOQs are based on the respective consultant's design and are intended for bid evaluation. The successful Contractor shall verify all quantities during detailed engineering and shall provide all additional materials, accessories, fittings, consumables, and Balance of System (BOS) items required for a complete and fully functional installation, whether specifically listed in the BOQ or otherwise required by the Technical Specifications, without any additional cost to the Employer.
6. In the event of any discrepancy between the BOQ, Technical Specifications, Drawings, and Scope of Work, the more stringent technical requirement shall prevail. Any ambiguity shall be referred to the Employer for clarification before submission of the Bid.
7. The quoted rates shall be deemed to include all costs associated with design verification, supply, transportation, loading/unloading, storage, installation, testing, commissioning, synchronization, Net Billing/Grid Interconnection, taxes, duties, insurance, labour, tools, equipment, training, documentation, warranties, and all incidental works necessary for successful completion of the Project
8. The proposed system capacities, site conditions, installation methodology, Battery Energy Storage System (BESS) requirements, civil works, and Balance of System (BOS) components vary from one Cantonment Board to another.

9. The BOQs of individual Cantonment Boards are provided solely to identify the scope and quantities of work for each site. Bidders shall carefully review all BOQs and shall be responsible for pricing each item based on the respective project requirements.
10. Bidders shall submit a single consolidated (cumulative) Financial Proposal covering all Cantonment Boards included in the procurement. Separate bids, partial bids, or site-wise financial proposals shall not be accepted and shall be treated as non-responsive.

Ser	ITEM(s)	MES Sch Rate Item / Market Rate Item	Unit	Unit Rate	CB Rawalpindi (Hybrid) (Ofc Building)	CB Peshawar (Hybrid) (Ofc Building)	CB Karachi (Hybrid) (Ofc Building)	CB Chaklala (Hybrid) (Ofc Building)	CB Lahore (On Grid) (Tube well)	CB Multan (Hybrid) (Ofc Building)
1	Hybrid Inverter	27-406	KW	43	80 KW	160 KW	100 Kw	100 KW	100 KW	80 KW
2	PV Solar Module	27-404	KW	43	80 KW	160 KW	100 KW	120 KW	100 KW	80 KW
3	PV Mount Structure	27-409	KW	18	80 KW	160 KW	100 KW	120 KW	100 KW	80 KW
4	Lithium-Ion Battery	27-407	KWh	66	80 KWH	60 KWh	40 KWh	30 KWh		40 KWh
5	AC Breaker	24-393	No.	48824	4	6	2	2	2	2
		24-397	No.	422906	-	-	-	-	-	-
		24-393	No.	48824	4	6	2	1	1	2
6	DC Wire with PV	27-410	Mtr	440	3,000	7000	1450	3000	3338	1200
7	AC Wire	25-231 to 25-242	Mtr & mm Sq	As per Rating	190 m @ 95mm 135m @16mm	400 m @ 95 mm 210 m @ 16mm	150 m @ 16mm/25mm	50m @ 150mm 50 m @ 70mm, 30m @ 18mm (HT) 50m @ 16mm (LT)	100m @ 70mm	90m @ 16mm
8	Cable Tray	25-977	Mtr	1633	1200	300	250	950	800	650
9	Genset Controller / Synch Panel	M-R	No.		1	1	1	1	0	1
10	0.4kV LV Panel	M-R	No.		4	4	2	1	1	1
11	DC Distribution Box	M-R	No.		4	4	2	2	1	1
12	Earthing	M-R	Job		Job	Job	Job	Job	Job	Job
13	Battery Instl System	M-R	No.		1	1	1	1	-	1
14	Complete Conduit	M-R	Job		Job	Job	Job	Job	Job	Job
15	Net billing Services	M-R	Job		Job	Job	Job	Job	Job	Job
16	Change Over Switch	M-R	No.		1	1	-	-	1	-

1 Rawalpindi Cantonment Board Office - Bill of Quantities (BOQ)

BOQ FOR SOLARIZATION OF RWP CANTONMENT BOARD OFFICE (Phase -1) 80 kW (Hybrid)							
Ser	ITEM(s)	Description	UOM	QTY	Unit Price (PKR)	TOTAL PRICE (PKR)	Remarks
1	Hybrid Inverter	3 phase Hybrid 80 kW Sineng Inverter with Remotely Monitoring Devices	kW	80	43,000	3,440,000	27-406
2	PV Solar Module	Tier 1 Manufacturer according to bloomberg latest issued rankings with IEC 61215 Compliance and not less than 600 W N-Type Half Cut PV module	kW	80	43,000	3,440,000	27-404
3	PV Mount Structure for ROOFTOP	Roof Top Galvanized Elevated Structure	kW	80	18,000	1,440,000	27-409
4	Lithium-Ion Battery	Lithium-ion Battery for critical load installed with Hybrid system	kW.	80	66,000	5,280,000	27-407
5	Geset Controller	Genset Controller for Hybrid Inverter	Job	1	1,350,000	1,350,000	M-R
6	0.4kV LV Panel	IP65 galvanized iron AC combiner Cabinet, 1 IN 1 Out The size of cabinet : H*L*D ft (4*2.5*2.5)/ DB as per layout Gauge : 16 AWG, Color : RAL 6021 Mounting type = ground mounted Details of breakers and SPD to be in housed in cabinet, Others specs:RYB Indicator, Digital Ammeter and Voltmeter =Yes, AC grounding bus bar =Yes(length =1 ft, to be placed at the left bottom of the DB),DC grounding Bus bar=Yes	Nos.	4	182,540	730,160	M-R
7	DC Distribution Box	IP54 GI DB for each inverter for placing DC strings Wall mount, single door with lock and with complete fitting scheme/ railing for DC breakers	Nos.	4	55,480	221,920	M-R

8	AC Breaker	AC Breakers 160A	Nos.	4	48,824	195,296	24-393
9	AC Breaker	AC Breakers 250A	Nos.	4	48,824	195,296	24-393
10	DC Breakers, fuses with safety equipment	DC Breakers with Fuses and all other safety equipment	Job	2	85,500	171,000	M-R
11	DC Wire with PV	06 mm Sq. DC flexible wire 1500V DC Copper conductor, Cu XLPO/XLPEO	Mtr.	3,000	440	1,320,000	27-410
12	AC Wire	AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 95 mm Sq. AC stranded	Mtr.	190	16,428	3,121,320	25-236
		AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 16 mm Sq. AC stranded	Mtr.	135	3,170	427,950	25-242
13	Earthing Pit	Earthing of Solar System	Nos.	3	19,813	59,439	M-R
14	Cable Tray	16 AWG Galvanized iron with flat cover, perforated, size (W*D)inch 4*2 for laying string wires	Mtr	800	1,633	1,306,400	25-977
15	Battery Instl System	DB's for Energy Source and Load for Back equipment, Racks for BESS, completed with all aspects	Nos.	2	600,000	1,200,000	M-R
16	Net billing Services	Net Billing Services complete in all aspects along with bidirectional meters and NEPRA license	Job.	1	1,000,000	1,000,000	M-R
19	Instl, Commissioning, Transportation & Labor Charges	Complete project installation and commissioning till handover of the project to client	Job.	1	700,000	700,000	M-R
22	Total (Rs)					20,166,262	
23	11% above MES Schedule 2025 (Rs)					2,026,014	
24	Non Schedule Item (Rs)					6,752,519	
Grand Total (Rs)						28,944,795	
Grand Total (Say)						29 M	

2 Peshawar Cantonment Board Office - Bill of Quantities (BOQ)

Ser	ITEM(s)	Description	UOM	QTY	Unit Price (PKR)	TOTAL PRICE (PKR)	Remarks
1	Hybrid Inverter	3 phase Hybrid Sineng Inverter with Remotely Monitoring Devices	kW	160	43,000	6,880,000	27-406
2	PV Solar Module	Tier 1 Manufacturer according to bloomberg latest issued rankings with IEC 61215 Compliance and not less than 600 W N-Type Half Cut PV module	kW	160	43,000	6,880,000	27-404
3	PV Mount Structure for ROOFTOP	Roof Top Galvanized Elevated Structure	kW	160	18,000	2,880,000	27-409
4	Lithium-Ion Battery	Lithium-ion Battery for critical load installed with Hybrid system	kW.	60	66,000	3,960,000	27-407
5	Geset Gateway / Synch Controller	Supply & fixing of Geset Gateway / Synch Controller, completed with all aspects	Job	1	700,000	700,000	M-R
6	0.4kV LV Panel	IP65 galvanized iron AC combiner Cabinet, 1 IN 1 Out The size of cabinet : H*L*D ft (4*2.5*2.5)/ DB as per layout Gauge : 16 AWG, Color : RAL 6021 Mounting type = ground mounted Details of breakers and SPD to be in housed in cabinet, Others specs:RYB Indicator, Digital Ammeter and Voltmeter =Yes, AC grounding bus bar =Yes(length =1 ft, to be placed at the left bottom of the DB),DC grounding Bus bar=Yes	Nos.	4	320,000	1,280,000	M-R
7	DC Distribution Box	IP54 GI DB for each inverter for placing DC strings Wall mount, single door with lock and with complete fitting scheme/ railing for DC breakers	Nos.	4	85,000	340,000	M-R
8	AC Breaker	AC Breakers 160A	Nos.	6	48,824	292,944	24-393
		AC Breakers 250A	Nos.	6	48,824	292,944	24-393
11	DC Wire with PV	06 mm Sq. DC flexible wire 1500V DC Copper conductor, Cu XLPO/XLPEO	Mtr.	7,000	440	3,080,000	27-410
12	AC Wire	AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 95 mm Sq. AC stranded	Mtr.	400	16,428	6,571,200	25-236

		AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 16 mm Sq. AC stranded	Mtr	210	3,046	639,660	25-257	
13	Earthing	Complete earthing of Solar System including lighting arresters with 15mm dia copper, 150 cm long with copper base, 75mm x 40 mm x 30 mm, fixed complete with brass, bolts, supply and fixing	Nos.	3	98,000	294,000	M-R	
14	Cable Tray	16 AWG Galvanized iron with flat cover, perforated, size (W*D)inch 4*2 for laying string wires	Mtr	300	2,900	870,000	25-977	
15	Battery Instl System	DB's for Energy Source and Load for Back equipment, Racks for BESS, completed with all aspects	Nos.	1	300,000	300,000	M-R	
16	Net billing Services	Net Billing Services complete in all aspects along with bidirectional meters and NEPRA license	Job.	1	1,000,000	1,000,000	M-R	
17	Complete Conduit	S/F of UPVC pipe including band, sockets and clips as per site req.	Job	1	550,000	550,000		
18	Change Over	Change Over (300A)	Job	2		0	M-R	
22	Total (Rs)						32,346,748	
23	10% above MES Schedule 2025 (Rs)						3,148,980	
24	Non Schedule Item (Rs)						4,464,000	
Grand Total (Rs)						39,959,728		
Grand Total (Say)						40 M		

3 Karachi Cantonment Board Office - - Bill of Quantities (BOQ)

Ser	ITEM(s)	Description	UOM	QTY	Unit Price (PKR)	TOTAL PRICE (PKR)	Remarks
1	Hybrid Inverter	3 phase Hybrid Sineng Inverter with Remotely Monitoring Devices	kW	100	43,000	4,300,000	27-406
2	PV Solar Module	Tier 1 Manufacturer according to bloomberg latest issued rankings with IEC 61215 Compliance and not less than 600 W N-Type Half Cut PV module	kW	100	43,000	4,300,000	27-404
3	PV Mount Structure for ROOFTOP	Roof Top Galvanized Elevated Structure	kW	100	18,000	1,800,000	27-409
4	Lithium-Ion Battery	Lithium-ion Battery for critical load installed with Hybrid system	kW.	40	66,000	2,640,000	27-407
5	Geset Gateway / Synch Controller	Supply & fixing of Geset Gateway / Synch Controller, completed with all aspects	Job	1	250,000	250,000	M-R
6	0.4kV LV Panel	IP65 galvanized iron AC combiner Cabinet, 1 IN 1 Out The size of cabinet : H*L*D ft (4*2.5*2.5)/ DB as per layout Gauge : 16 AWG, Color : RAL 6021 Mounting type = ground mounted Details of breakers and SPD to be in housed in cabinet, Others specs:RYB Indicator, Digital Ammeter and Voltmeter =Yes, AC grounding bus bar =Yes(length =1 ft, to be placed at the left bottom of the DB),DC grounding Bus bar=Yes	Nos.	2	182,540	365,080	M-R
7	DC Distribution Box	IP54 GI DB for each inverter for placing DC strings Wall mount, single door with lock and with complete fitting scheme/ railing for DC breakers	Nos.	2	55,480	110,960	M-R
8	AC Breaker	AC Breakers 160A	Nos.	2	48,824	97,648	24-393
		AC Breakers 250A	Nos.	2	48,824	97,648	24-393

11	DC Wire with PV	06 mm Sq. DC flexible wire 1500V DC Copper conductor, Cu XLPO/XLPEO	Mtr.	1,450	440	638,000	27-410	
12	AC Wire	AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 95 mm Sq. AC stranded	Mtr.	0	16,428	0	25-236	
		AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 16 mm Sq. AC stranded	Mtr	150	3,046	456,900	25-257	
13	Earthing	Complete earthing of Solar System including lighting arresters with 15mm dia copper, 150 cm long with copper base, 75mm x 40 mm x 30 mm, fixed complete with brass, bolts, supply and fixing	Nos.	2	98,000	196,000	M-R	
14	Cable Tray	16 AWG Galvanized iron with flat cover, perforated, size (W*D)inch 4*2 for laying string wires	Mtr	250	1,633	408,250	25-977	
15	Battery Instl System	DB's for Energy Source and Load for Back equipment, Racks for BESS, completed with all aspects	Nos.	1	200,000	200,000	M-R	
16	Net billing Services	Net Billing Services complete in all aspects along with bidirectional meters and NEPRA license	Job.	1	400,000	400,000	M-R	
17	Complete Conduit	S/F of UPVC pipe including band, sockets and clips as per site req.	Job	1	200,000	200,000		
18	Change Over	Change Over (300A)	Job	2		0	M-R	
22	Total (Rs)						14,738,446	
23	10% above MES Schedule 2025 (Rs)						1,500,790	
24	Non Schedule Item (Rs)						1,722,040	
Grand Total (Rs)						17,961,276		
Grand Total (Say)						18 M		

4 Chaklala Cantonment Board Office - Bill of Quantities (BOQ)

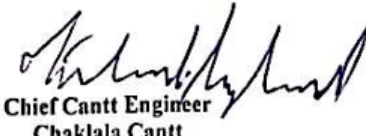
S.No	Description	No	L	B	H/D	QTY	UNIT	S.I NO	RATE	AMOUNT
1	Supply, installation, testing and commissioning of PV panel Tier-I for solar electric energy system, complete in all respect as specified									
	120x1000w	1	120000			120000	Watt	120		
					Total	120000	Watt	27-404	43	5,160,000
2	Supply, installation, testing and commissioning of Lithium Iron Phosphate Battery for solar electric energy system, complete in all respect as specified									
		1	30000			30000	Watt	30		
					Total	30000	Watt	27-407	66	1,980,000
3	String Inverter 3 phase on Grid and Hybrid Inverter Combination with Remote Monitoring Devices 150KW									
		1				1	Each			
					Total	1	Each	M-R	4,300,000	4,300,000
4	Communication Box									
		1				1	Each			
					Total	1	Each	M-R	150,000	150,000
5	Supply and Installation of GI/ Aluminium frame structure (Roof Top Elevated Structure) including concrete work for solar electric energy system, complete in all respect as specified									
		1	120000			120000	Watt	120		
					Total	120000	Watt	27-409	18	2,160,000
6	Air termination for Lightning Conductor, with 15 mm dia copper rod, 150 cm long, with gunmetal copper base, 75 mm x 40 mm x 30 mm, fixed complete, with brass bolts, supply and fixing.									
		2				2	Each			
					Total	2	Each	24-289	8,579	17,158
7	0.4kV LV Panel									
		1				1	Each			
					Total	1	Each	M-R	55,000	55,000
8	Distribution Board, steel sheet (16 BG) with hinged over, having locking arrangement, enamel painted, suitable for housing of different capacities of MCCBs etc (as required), supply and fixing									
		1				1	Each			
					Total	1	Each	24-747	86,893	86,893
9	DC Breakers									
		6				6	Each			
					Total	6	Each	M-R	10,000	60,000
10	Supply, installation, testing and commissioning of DC Cable 6mm ² double XLPO insulated and tin coated for solar electric energy system, complete in all respect as specified									
		3000				3000	Mtr			
					Total	3000	Mtr	27-410	440	1,320,000
11	Cable electric LT PVC insulated, PVC sheathed, steel wire armoured, overall PVC 600/1000 V, with stranded copper conductor, 150 mm ² , 4 core, laid in trenches, complete with bricks, sand (excluding cost of excavation), supply and fixing									
		50				50	Mtr			
					Total	50	Mtr	25-238	25,290	1,264,500

12	Cable electric HT, 11 KV stranded Copper conductor XLPE insulated, extruded PVC bedded, steel wire armoured and PVC sheathed overall Single core, 70 mm ² laid in trenches complete with bricks, sand (excluding cost of excavation) supply and fixing	50				50	Mtr			
					Total	50	Mtr	25-209	5,561	278,050
13	Cable electric HT, 11 KV stranded Copper conductor XLPE insulated, extruded PVC bedded, steel wire armoured and PVC sheathed overall Single core, 16 mm ² laid in trenches complete with bricks, sand (excluding cost of excavation) supply and fixing	30				30	Mtr			
					Total	30	Mtr	25-205	3,068	92,040
14	Wiring in conduit surface, concealed, flame proof, with single core PVC insulated cable, installed and connected complete (excluding conduit) single core cable, 6 mm ² , supply and fixing	100				100	Mtr			
					Total	100	Mtr	24-613	244	24,400
15	Wiring in conduit surface, concealed, flame proof, with single core PVC insulated cable, installed and connected complete (excluding conduit) single core cable, 16 mm ² , supply and fixing	50				50	Mtr			
					Total	50	Mtr	24-615	614	30,700
16	Stringing, straining, tensioning and binding Copper conductor, bare solid or stranded 4 SWG, supply and fixing	40				40	Mtr			
					Total	40	Mtr	25-102	717	28,680
17	Cable tray out of 16 Gauge, GI sheet, without cover, complete in jointing plates.	100				100	Mtr			
					Total	100	Mtr	25-980	5,219	521,900
18	Conduit 50 mm dia, heavy gauge Class "B" screwed complete with all bends, tees, boxes, saddles etc, stove enamelled for Concealed wiring, supply and fixing.	200				200	Mtr			
					Total	200	Mtr	24-430	2,521	504,200
19	Conduit 25 mm dia, heavy gauge Class "B" screwed complete with all bends, tees, boxes, saddles etc, stove enamelled for Concealed wiring, supply and fixing.	200				200	Mtr			
					Total	200	Mtr	24-428	1,657	331,400
20	Connectors, consisting of mould resin, padding tape, funnels and ferrules etc as specified for PVC unarmoured LT cable, Single core, 25 mm ² to 35 mm ² , supply and fixing	50				50	Each			
					Total	50	Each	25-555	3,730	186,500
21	Bi-directional Meter	1				1	Each			
					Total	1	Each	M-R	275,000	275,000
22	DC Earth, complete as described in Para 24.16 of the Specifications, with 3/0 SWG copper conductor, supply and fixing.	1				1	Each			
					Total	1	Each	24-286	24,904	24,904

23	AC Earth, complete as described in Para 24.16 of the Specifications, with 3/0 SWG copper conductor, supply and fixing									
		1				1	Each			
					Total	1	Each	24-286	24,904	24,904
24	MISC ITEMS	1				1	job			
					Total	1	job	M-R	650,000	650,000
25	Installation, Testing and Commissioning					1				
					Total	1	job	M-R	40,000	40,000
26	Net metering services					1				
					Total	1	job	M-R	320,000	320,000
27	Operation and Maintenance Services					1				
					Total	1	job	M-R	55,000	55,000
28	O&M Training					1				
					Total	1	job	M-R	60,000	60,000
								Total MES Schedule Items	14036229.00	
								Total NonSchedule Items	5965000.00	
								G.Total	20001229.00	
								Say	20.00 M	


Cantt Sub Engineer
Chaklala Cantt


Cantt Engineer
Chaklala Cantt


Chief Cantt Engineer
Chaklala Cantt


Executive Officer
Chaklala Cantonment

5 Lahore Cantonment Board Office - Bill of Quantities (BOQ)



ENGINEER'S COST ESTIMATE LAHORE CANTONMENT BOARD

Design, Solarization / Installation & Commissioning of 100 KW Solar PV System on Net Metering for Tubewell

Measurment Detial										
S/No	Description	No.	L	B	D	QTY	UNIT	S.I NO	RATE	Rs.
1	Supply, installation, testing and commissioning of PV panel Tier-I for solar electric energy system, complete in all respect as specified.									
		100000				100000	Watt			
					Total	100000	Watt	27-404.	43	4,300,000
2	Supply, installation, testing and commissioning of PV panel Tier-I for Hybrid solar electric energy system, complete in all respect as specified.									
		100000				100000	Watt			
					Total	100000	Watt	27-406.	43	4,300,000
3	Supply and Installation of GI/ Aluminium frame structure (Roof Top Elevated Structure) including concrete work for solar electric energy system, complete in all respect as specified									
		100000				100000	Watt			
					Total	100000	Watt	27-409.	18	1,800,000
4	Supply, installation, testing and commissioning of DC Cable 6mm ² double XLPO insulated and tin coated for solar electric energy system, complete in all respect as specified.									
		1	13000			13000	Rft			
					Total	13000	Rft			
			x 0.3048		or	3962	Mtr	27-410.	440	1,743,456
5	Change over switch, 300 A, TP with NL, wall mounted type, supply and fixing.									
		1				1.00	Each			
					Total	1.00	Each	24-358.	41173	41,173
6	Complete Documentation Process including DISCOM and Bi-Directional Energy meter charges. Proper Earthing Panel to Panel earthing with proper thimbles, nuts, bolts, Cable & Lighting arrester with all complete jobs.									
		100000				100000	Watt			
					Total	100000	Watt	MR	15	1,500,000
									Total	13,684,629
									Add 5% contingency for unforeseen items	684,231
									Total	14,368,860
									Add 15% Above on MES Sch of Rates 2025	2,155,329
									Grand Total	16,524,190
									Say (M)	16.500

Cantt Sub Engineer
Lahore Cantonment Board

Assistant Cantt Engineer
Lahore Cantonment Board

Senior Cantt Engineer
Lahore Cantonment Board

6 Multan Cantonment Board Office - Bill of Quantities (BOQ)

Ser	ITEM(s)	Description	UOM	QTY	Unit Price (PKR)	TOTAL PRICE (PKR)	Remarks
1	Hybrid Inverter	3 phase Hybrid Sineng Inverter with Remotely Monitoring Devices	kW	80	43,000	3,440,000	27-406
2	PV Solar Module	Tier 1 Manufacturer according to bloomberg latest issued rankings with IEC 61215 Compliance and not less than 600 W N-Type Half Cut PV module	kW	80	43,000	3,440,000	27-404
3	PV Mount Structure for ROOFTOP	Roof Top Galvanized Elevated Structure	kW	80	18,000	1,440,000	27-409
4	Lithium-Ion Battery	Lithium-ion Battery for critical load installed with Hybrid system	kW.	40	66,000	2,640,000	27-407
5	Geset Gateway / Synch Controller	Supply & fixing of Geset Gateway / Synch Controller, completed with all aspects	Job	1	250,000	250,000	M-R
6	0.4kV LV Panel	IP65 galvanized iron AC combiner Cabinet, 1 IN 1 Out The size of cabinet : H*L*D ft (4*2.5*2.5)/ DB as per layout Gauge : 16 AWG, Color : RAL 6021 Mounting type = ground mounted Details of breakers and SPD to be in housed in cabinet, Others specs:RYB Indicator, Digital Ammeter and Voltmeter =Yes, AC grounding bus bar =Yes(length =1 ft, to be placed at the left bottom of the DB),DC grounding Bus bar=Yes	Nos.	2	182,540	365,080	M-R
7	DC Distribution Box	IP54 GI DB for each inverter for placing DC strings Wall mount, single door with lock and with complete fitting scheme/ railing for DC breakers	Nos.	2	55,480	110,960	M-R
8	AC Breaker	AC Breakers 160A	Nos.	4	48,824	195,296	24-393
		AC Breakers 250A	Nos.	4	48,824	195,296	24-393
11	DC Wire with PV	06 mm Sq. DC flexible wire 1500V DC Copper conductor, Cu XLPO/XLPEO	Mtr.	300	440	132,000	27-410
12	AC Wire	AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 95 mm Sq. AC stranded	Mtr.	0	16,428	0	25-236

		AC Cable 4-C Cu, PVC/PVC 0.6/1 kV, 16 mm Sq. AC stranded	Mtr	160	3,046	487,360	25-257
13	Earthing	Complete earthing of Solar System including lighting arresters with 15mm dia copper, 150 cm long with copper base, 75mm x 40 mm x 30 mm, fixed complete with brass, bolts, supply and fixing	Nos.	3	98,000	294,000	M-R
14	Cable Tray	16 AWG Galvanized iron with flat cover, perforated, size (W*D)inch 4*2 for laying string wires	Mtr	640	1,633	1,045,120	25-977
15	Battery Instl System	DB's for Energy Source and Load for Back equipment, Racks for BESS, completed with all aspects	Nos.	1	200,000	200,000	M-R
16	Net billing Services	Net Billing Services complete in all aspects along with bidirectional meters and NEPRA license	Job.	1	400,000	400,000	M-R
17	Complete Conduit	S/F of UPVC pipe including band, sockets and clips as per site req.	Job	1	200,000	200,000	M-R
18	Change Over	Change Over (300A)	Job	1		0	M-R
22	Total (Rs)					13,015,072	
23	10% above MES Schedule 2025 (Rs)					1,363,528	
24	Non Schedule Item (Rs)					1,820,040	
Grand Total (Rs)						16,198,640	
Grand Total (Say)						16.2	

Letter of Bid

Bid Reference No. _____
[Name of Contract/ Works]

To: _____

Dear Sir

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract, Specifications, Schedules to Bid including Bill of Quantities, Drawings and Addenda Nos. _____ for the execution of the above-named Works, we, the undersigned, offer to execute and complete such Works and remedy any defects therein in conformity with the said Bidding Documents and Addenda for the sum of Equivalent PKR _____ (Eq. Pak Rupees _____) or such other sum as may be ascertained in accordance with the said conditions.
2. We meet the eligibility requirements in accordance with IB.3.
3. We, including any Subcontractors for any part of the Contract, are not debarred/ blacklisted by the Employer, any Government/Semi Government/Public Department in Pakistan or foreign country, international organizations or other foreign institutions.
4. Our subcontractors or suppliers for any part of the Contract, if any, shall have nationalities from eligible countries, in accordance with IB.4.4.
5. We understand that all the Schedules attached hereto form part of this Bid.
6. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of PKR _____ (Pak. Rupees. _____) drawn in your favour or made payable to you and valid for a period of _____ days beginning from the date Bids are opened.
7. We undertake, if our Bid is accepted, to commence the Works and to complete the whole of the Works comprised in the Contract within the time stated in Contract Data.
8. We agree to abide by this Bid for the period of _____ days, inclusive of 14 days beyond Bid validity period (as mentioned at Sr. No. 6 above) and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
9. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
10. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other Bidder for the Works.
11. We understand that you are not bound to accept the lowest or any Bid you may receive.

12. We undertake that all the information and documents submitted with the Bid are genuine, and in case of incorrect information of fake documents we shall be liable for punitive action under the Applicable Law.

Dated this _____ day of _____ 20 _____

Signature: _____

in the capacity of _____ duly authorized to sign Bids for and on behalf of

(Name of Bidder in Block Capitals)
(Seal)

Address: _____

Witness:

Signature: _____

Name: _____

Address. _____

Occupation _____

Form of Bid Security

Security Executed on _____
(Date)

Expiry on _____
(Date)

Name of Surety with Address: _____

Name of Principal (Bidder) with Address _____

Penal Sum of Security PKR _____ (Pak Rupees _____)

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal (Bidder) we, the Surety above named, are held and firmly bound unto _____
(hereinafter called the 'Employer') in the sum stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Bidder has submitted the accompanying Bid dated _____ for _____
(Particulars of Bid) to the said Employer; and

- (1) WHEREAS, the Employer has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum to the Employer, conditioned as under: that the Bid Security shall remain in force for a period fourteen (14) days beyond the Bid Validity date i.e., upto _____.
- (2) that the Bid Securities of the Bidders except the lowest three will be returned by the Employer within twenty eight (28) days from the opening of Bids, provided a Bidder request for the return of its Bid Security, or on the expiry of original validity of Bid Security or as extended, whichever is earlier;
- (3) that the Bid Security of the lowest three Bidders comprising the successful Bidder will be returned when the successful Bidder has furnished the required Performance Security; and
- (4) that in the event of failure of the successful Bidder to furnish the required Performance Security, the entire said sum be paid immediately to the said Employer pursuant to IB.16 and IB.35 of the Instructions to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefor, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Employer for the faithful performance and proper fulfilment of the said Contract or in the event of non-withdrawal of the said Bid within the time specified for its validity then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Surety shall forthwith pay the Employer the said sum upon first written demand of the Employer (without cavil or argument) and without requiring the Employer to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Employer by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the Employer shall decide, whether the Principal (Bidder) has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Surety shall pay without objection the said sum upon demand from the Employer forthwith and without any reference to the Principal (Bidder) or any other person.

IN WITNESS WHEREOF, the above bounden Surety has executed the instrument under its seal on the date indicated above, the name and seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

SURETY
(Schedule Bank/Insurance Company)

WITNESS:

Signature _____

1. _____

Name _____

Corporate Secretary (Seal)

Title _____
Corporate Guarantor (Seal)

2. _____

Name, Title & Address

Form of Performance Security

Guarantee No. _____

Executed on _____

Expiry date _____

[Letter by the Guarantor to the Employer]

Name of Guarantor with address: _____

Name of Principal (Contractor) with address: _____

Penal Sum of Security (*express in words and figures*) _____

Letter of Acceptance No. _____ Dated _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly bound unto the _____ (hereinafter called the Employer) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Employer, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Employer's above said Letter of Acceptance for _____

_____ (*Name of Contract*) for the _____
_____ (*Name of Project*).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 11, Defects After Taking Over, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, _____ (the Guarantor), waiving all objections and defense under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments

and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall decide, whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Guarantor
(Schedule Bank/ Insurance Company)

WITNESS:

Signature _____

1. _____

Name _____

Corporate Secretary (Seal)

Title _____
Corporate Guarantor (Seal)

2. _____

Name, Title & Address

INTEGRITY PACT

DECLARATION OF FEES, COMMISSION AND BROKERAGE, ETC. PAYABLE BY THE BIDDERS/CONTRACTORS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH PAK. RS. 10.00 MILLION OR MORE

Contract No. _____
Contract Value: _____
Contract Title: _____

Dated _____

..... **[Name of Bidder/Contractor]** hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, **[Name of Bidder/ Contractor]** represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[Name of Bidder/Contractor] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[Name of Bidder/Contractor] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, **[name of Bidder/Contractor]** agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Bidder/Contractor] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Employer:
Signature:
[Seal]

Name of Bidder/Contractor:
Signature:
[Seal]

**GOVERNMENT OF PAKISTAN
MINISTRY OF DEFENCE
MILITARY LANDS & CANTONMENTS DEPARTMENT**

Section IX - DEED OF WARRANTY NOVATION

**FOR TRANSFER, ASSUMPTION AND ENFORCEMENT OF LONG-TERM WARRANTY,
PERFORMANCE AND AFTER-SALES OBLIGATIONS OF SOLAR PHOTOVOLTAIC
SYSTEM**

Project: Solarization of _____ Cantonment Board

Tender No.: _____

Contract No.: _____

Date of Original Contract: _____

Contract Price: Rs. _____

Date of Commissioning: _____

Date of Taking Over: _____

THIS DEED OF WARRANTY NOVATION is made and executed at
_____ on this ____ day of _____ 2026.

BY AND BETWEEN

1. _____ **[CANTONMENT BOARD/PROCURING AGENCY]**, through its authorized representative _____, having its office at _____, hereinafter referred to as the “**Procuring Agency**”, which expression shall, where the context so permits, include its successors and permitted assigns;

AND

2. **M/s** _____, a company/firm incorporated/registered under the laws of Pakistan, having its registered office at _____, NTN _____, STRN _____, through its duly authorized representative _____, hereinafter referred to as the “**Original Contractor/EPC Contractor**”, which expression shall include its successors and permitted assigns;

AND

3. **M/s** _____, being the manufacturer/authorized distributor/authorized supplier of the Solar PV Modules/Inverters/other equipment, having its registered office at _____, through its duly authorized representative _____, hereinafter referred to as the “**New Warranty Obligor**”, which expression shall include its successors and permitted assigns. The above shall collectively be referred to as the “**Parties**” and individually as a “**Party.**”

1. RECITALS

1.1

The Procuring Agency initiated procurement for the **Solarization of** _____ **Cantonment Board** in accordance with the applicable public procurement laws, rules, regulations and approved bidding documents.

1.2

The Original Contractor submitted its bid against Tender No. _____ dated _____ and was declared the successful bidder in accordance with the prescribed procurement procedure.

1.3

The Procuring Agency and the Original Contractor entered into Contract No. _____ dated _____ for supply, installation, testing and commissioning of the Solar PV System at _____ Cantonment Board.

1.4

The Solar PV System comprises, inter alia:

- a. Solar PV modules/panels;
- b. Solar inverters;
- c. mounting structures;
- d. DC and AC cables;
- e. protection equipment;
- f. monitoring and data-logging equipment;
- g. electrical equipment;
- h. associated civil works; and
- i. other equipment specified in the Contract.

1.5

The Original Contractor is contractually responsible for ensuring the validity and enforcement of the warranties applicable to the equipment supplied under the Contract.

1.6

The Procuring Agency requires long-term protection of public assets and accordingly requires the warranty obligations relating to the Solar PV Modules/Panels and Inverters to remain directly enforceable throughout the applicable warranty periods.

1.7

The New Warranty Obligor is the manufacturer/authorized supplier/authorized representative of the relevant equipment and has agreed to assume and directly honour the warranty obligations specified in this Deed.

1.8

The Parties therefore desire to record the transfer, assumption, continuation and enforcement of the warranty obligations through this Deed.

2. PURPOSE OF THE DEED

The purpose of this Deed is to:

- a. formally record the long-term warranty obligations relating to the Solar PV System;
- b. secure a minimum **25-year warranty for Solar PV Modules/Panels**;
- c. secure a minimum **10-year warranty for Solar Inverters**;
- d. establish direct warranty obligations in favour of the Procuring Agency;
- e. provide a mechanism for repair/replacement of defective equipment;
- f. ensure continuity of warranty obligations notwithstanding completion of the project;
- g. establish performance monitoring and reporting obligations;
- h. provide remedies for failure to honour warranty obligations; and
- i. establish the contractual and regulatory consequences of established contractual breach, including proceedings under **Rule 19 of the Public Procurement Rules, 2004**, where legally applicable.

3. EFFECTIVE DATE

This Deed shall become effective from the date of its execution by all Parties, unless another effective date is specifically stated herein.

The warranty periods shall, however, be calculated from the date specified in the original Contract, commissioning certificate or warranty certificate, as applicable.

4. NOVATION AND ASSUMPTION OF WARRANTY OBLIGATIONS

4.1

The Original Contractor hereby assigns/transfers, to the extent legally permissible, and the New Warranty Obligor hereby accepts and assumes, the warranty obligations specified in this Deed.

4.2

The New Warranty Obligor irrevocably undertakes to honour the applicable warranties directly in favour of the Procuring Agency.

4.3

The New Warranty Obligor shall not require the Procuring Agency to first pursue the Original Contractor before making a valid warranty claim.

4.4

The Original Contractor shall remain responsible for all obligations which, under the original Contract, are not expressly novated or released by this Deed.

4.5

Nothing in this Deed shall prejudice or extinguish any right or remedy of the Procuring Agency which accrued before the effective date of this Deed.

4.6

This Deed shall not be construed as a waiver of any obligation of the Original Contractor under the original Contract unless such obligation is expressly stated to have been novated or discharged.

5. WARRANTY PERIODS

The minimum warranty periods shall be as follows:

Sr. No.	Component	Minimum Warranty
1	Solar PV Modules/Panels	25 Years
2	Solar Inverters	10 Years
3	Mounting Structures	As per Contract/Technical Specifications
4	DC Cables	As per Contract/Manufacturer Warranty
5	AC Cables	As per Contract/Manufacturer Warranty
6	Protection Equipment	As per Contract/Manufacturer Warranty
7	Monitoring System	As per Contract/Manufacturer Warranty
8	Workmanship/Installation	As specified in Contract

Where the manufacturer's warranty or Contractor's accepted bid provides a period longer than the above minimum, the **longer period shall apply**.

6. 25-YEAR WARRANTY FOR SOLAR PV MODULES/PANELS

6.1

The New Warranty Obligor guarantees that all Solar PV Modules/Panels supplied under the Project shall remain covered by a minimum **25-year performance warranty**.

6.2

The warranty shall cover manufacturing defects, material defects and degradation/performance issues in accordance with the approved technical specifications and manufacturer's warranty.

6.3

The guaranteed power output/degradation curve shall be recorded in **Schedule-I** of this Deed.

6.4

Where a module fails to meet the guaranteed performance level, the New Warranty Obligor shall, at its own cost:

a. inspect the module;

- b. determine the cause of failure;
- c. repair or replace the defective module; and
- d. restore the system to the guaranteed performance level.

6.5

Replacement modules shall be:

- a. new;
- b. genuine;
- c. of equal or higher capacity;
- d. technically compatible with the installed system; and
- e. covered by the applicable remaining warranty.

6.6

No additional cost shall be payable by the Procuring Agency for replacement of equipment covered by warranty.

7. 10-YEAR WARRANTY FOR SOLAR INVERTERS

7.1

The New Warranty Obligor shall provide a minimum **10-year warranty** for each inverter installed under the Project.

7.2

The inverter warranty shall cover manufacturing defects, material defects and failures arising during normal operation.

7.3

In the event of failure, the New Warranty Obligor shall:

- a. diagnose the fault;
- b. repair the inverter where technically feasible; or
- c. replace the inverter where repair is not feasible.

7.4

All costs relating to transportation, repair/replacement, installation, testing and recommissioning shall be borne by the responsible warranty obligor where the defect is covered by warranty.

7.5

The replacement inverter shall be of equal or superior technical specification and shall be compatible with the installed system.

8. WARRANTY CLAIM PROCEDURE

8.1

The Procuring Agency shall notify the Contractor/New Warranty Obligor of any suspected defect through written notice, email or the designated warranty reporting system.

8.2

The warranty notice shall, where possible, identify:

- a. equipment;
- b. serial number;
- c. date of failure;
- d. nature of defect;
- e. photographs/logs, where available; and
- f. relevant monitoring data.

8.3

The New Warranty Obligor shall acknowledge the claim within **48 hours**.

8.4

For a critical system failure, technical assistance shall commence within **24 hours** of notification.

8.5

The New Warranty Obligor shall rectify or replace defective equipment within ____ **days**, unless the nature of the defect requires a longer period and the Procuring Agency accepts the justification in writing.

9. PERFORMANCE GUARANTEE

9.1

The Contractor guarantees the performance of the Solar PV System in accordance with the approved technical specifications and accepted bid.

9.2

The guaranteed parameters shall include, where applicable:

- a. installed DC capacity;
- b. AC capacity;
- c. annual energy generation;
- d. performance ratio;
- e. system availability;
- f. inverter efficiency;
- g. module degradation; and
- h. power quality.

9.3

The guaranteed parameters shall be incorporated in **Schedule-II**.

9.4

The Procuring Agency may use monitoring data, testing, inspection or independent technical verification for determining system performance.

10. PERFORMANCE MONITORING

The Contractor/New Warranty Obligor shall provide:

- a. access to the online monitoring system;
- b. generation data;
- c. inverter performance data;
- d. fault/alarm logs;
- e. monthly performance reports where required; and
- f. annual performance reports where required.

The Procuring Agency shall retain the right to independently verify reported performance.

11. OPERATION AND MAINTENANCE

Where O&M is included in the Contract, the Contractor shall undertake:

- a. preventive maintenance;
- b. corrective maintenance;
- c. system inspection;
- d. inverter inspection;
- e. electrical connection inspection;
- f. panel cleaning where specified;
- g. monitoring;
- h. fault diagnosis;
- i. replacement of warranty-covered defective components; and
- j. maintenance reporting.

12. RESPONSE AND RECTIFICATION TIME

Category	Maximum Response	Maximum Rectification
Complete system failure	24 hours	____ days

Inverter failure	24 hours	___ days
Critical electrical fault	24 hours	___ days
Individual panel failure	48 hours	___ days
Monitoring system failure	48 hours	___ days

Repeated failure to comply with these requirements may constitute contractual non-performance.

13. SPARE PARTS AND REPLACEMENT EQUIPMENT

The Contractor/New Warranty Obligor shall maintain reasonable arrangements for availability of spare parts required to honour warranty obligations.

Where an original component is discontinued, an equivalent or technically superior component shall be provided.

14. NO SUBSTITUTION WITHOUT APPROVAL

No major component may be substituted without prior written approval of the Procuring Agency.

Any substitute equipment shall be of equal or superior technical specification and shall not reduce the applicable warranty or performance obligations.

15. EQUIPMENT TRACEABILITY

The Contractor shall provide a complete inventory containing:

Sr. No.	Component	Manufacturer	Model	Serial No.	Capacity	Warranty
1	PV Module					25 Years
2	Inverter					10 Years
3	Structure					
4	Protection Equipment					

This inventory shall be maintained throughout the warranty period.

16. WARRANTY DOCUMENTATION

The Contractor shall provide original/verified copies of:

- manufacturer warranty certificates;
- product datasheets;
- serial-number lists;
- test certificates;
- performance warranty certificates;
- inverter warranty certificates;
- commissioning certificate;
- as-built drawings;
- operation and maintenance manuals; and
- manufacturer's authorized warranty undertaking.

17. DIRECT WARRANTY UNDERTAKING BY MANUFACTURER

Where the New Warranty Obligor is the manufacturer or authorized representative, it shall execute a separate **Manufacturer's Direct Warranty Undertaking** in the form attached as **Schedule-V**.

The undertaking shall expressly identify the Procuring Agency as the beneficiary of the warranty.

18. CONTRACTOR'S CONTINUING RESPONSIBILITY

Execution of this Deed shall not, by itself, release the Original Contractor from responsibilities under the original Contract except to the extent expressly novated and accepted by the Procuring Agency.

The Original Contractor shall continue to facilitate communication, technical support and enforcement of manufacturer warranties where required.

19. INSPECTION AND TESTING

The Procuring Agency may inspect the Solar PV System at any reasonable time during the warranty period.

Where there is reasonable doubt regarding performance or equipment quality, the Procuring Agency may arrange independent testing.

Where the test establishes a defect covered by warranty or contractual non-performance attributable to the Contractor/New Warranty Obligor, the responsible party shall bear the reasonable cost of such testing.

20. RECORDS AND AUDIT

The Contractor/New Warranty Obligor shall maintain relevant warranty, maintenance, replacement and performance records.

Such records shall be made available to the Procuring Agency and competent audit authorities as required by law.

21. CONTRACTUAL DEFAULT

The following shall constitute contractual default, subject to the terms of the original Contract:

- a. failure to honour warranty obligations;
- b. failure to replace defective panels;
- c. failure to repair/replace defective inverters;
- d. persistent failure to achieve guaranteed performance;
- e. supply of counterfeit equipment;
- f. supply of materially non-conforming equipment;
- g. submission of false warranty certificates;
- h. falsification of performance data;
- i. abandonment of warranty obligations;
- j. persistent failure to respond to warranty claims;
- k. unauthorized substitution of equipment; and
- l. any other material breach of the Contract.

22. NOTICE OF DEFAULT

Where the Procuring Agency considers that a contractual default has occurred, it shall issue a written notice specifying:

- a. the alleged breach;
- b. the relevant contractual provision;
- c. facts/evidence supporting the allegation;
- d. corrective action required; and
- e. reasonable time for submission of explanation and/or rectification.

23. OPPORTUNITY TO CURE

The Contractor/New Warranty Obligor shall be afforded a reasonable opportunity to rectify a curable default, except where:

- a. the breach is incapable of cure;
- b. immediate action is necessary to protect public assets;
- c. the Contract permits immediate termination/action; or
- d. the matter involves suspected corrupt or fraudulent practice requiring action under the applicable law.

24. ARBITRATION / DISPUTE RESOLUTION

24.1

Any dispute arising out of or relating to this Deed shall initially be referred to the designated competent authority for amicable resolution.

24.2

Where the original Contract contains an arbitration clause covering the relevant breach, the Parties shall follow the contractual dispute-resolution/arbitration mechanism.

24.3

For the purposes of **Rule 19(1)(b) of the Public Procurement Rules, 2004**, where failure to perform contractual obligations or breach of contract is covered by the contractual arbitration/dispute settlement mechanism, the Procuring Agency shall exhaust the applicable arbitration forum before initiating blacklisting/debarment proceedings.

24.4

Nothing in this clause shall prevent the Procuring Agency from taking such action as may lawfully be available in respect of corrupt or fraudulent practices.

25. BLACKLISTING AND DEBARMENT

25.1

The Contractor acknowledges that failure to perform contractual obligations or breach of contract may result in blacklisting/debarment proceedings under **Rule 19 of the Public Procurement Rules, 2004**, subject to the applicable statutory procedure.

25.2

Where established contractual failure falls within Rule 19(1)(b), the Contractor may be blacklisted and cross-debarred from participation in the respective category of public procurement for a period **not exceeding three years**, subject to the law and applicable PPRA regulations.

25.3

Blacklisting/debarment shall **not be automatic merely because a warranty claim has been made or a defect has occurred**. The Procuring Agency shall establish the relevant contractual default in accordance with the Contract and applicable law.

25.4

The Procuring Agency shall follow the applicable PPRA mechanism, including notice, consideration of the Contractor's response, determination by the competent authority and issuance of a reasoned decision.

25.5

Where required by Rule 19(2), the decision shall be communicated to PPRA and the concerned bidder/Contractor, containing the grounds for such action.

25.6

The applicable **PPRA Regulations for Mechanism for Blacklisting and Debarment of Bidders or Contractors, 2024**, and any subsequent amendments applicable at the relevant time, shall be followed.

26. EFFECT OF BLACKLISTING/DEBARMENT

Blacklisting or debarment shall operate in accordance with Rule 19 and the applicable PPRA regulations.

It shall not, by itself, extinguish the Contractor's existing contractual obligations in ongoing contracts where the applicable law provides otherwise.

27. REVIEW PETITION

The Contractor shall have the right to avail the statutory remedy of review before PPRA in accordance with **Rule 19(3) of the Public Procurement Rules, 2004** and the applicable regulations.

The Procuring Agency shall inform the Contractor of the applicable statutory remedy in the blacklisting/debarment decision.

28. PERFORMANCE SECURITY

Where applicable under the original Contract, the Performance Guarantee/Security shall remain subject to the terms and conditions of the original Contract.

Invocation or release of Performance Security shall be dealt with independently from the long-term warranty obligations unless otherwise provided in the Contract.

29. WARRANTY SECURITY

Where required under the bidding documents, the Contractor shall furnish/maintain warranty security in the prescribed amount and form.

Such security shall remain enforceable for the period specified in the Contract.

30. INDEMNITY

The Contractor shall indemnify the Procuring Agency against losses, damages, costs, claims and liabilities arising from:

- a. defective workmanship;
- b. counterfeit or defective equipment;
- c. breach of warranty obligations;
- d. negligence or wilful misconduct;
- e. breach of contract; or
- f. violation of applicable law attributable to the Contractor.

31. INSURANCE

The Contractor shall maintain such insurance as required under the original Contract and applicable law.

Any insurance requirement shall not reduce or replace the warranty obligations contained in this Deed.

32. FORCE MAJEURE

Neither Party shall be liable for failure to perform an obligation to the extent caused by a Force Majeure Event as defined in the Contract.

The Party claiming Force Majeure shall promptly notify the other Party and take reasonable measures to mitigate its effects.

Force Majeure shall not automatically excuse obligations which are expressly required to survive under the Contract.

33. COMPLIANCE WITH LAW

The Parties shall comply with all applicable laws, rules, regulations, standards and directions of competent authorities, including where applicable:

- a. Public Procurement Rules, 2004;
- b. PPRA Regulations;
- c. applicable engineering standards;
- d. electrical safety requirements;
- e. applicable grid/interconnection requirements;
- f. environmental requirements;
- g. taxation laws; and
- h. other applicable Government of Pakistan requirements.

34. ANTI-CORRUPTION AND INTEGRITY

The Contractor and New Warranty Obligor shall not engage in corrupt, fraudulent, collusive, coercive or obstructive practices in relation to the Contract or this Deed.

Any established corrupt or fraudulent practice shall attract the consequences prescribed under the applicable procurement law and regulations.

35. ASSIGNMENT

Neither the Original Contractor nor the New Warranty Obligor shall assign or transfer its obligations under this Deed without prior written approval of the Procuring Agency, except for an assignment expressly contemplated and approved through this Deed.

36. SUCCESSORS AND ASSIGNS

The warranty obligations shall bind the successors and permitted assigns of the relevant Party.

The Contractor/New Warranty Obligor shall ensure that any corporate restructuring, merger, acquisition or transfer does not prejudice the warranty rights of the Procuring Agency.

37. SURVIVAL OF WARRANTY OBLIGATIONS

The warranty obligations contained in this Deed shall survive:

- a. completion of installation;
 - b. commissioning;
 - c. taking over of the Solar PV System;
 - d. final payment;
 - e. release of Performance Security; and
 - f. expiry or termination of the original Contract,
- to the extent that the relevant warranty period has not expired.

38. NO WAIVER

Failure or delay by the Procuring Agency in exercising any right shall not constitute a waiver of that right.

Acceptance of defective equipment or payment of an invoice shall not constitute waiver of warranty rights.

39. AMENDMENT

No amendment, modification or waiver of this Deed shall be effective unless made in writing and approved by the competent authority in accordance with applicable rules and procedures.

40. ENTIRE AGREEMENT

This Deed, together with the original Contract, bidding documents, accepted bid, technical specifications, warranty certificates and schedules attached hereto, constitutes the complete understanding of the Parties regarding the warranty obligations covered by this Deed.

In case of inconsistency, the order of precedence specified in the original Contract shall apply, except that no provision shall be interpreted to reduce the minimum **25-year panel warranty or 10-year inverter warranty** expressly guaranteed herein.

41. SEVERABILITY

If any provision of this Deed is declared invalid or unenforceable, the remaining provisions shall continue to remain effective to the extent permitted by law.

42. GOVERNING LAW

This Deed shall be governed by and construed in accordance with the laws of the **Islamic Republic of Pakistan**.

43. NOTICES

All notices under this Deed shall be made in writing and delivered to the addresses specified below:

Procuring Agency

Address: _____

Telephone: _____

Email: _____

Original Contractor

Address: _____

Telephone: _____

Email: _____

New Warranty Obligor

Address: _____

Telephone: _____

Email: _____

44. EXECUTION

IN WITNESS WHEREOF, the Parties have executed this Deed of Warranty Novation on the date first written above.

FOR AND ON BEHALF OF THE PROCURING AGENCY

Name: _____

Designation: _____

CNIC: _____

Signature: _____

Official Seal: _____

Date: _____

FOR AND ON BEHALF OF THE ORIGINAL CONTRACTOR/EPC CONTRACTOR

Name: _____

Designation: _____

Company: _____

CNIC: _____

Signature: _____

Company Seal: _____

Date: _____

FOR AND ON BEHALF OF THE NEW WARRANTY OBLIGOR

Name: _____

Designation: _____

Company/Manufacturer: _____

CNIC: _____

Signature: _____

Company Seal: _____

Date: _____

WITNESS NO. 1

Name: _____

CNIC: _____

Designation: _____

Address: _____

Signature: _____

WITNESS NO. 2

Name: _____

CNIC: _____

Designation: _____

Address: _____

Signature: _____

SCHEDULE-I SOLAR PV MODULE/PANEL WARRANTY

Manufacturer: _____

Module Model: _____

Module Capacity: _____

Quantity: _____

Total Installed Capacity: _____

Minimum Guaranteed Performance

Year	Minimum Guaranteed Output
Initial	____ %
Year 1	____ %
Year 5	____ %
Year 10	____ %
Year 15	____ %
Year 20	____ %
Year 25	____ %

The manufacturer's applicable performance warranty certificate shall be attached to this Schedule.

**SCHEDULE-II
SOLAR INVERTER WARRANTY**

Manufacturer: _____

Model: _____

Rated Capacity: _____

Quantity: _____

Serial Numbers: _____

Warranty: Minimum 10 Years

The warranty shall cover repair/replacement of defective inverter equipment in accordance with this Deed and the manufacturer's warranty conditions.

SCHEDULE-III
SYSTEM PERFORMANCE GUARANTEE

Parameter	Guaranteed Value
Installed DC Capacity	_____ kWp
Installed AC Capacity	_____ kW
Annual Energy Generation	_____ kWh
Performance Ratio	_____ %
System Availability	_____ %
Inverter Efficiency	_____ %
Maximum Permissible Module Degradation	_____ %

The methodology for measuring performance shall be specified in the Technical Specifications/Contract.

SCHEDULE-IV
WARRANTY CLAIM AND ESCALATION MATRIX

Event	Responsible Party	Response Time	Rectification Time
Panel defect	Contractor/Manufacturer	48 hours	___ days
Inverter failure	Contractor/Manufacturer	24 hours	___ days
Complete system failure	Contractor	24 hours	___ days
Monitoring failure	Contractor	48 hours	___ days
Performance shortfall	Contractor	___ days	___ days

SCHEDULE-V
MANUFACTURER'S DIRECT WARRANTY UNDERTAKING

We, **M/s** _____, being the manufacturer/authorized representative of the Solar PV Modules/Inverters supplied for _____ **Cantonment Board**, hereby irrevocably undertake in favour of the Procuring Agency that:

1. the equipment supplied is genuine, new and unused;
2. the Solar PV Modules/Panels shall carry a minimum **25-year performance warranty**;
3. the Solar Inverters shall carry a minimum **10-year warranty**;
4. all valid warranty claims shall be honoured during the applicable warranty period;
5. defective equipment shall be repaired or replaced in accordance with the Deed;
6. replacement equipment shall be of equal or better technical specification;
7. the warranty shall remain enforceable notwithstanding completion or final payment of the original Contract; and
8. we shall not unreasonably refuse or delay a valid warranty claim.

For and on behalf of Manufacturer/Authorized Warranty Obligor

Name: _____

Designation: _____

Company: _____

Signature: _____

Seal: _____

Date: _____

SCHEDULE-VI
DOCUMENTS TO FORM PART OF THE DEED

The following shall be attached and form an integral part of this Deed:

1. Copy of Original Contract;
2. Letter of Acceptance/Award;
3. Accepted Technical Bid;
4. Technical Specifications;
5. Bill of Quantities;
6. Commissioning Certificate;
7. Taking-Over Certificate;
8. Solar PV Module Warranty Certificate;
9. Solar PV Module Performance Warranty;
10. Inverter Warranty Certificate;
11. Manufacturer's Authorization Certificate;
12. Complete equipment serial-number list;
13. Performance Guarantee;
14. O&M obligations;
15. Approved drawings/as-built drawings;
16. Testing and commissioning reports;
17. Performance testing report; and
18. Any other document specifically incorporated into the Contract.

SCHEDULE-VII
CONTRACTUAL DEFAULT AND REGULATORY ENFORCEMENT MATRIX

Default	First Remedy	Further Remedy	Possible PPRA Action
Failure to honour panel warranty	Notice + replacement	Recovery/contractual remedies	Rule 19 proceedings where established as contractual failure
Failure to honour inverter warranty	Notice + repair/replacement	Recovery/contractual remedies	Rule 19 proceedings where applicable
Persistent performance shortfall	Performance notice	Corrective action/contractual remedies	Rule 19 proceedings where established
Counterfeit equipment	Immediate contractual action	Termination/recovery	Possible corrupt/fraudulent practice proceedings
False warranty certificate	Show-cause	Termination/recovery	Appropriate PPRA proceedings
Abandonment	Default notice	Termination/recovery	Rule 19 proceedings
Persistent contractual breach	Notice/cure	Arbitration/other contractual remedy	Rule 19(1)(b), subject to statutory procedure
Bid securing declaration breach	Statutory/contractual action	As prescribed	Rule 19(1)(c)

Important: The above matrix does not create an automatic blacklisting penalty. Any blacklisting/debarment shall be adopted only under the applicable PPRA Rule 19(2) regulatory enforcement after following the prescribed procedure.

SCHEDULE-VIII
PROCEDURE FOR BLACKLISTING / DEBARMENT

Where the facts establish a case falling within Rule 19 of the Public Procurement Rules, 2004, the Procuring Agency shall:

1. document the alleged breach/default;
2. identify the relevant contractual provision;
3. collect supporting evidence;
4. issue a detailed show-cause notice;
5. provide the Contractor an opportunity to respond;
6. examine the response and evidence;
7. determine the contractual liability through the applicable contractual mechanism;
8. where applicable, exhaust the arbitration/dispute-resolution forum required by Rule 19(1)(b);
9. place the complete case before the competent authority;
10. pass a reasoned decision;
11. communicate the decision to the Contractor;
12. communicate the decision and grounds to PPRA as required under Rule 19(2);
13. comply with the applicable PPRA Regulations for Mechanism for Blacklisting and Debarment; and
14. inform the Contractor of the statutory right of review under Rule 19(3).

The maximum period of blacklisting/debarment shall remain subject to the limits prescribed by Rule 19 and the applicable PPRA regulations.

SCHEDULE-IX
CONTACT DETAILS FOR WARRANTY SUPPORT

Primary Contractor Contact

Name: _____

Designation: _____

Mobile: _____

Email: _____

Manufacturer Contact

Name: _____

Designation: _____

Mobile: _____

Email: _____

Emergency/24-Hour Support

Telephone: _____

Email: _____

Section X – General Conditions of Contract

CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

The words and expressions defined below shall have the meanings assigned to them in this Contract except where the context requires otherwise.

The Contract

1.1.1 "**Contract**" means the Contract Agreement and the other documents listed therein to be executed between the Employer and the Contractor for the execution of the project as advertised.

1.1.2 "**Specifications**" means the minimum specifications of the equipment and allied materials/accessories of the Solar PV System as set out in the Bidding Documents.

1.1.3 "**Project Design**" means the design of the Solar PV System, got prepared by the Employer through feasibility study based on the specifications of the offered equipment and allied materials/accessories.

Persons

1.1.4 "**Employer**" means the Cantonment Boards i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments or an officer nominated by it.

1.1.5 "**Contractor**" means the person named in the Contract Data whose bid has been accepted by the Employer and the legal successors in title to such person, but not (except with the consent of the Employer) any assignee of such person.

1.1.6 "**Party**" means either the Employer or the Contractor, Dates, Times and Periods

1.1.7 "**Commencement Date**" means the date as mentioned in the Contract Data.

1.1.8 "**Day**" means a calendar day.

1.1.9 "**Time for Completion**" means the time for completion of the Works as stated in the Contract Data (or as extended under Sub-Clause 7.3), calculated from the Commencement Date.

Money and Payments

1.1.10 "**Cost**" means all expenditure properly incurred (or to be incurred) by the Contractor, whether on or off the Site, including overheads and similar charges.

Other Definitions

1.1.11 "**Contractor's Equipment**" means all machinery, apparatus and other things required for the execution of the Works but does not include Materials or System intended to form part of the Works.

1.1.12 "**Country**" means the Islamic Republic of Pakistan.

1.1.13 "**Employer's Risks**" means those matters listed in Sub-Clause 6.1.

1.1.14 "**Force Majeure**" means an event or situation beyond the control of a Party which is not foreseeable, is unavoidable and its origin is not due to negligence or care on the part of such Party. Such events, subject to the conditions stated in the preceding sentence, may include, but not be limited to, wars or revolutions, floods, epidemics, quarantine restrictions, and freight embargoes.

1.1.15 "**Materials**" means things of all kinds (other than the System) to be supplied and incorporated in the Works by the Contractor.

1.1.16 "**System**" means the machinery and apparatus intended to form or forming part of the Works.

1.1.17 "**Site**" means the place mentioned in the Contract Data where the Works are to be executed, and any other place(s) specified in the Contract as forming part of the Site.

1.1.18 "**Variation**" means a change which is instructed by the Employer under Sub-Clause 10.1.

1.1.19 "**Works**" means any or all the works including design, supply, installation, construction, testing and commissioning and maintenance of the System to be performed by the Contractor. Including temporary works and any variation thereof as per scope of work given in the Tender Documents.

1.1.20 "**The Engineer**" means a Cantonment Board Engineer or any officially designated technical representative of the Board to act as Engineer for the purpose of the Contract, execution of this Contract, implementation of the project visualized in this Contract, inspection of the equipment and materials provided by the Contractor, and verification of the installed System.

1.1.21 "**Engineer's Representative**" means a person appointed from time to time by the Engineer.

1.1.22 "**Letter of Acceptance**" means the formal acceptance by the Employer of the Tender.

1.1.23 "**Tender**" means the Contractor's priced offer to the Employer for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract, as accepted by the Letter of Acceptance.

1.2 Interpretation

Words importing persons or parties shall include firms and organizations. Words importing the singular or one gender shall include the plural or the other gender where the context requires.

1.3 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found in the documents, the priority of the documents shall be in accordance with the order as listed in the General Provisions of the Conditions of Contract.

1.4 Law

The rights and obligations of the Parties under the Contract shall be governed by the laws of the Islamic Republic of Pakistan.

1.5 Communications

All communications related to the Contract shall be in the English language.

1.6 Statutory Obligations

The Contractor shall comply with the laws of the Islamic Republic of Pakistan and shall give all notices and pay all fees and other charges in respect of the Works.

2. The Employer

2.1 Provision of Site

The Employer shall provide the Site and right of access thereto at the times stated in the Contract Data.

2.2 Permits, etc.

The Contractor shall be exclusively responsible to apply for and obtain any license from **NEPRA / IESCO / K-Electric** or any other department or agency, if applicable. The Employer shall, if requested by the Contractor, assist him in applying for permits, licenses or approvals which are required for the Works.

2.3 Employer's Instructions

The Contractor shall comply with all instructions given by the Employer in respect of the Works, including the suspension of all or part of the Works.

2.4 Approvals

No approval, consent, or absence of comment by the Employer shall affect the Contractor's obligations required under the Contract.

3. Employer's Representatives

The Employer shall appoint, with a precise scope of authority, and notify in writing, a duly authorized person to act for him and on his behalf for the purposes of this Contract. The details and precise scope of the authority of such authorized person shall be notified in writing to the Contractor immediately after the signing of the Contract.

4. The Contractor

4.1 General Obligations

The Contractor shall carry out the Works as per the highest standards of workmanship in the solar industry and in accordance with the terms and conditions of the Contract. The Contractor shall provide all supervision, labour, materials, plant and Contractor's equipment which may be required for the execution of the Works and shall also arrange all permits and licenses at his own cost, required for installation, commissioning and operation of the System.

For avoidance of doubt, the Contractor shall arrange bi-directional meter for the System and bear all related costs.

4.2 Contractor's Representative

The Contractor shall appoint a representative at site on full time basis to supervise the execution of Works and to receive instructions on behalf of the Contractor but only after obtaining the consent of the Employer for such appointment which consent shall not be unreasonably withheld by the Employer. Such authorized representative may be replaced by the Contractor at any time during the Contract Period but only after obtaining the consent of the Employer as aforesaid.

4.3 Subcontracting / Assignment

The Contractor shall not assign, transfer, or subcontract any portion of the Works without prior express written consent of the Cantonment Executive Officer, i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments. Unauthorized subcontracting shall lead to immediate contract termination and forfeiture of Performance Security.

4.4 Performance Security

- a) The Contractor shall furnish to the Employer within fourteen (14) working days after receipt of Letter of Acceptance a Performance Security, in the form of irrevocable and unconditional Bank Guarantee equivalent to **10% of the project value** from any Scheduled Bank of Pakistan OR an insurance company having at least AA rating from PACRA/JCR acceptable to the Employer.

- b) Such Performance Security shall be liable to release on issuance of Taking Over Certificate and will be returned after submission of subsequent Performance Bond.

4.5 Labour

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding, transport.

4.6 Water and Electricity

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the provision of Water supply and Electricity. This is to mention that in case water and electricity is provided by Employer, these will be charged to the Contractor on actual basis and will be recovered in IPCs.

4.7 Third Party Validation

The Contractor will arrange a third-party inspection. Third Party Validation (within Pakistan) shall be witnessed by two officers of the Employer or by renowned firm as approved by the Engineer. All costs in connection with nominated Third Party representatives visit/inspection shall be borne by the Contractor. These shall include the costs of travel from within Pakistan to place of inspection and back, including boarding/lodging, inland transportation and daily allowance for each person of third-party Validation as desired by the Engineer.

5. DESIGN OF THE PROJECT

5.1 Responsibility for Design

Notwithstanding that the design of the project is prepared by the Consultant and approved by the Employer; the Contractor shall solely remain responsible for executing it in such a manner that it shall not only be in strict conformity with the Employer Specifications but also be fit for intended purposes defined in the Contract. In addition, the Contractor shall also be solely responsible for any infringement of any patent or copyright in respect of such design.

5.2 Drawings

At the completion of the Works under the Contract, the Contractor shall furnish to the Engineer **three (3) copies and one reproducible copy** of all drawings amended to conform with the Works as built. The price of such drawings shall be deemed to be included in the Contract Price.

5.3 Net Minimum Guaranteed Generation (NMGG)

The Contractor shall be responsible for achieving the **Net Minimum Guaranteed Generation (NMGG)**. For any shortfall, if any, for one year corresponding to the offer, the

compensation shall be recovered from the Contractor's Security/Final Bill. The Contractor has to maintain the Solar Plant equipment(s), including repair, replacement, overhauling, etc., to achieve the offered NMGG per year.

5.3.1 Performance Testing

Upon completion of installation of the Works, the Contractor shall conduct all necessary Pre-commissioning tests, Grid synchronization tests, and Performance tests in accordance with the Specifications and internationally recognized standards applicable to Solar Photovoltaic Systems. The performance tests shall verify compliance with the Net Minimum Guaranteed Generation (NMGG), such as an annual average minimum generation of 4.0 kWh (or above) per kW per day, together with the other technical parameters specified in the Contract.

5.3.2 Failure to Achieve Guaranteed Performance

If the System fails to achieve the guaranteed performance levels, the Contractor shall, at its own cost and without delay, rectify the deficiencies and conduct retesting within 30 days. The contractor will add additional system to complement the deficiency without any financial liability on the Cantonment Boards i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments. Taking Over of the Works shall not occur unless and until successful completion of the prescribed performance tests has been achieved.

In the event of persistent failure attributable to the Contractor, the **Cantonment Boards** i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments shall be entitled to recover compensation or adjust payments in accordance with the Contract, including recourse to the Performance Security as aforementioned in the Warranty and Defect Liability clause. The Cantonment Board shall also be legally entitled to calculate the financial shortfall and recover equivalent compensation directly from the **Contractor's Final Bill or Retention Money**.

5.4 Warranty Period

The Contractor shall ensure that all materials, equipment and workmanship are new, free from defects, and in strict conformity to the Contract/Tender documents. The **Defect Liability Period** shall be **two (2) years** from the issuance of the **Taking Over Certificate**.

The Contractor shall promptly remedy, at its own cost, any defect notified during this period.

Manufacturer warranties for photovoltaic modules, inverters and other components shall be provided as specified in the Tender Documents and shall not derogate from the Contractor's overall responsibility.

The **Retention Money** under Clause **11.3** has the following distributions to guarantee an amount that will be retained till completion of such warranties:

- **Percentage of Retention Money:** 10% of the amount of each Interim Payment Certificate (IPC).
- **Limit of Retention Money:** Minimum Limit of Retention Money is 5% that is against advance payment.

The Warranty to safeguard the system are as follows:

- **25 Years Performance Warranty** for PV Panels.
- **10 Years Manufacturer's Warranty** for Inverters & BESS.
- **05 Years Warranty** for other materials and installation.
- **Minimum One-Year O&M**, (Where, all the Water and cleaning responsibility will rest with contractor).

The retention money shall be released after the completion of two years Defect Liability Period.

6. EMPLOYER'S RISKS

6.1 The Employer's Risks.

The Employer's Risks are:

- a. Politically motivated riot, commotion or disorder by persons other than the Contractor's personnel and other employees including the personnel and employees of Sub-Contractors, directly affecting the Site and / or the Works;
- b. Use or occupation by the Employer of any part of the Works, except as may be specified in the Contract;
- c. Late handing over of Site,
- d. A suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure; and
- e. Physical obstructions or physical conditions other than climatic conditions, encountered on the Site during the performance of the Works, for which the Contractor immediately notified to the Employer and accepted by the Employer

6.2 Loss or Damage due to Employer's Risks

In the event of any such loss or damage happening from any of the risks defined in Sub-Clause 6.1 or force majeure, or in combination with other risks, the Contractor shall, if and to the extent required by the Employer, rectify the loss or damage and the Employer shall determine an addition to the Contract Price in accordance with Clause 10 and shall notify the Contractor accordingly. In the case of a combination of risks, Causing loss or damage any such determination shall take into account the proportional responsibility of the Contractor and the Employer.

7. TIME FOR COMPLETION

7.1 Execution of the Works

The Contractor shall commence the Works on the **Commencement Date** and shall proceed expeditiously and without delay and shall complete the works, subject to Sub-Clause 7.3 below, within the Time for Completion as stated in the Contract Data.

7.2 Programme

Within the time stated in the Contract Data, the Contractor shall submit to the Employer a detailed program for the Works incorporating the dates, which program shall be in-line with the Proposed Construction Schedule submitted along with the Bid.

7.3 Extension of Time

The Contractor shall, within such time as may be reasonable under the circumstances, notify the Employer of any event(s) falling within the scope of Sub-Clause 6.1 or 10.3 of these Conditions of Contract and request the Employer for a reasonable extension in the time for the completion of Works. Subject to the aforesaid, the Employer shall determine such reasonable extension in the time for the completion of Works as may be justified in the light of the details/particulars supplied by the Contractor in connection with the such determination by the Employer within such period as may be prescribed by the Employer for the same; and the Employer shall extend the Time for Completion as determined.

7.4 Late Completion

If the Contractor fails to complete the Works within the Time for Completion, the Contractor's only liability to the Employer for such failure shall be to pay the amount stated in the Contract Data for each day for which he fails to complete the Works.

8. TAKING OVER

8.1 Notice of Completion by the Contractor.

The Contractor shall notify in writing to the Employer when he considers that the Works are complete in all aspects.

8.2 Taking-Over Notice

Within fifty (50) days of receipt of notice of completion from the Contractor, the Engineer shall determine the conformity of the installed System with the approved Contractor Design and notify the Contractor through Employer that the Works are complete in accordance with the Contract. The Employer shall take over the Works upon the issue of this notice and issue Taking Over Certificate to the Contractor. Alternatively, the Contractor shall be notified that the Works are not ready for taking over, stating the reasons accordingly. The Contractor shall then promptly complete any outstanding work and, subject to Clause 9, clear the site.

8.3 Defect Liability Period

Defect Liability Period shall be as stated in the Contract Data.

9. REMEDYING DEFECTS

9.1 REMEDYING DEFECTS

The Employer may at any time prior to the expiry of the period stated in the Contract Data, notify the Contractor of any defects. The Contractor shall remedy at no cost to the Employer any defects due to the Contractor Design, Materials, System or workmanship not in accordance with the Contract.

The Cost of remedying defects attributable to any other cause shall be valued as a Variation. Failure to remedy any such defects or complete outstanding work within a reasonable time shall entitle the Employer to carry out all necessary works at the Contractor's cost.

9.2 Uncovering and Testing

The Employer may give instruction as to the uncovering and/or testing of any work. Unless as a result of an uncovering and/or testing it is established that the Contractor Design, Materials, System or workmanship are in accordance with the Contract, the Contractor shall be paid for such uncovering and/or testing as a Variation in accordance with Sub-Clause 10.2.

9.3 The Contractor at his own responsibility shall arrange all hoisting and fixing equipment necessary for the satisfactory completion of work and shall make any damage to the existing surface

10. VARIATIONS AND CLAIMS

10.1 Right to Vary

The Employer may instruct Variations.

10.2 Valuation of Variations

Variations shall be valued at a lump sum price mutually agreed between the Parties.

10.3 Valuation of Claims

If the Contractor incurs Cost as result of any of the Employer's Risk, the Contractor shall be entitled to the amount of such Cost. If as a result of any employer's Risk, it is necessary to change the Works, this shall be dealt with as a variation subject to Contractor's notification for intention of claim to the Employer within fourteen (14) days of the occurrence of cause.

10.4 Variation and Claims Procedure

The contractor shall submit to the employer an itemized make-up of the value of Variations and claims within twenty-one (21) days of the instruction or of the event giving rise to the claim. The Employer shall check and if possible, agree the value. In the absence of agreement on the claim, the Employer shall determine the value.

11. CONTRACT PRICE AND PAYMENT TERMS

11.1 Contract Price

The Contract price shall be as provided in the Acceptance Letter.

11.2 Payment Terms and Statements;

Subject to the terms and conditions of the Contract, the Contractor shall be entitled to be paid the Contract Price at such intervals as given in the Contract data.

11.3 Retention Money

The Engineer shall, within fifteen (15) days of receiving such statement, deliver to the Employer an **Interim Payment Certificate** stating the amount of payment to the Contractor which the Engineer considers due and payable in respect of such statement, subject:

- (a) firstly, to the retention of the amount calculated by applying the **Percentage of Retention** to the amount to which the Contractor is entitled;
- (b) secondly, to the deduction of any sums which may have become due and payable by the Contractor to the Employer.

Provided that the Engineer shall not be bound to certify any payment under this Sub-Clause if the net amount thereof, after all retentions and deductions, would be less than the **Minimum Amount of Interim Payment Certificates**.

Notwithstanding the terms of this Clause or any other Clause of the Contract, no amount will be certified by the Engineer for payment until the **Performance Security**, if required under the Contract, has been provided by the Contractor and approved by the Employer.

12. DEFAULT

12.1 Default by Contractor

If the Contractor abandons the Works, refuses or fails to comply with a valid instruction of the Employer, or fails to proceed expeditiously and without delay, or is, despite a written complaint, in breach of the Contract, the Employer may give notice referring to this Sub-Clause and stating the default. If the Contractor has not taken all practicable steps to remedy the default within **seven (7) days** after receipt of the Employer's notice, the Employer may, by a second notice given within a further **fourteen (14) days**, terminate the Contract. The Contractor shall then immediately demobilize from the Site, leaving behind

any and all Contractor's Equipment which the Employer instructs, in the second notice, to be used for the completion of the Works at the risk and cost of the Contractor.

12.2 Default by Employer

If the Employer fails to pay in accordance with the Contract, or is, despite a written complaint, in breach of the Contract, the Contractor may give notice referring to this Sub-Clause and stating the default.

If the default is not remedied within **twenty-eight (28) days** after the Employer's receipt of this notice, the Contractor may suspend the execution of all or parts of the Works.

12.3 Insolvency

If a Party is declared insolvent under any applicable law, the other Party may, by notice, terminate the Contract, which shall become effective **fourteen (14) days** after receipt of the notice by the other Party. The Contractor shall then immediately demobilize from the Site, leaving behind, in the case of the Contractor's insolvency, any Contractor's Equipment which the Employer instructs in the notice to be used for the completion of the Works.

12.4 Payment upon Termination After Termination

The Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and System reasonably delivered to the Site, adjusted by the following:

- (a) Any sums to which the Contractor is entitled under **Sub-Clause 10.4**;
- (b) Any sums to which the Employer is entitled;
- (c) If the Employer has terminated under **Sub-Clause 12.1 or 12.3**, the Employer shall be entitled to a sum equivalent to **twenty percent (20%)** of the value of parts of the Works **not executed** at the date of the termination; and
- (d) If the Contractor has terminated under **Sub-Clause 12.2 or 12.3**, the Contractor shall be entitled to the cost of his demobilization together with a sum equivalent to **ten percent (10%)** of the value of parts of the Works executed at the date of termination. The net balance due shall be paid or repaid within **fifteen to thirty (15 to 30) days** of the notice of termination.
- (e) A material default by the Contractor shall entitle the **CB** to initiate formal departmental and **blacklisting proceedings** in strict accordance with the **Federal PPRA Rules**.

13. RISKS AND RESPONSIBILITIES

13.1 Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works from the **Commencement Date** until the date of the Employer's issuance of the **Certificate of Completion** under Sub-Clause **8.2**. Responsibility shall then pass to the Employer. If any loss or damage happens to the Works during the above period, the Contractor shall rectify such loss or damage so that the Works conform with the Contract.

Unless the loss or damage happens as a result of any of the **Employer's Risks**, the Contractor shall indemnify the Employer, or his agents, against all claims, loss, damage and expense arising out of the Works.

13.2 Force Majeure

If **Force Majeure** occurs, the Contractor shall notify the Employer immediately. If necessary, the Contractor may suspend the execution of the Works and, to the extent agreed with the Employer, demobilize the Contractor's Equipment.

If the event continues for a period of **ninety (90) days**, either Party may then give notice of termination, which shall take effect **thirty (30) days** after the giving of the notice.

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and System reasonably delivered to the Site, adjusted by the following:

- (a) Any sums to which the Contractor is entitled under **Sub-Clause 10.4**, including the cost of his demobilization; and
- (b) Less any sums to which the Employer is entitled.
- (c) The net balance due shall be paid or repaid within **thirty-five (35) days** of the notice of termination.

14. INDEMNITY

The Contractor shall indemnify, defend and hold harmless the Party No. 1 CANTONMENT BOARDS i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments, its officers, employees and representatives from and against all claims, demands, actions, damages, losses, liabilities, costs and expenses arising out of or in connection with the execution of the Works, including but not limited to claims for bodily injury, death, property damage, environmental harm, or infringement of intellectual property rights, to the extent that such claims arise from the acts, omissions, negligence or breach of the Party No. 2 Contractor, its employees, agents or sub-Party No. 2 Contractors. This indemnity shall survive completion, termination or expiry of the Contract, provided that the Party No. 2 Contractor shall not be liable to the extent that such damage or loss is caused by the gross negligence or wilful misconduct of the CANTONMENT BOARDS i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments.

15. RESOLUTION OF DISPUTES

15.1 Employer's Decision

If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with the Works, the matter in dispute shall, in the first place, be referred in writing to the Employer. Such reference shall state that it is made pursuant to this Clause. No later than thirty (30) days after the day on which he received such reference, the Employer shall give notice of his decision to the Contractor.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the Works with all due diligence, and the Contractor shall give effect forthwith to every such decision of the Employer unless and until the same shall be revised, as hereinafter provided in an arbitral award.

15.2 Notice of Dissatisfaction

If the Contractor is dissatisfied with the decision of the Employer or if no decision is given within the time set out in Sub-Clause 15.1 hereof above, the Contractor may give notice of dissatisfaction referring to this Clause 15.1 hereof, to the Contractor, within fourteen (14) days of receipt of the decision or the expiry of the time for the decision.

If no notice of dissatisfaction is given within the specified time, the decision shall be final and binding on the Contractor. If notice of dissatisfaction is given within the specified time, the decision shall still be binding on the Contractor who shall give effect to it without delay unless and until the decision of the Employer is revised by an arbitrator.

15.3 Arbitration

A dispute which has been the subject of a notice of dissatisfaction shall be referred to DML&C of the concerned region for arbitration.

16. Integrity Pact and Anti-Corruption

The Contractor represents and warrants that it has not engaged in and shall not engage in any corrupt, fraudulent, collusive, coercive or obstructive practice in connection with the procurement or execution of this Contract. The Party No. 2 Contractor shall comply strictly with all applicable anti-corruption and transparency laws of the Islamic Republic of Pakistan and with the Integrity Pact executed in connection with this procurement.

Any breach of this undertaking shall constitute a fundamental breach of the Contract and shall entitle the CANTONMENT BOARD to, without prejudice to any other rights or remedies, terminate the Contract, forfeit the Performance Security, recover damages, and initiate debarment proceedings in accordance with applicable procurement rules.

16.b. ENTIRE AGREEMENT AND NON-MODIFICATION

This Agreement constitutes the entire understanding between the Parties and supersedes all prior discussions, negotiations, and communications.

No amendment or modification shall be valid unless made in writing and signed by duly authorized representatives of both Parties. The Party No. 2 Contractor expressly acknowledges that execution of this Agreement amounts to unconditional acceptance of all Tender terms and that no claim inconsistent with the Contract Documents shall be maintainable.

16.1 If the Contractor, or any of his Sub-Contractors, agents or servants, is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Appendix-D to his Bid, then the Employer shall be entitled to:

- (a) Recover from the Contractor an amount equivalent to ten (10) times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Contractor or any of his Sub-Contractors, agents or servants;
- (b) Terminate the Contract; and
- (c) Recover from the Contractor any loss or damage to the Employer as a result of such termination or of any other corrupt business practices of the Contractor or any of his Sub-Contractors, agents or servants.

On termination of the Contract under Sub-Para (b) of this Sub-Clause, the Contractor shall immediately demobilize from the Site leaving behind Contractor's Equipment which the Employer instructs, in the termination notice, to be used for the completion of the Works at the risk and cost of the Contractor. Payment upon such termination shall be made under Sub-Clause 12.4, in accordance with Sub-Para (c) thereof, after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.

17. Priority of Contract Documents

The priority list of contractual documents shall be as follows:

- (a) Contract Agreement.
- (b) Letter of Acceptance.
- (c) Specifications.
- (d) Contract Data.
- (e) Conditions of Contract.
- (f) Letters Technical Bid and Price Bid.
- (g) The Priced Bill of Quantities.
- (h) The Appendices to Bid.

18. ADVANCE PAYMENT / MOBILIZATION ADVANCE

Where provided in the Contract Data, the Employer / CANTONMENT BOARDS i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments may grant an advance payment not exceeding the percentage specified therein. The Contractor shall, prior to receipt of such advance, furnish an unconditional and irrevocable Advance Payment Bank Guarantee in an equivalent amount, in a form acceptable to the CANTONMENT BOARDS i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments. The advance shall be recovered by proportional deductions from Interim Payment Certificates in accordance with the Contract Data. No advance payment shall be released unless and until the required guarantee has been duly submitted and accepted.

The advance payment will be deducted from the Contractor in equal installments in each IPC.

- (a) An interest-free Mobilization Advance up to 15% of the Contract Price stated in the Letter of Acceptance shall be paid by the Employer to the Contractor upon submission by the Contractor of a Mobilization Advance Guarantee/Bond for the full amount of the Advance in the specified form from a Scheduled Bank in Pakistan.

This Advance shall be recovered in equal installments from the subsequent Interim Payment Certificates (IPCs).

19. Taxation

All prevailing Federal, Provincial and Local Government Taxes (Income Tax, Sales Tax/PRA, and Cantonment Cesses) shall be withheld at source from each IPC and the Final Bill.

20. Procurement Supremacy

In the event of a conflict between this Contract and the Federal PPRA Rules, 2004 or the Cantonment Act, the statutory laws of Pakistan shall take absolute precedence.

21. Site Safety & Indemnity

The Contractor is solely liable for site safety. Any structural damage, injury, or death to labour/third parties shall be the civil/criminal liability of the Contractor, and CB stands completely indemnified.

Section XI – Special Conditions of Contract

Parent GCC Clause Reference	MACRO PROJECT DATA INPUT (640 kW / 6x Cantonment Boards)
GCC Sub-Clause 1.1 <i>(The Employer)</i>	HQ Military Lands & Cantonments (ML&C), Ministry of Defence, acting under framework Rule 45A of PPRA Rules 2004 on behalf of the 6 constituent Cantonment Boards i.e. Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan.
GCC Sub-Clause 1.2 <i>(The Works Scope)</i>	Design, procurement, installation, testing, and commissioning of a consolidated 640 kW Hybrid/On-Grid System with 250 kWh Battery Energy Storage Systems (BESS).
GCC Sub-Clause 1.3 <i>(Site Boundaries)</i>	06 x Sites: Rawalpindi, Karachi, Peshawar, Chaklala, Lahore, and Multan Cantonments.
GCC Sub-Clause 1.5 <i>(Priority of Documents)</i>	If any ambiguity, divergence, or legal conflict is discovered between the component documents of this Contract, the following strict order of precedence shall govern and control the execution: 1. Contract Agreement 2. Letter of Acceptance 3. Letter of Bid 4. Section IX: SCC 5. Section VIII: GCC 6. Technical Specs 7. BOQ 8. The Drawings (if any) and verified site layouts.
GCC Sub-Clause 3.1 <i>(The Engineer)</i>	The Engineer/s is appointed by HQ ML&C to monitor multi-site engineering quality, verify physical deliveries, and certify progressive billing statements.
GCC Sub-Clause 4.1 <i>(Turnkey Sizing & Liability)</i>	Single-Point Turnkey Engineering Liability: Array sizes are fixed as: Rawalpindi (80kW+80kWh BESS), Peshawar (160kW+60kWh BESS), Karachi (100kW+40KWh BESS), Chaklala (120kW+30kWh BESS), Lahore (100kW), Multan (80kW+40KWh BESS).
GCC Sub-Clause 4.2 <i>(Performance Security)</i>	10% of the total Accepted Contract Price from a scheduled bank, valid through the maintenance window.
GCC Sub-Clause 4.2.1 <i>(Bid Validity Window)</i>	Locked at a fixed period of 180 calendar days from the technical proposal opening date on e-PADS.
GCC Sub-Clause 5.1 <i>(Technical Licensing)</i>	PEC Firm Registration in Category C-3 or above with explicit EE-11 (Solar Specialization) activation.
GCC Sub-Clause 5.2 <i>(Consortium Limits)</i>	Joint Venture formations are strictly limited to a maximum of two (02) partner firms (Joint & Several Liability).
GCC Sub-Clause 6.2 <i>(Wind Endurance)</i>	Mounting structures must carry certified structural engineer stamps for wind load endurance ≥ 160 km/h.

GCC Sub-Clause 7.1 <i>(Equipment Warranties)</i>	Panels: 25-yr performance. Inverters: 10-yr operational. BESS: 10-yr OEM warranty. Requires a formal Deed of Warranty Novation at completion.
GCC Sub-Clause 8.1 <i>(Time for Completion)</i>	Complete regional framework cluster must be fully operational within 90 calendar days.
GCC Sub-Clause 8.8 <i>(Liquidated Damages)</i>	Calculated systematically at 0.1% of the contract price per day, up to a maximum cap of 10%.
GCC Sub-Clause 9.1 <i>(Handover Thresholds)</i>	Handover requires a continuous 72-hour trial run, grounding checks, and net-metering synchronization.
GCC Sub-Clause 11.1 <i>(Defects Notification Period)</i>	Comprehensive equipment maintenance and field repair window fixed at 730 calendar days (2 Years).
GCC Sub-Clause 13.7 <i>(Price Adjustment)</i>	Price Adjustments shall NOT apply. All rates are fixed and firm; inflation escalation claims are barred.
GCC Sub-Clause 14.1 <i>(Contract Pricing Structure)</i>	Combined (MES Schedule and Fixed Market Item Rate) Contract across all 6 x CBs including all federal/provincial withholding taxes. Quoted rates include all federal/provincial withholding taxes
GCC Sub-Clause 14.3 <i>(Progressive Payment Splits)</i>	Cleared in PKR within 30 days: 75% progress bills (10% retention money cut), Final 15% payment is strictly contingent upon execution and submission of a legally binding Deed of Warranty Novation, and 10% upon 2-Year DLP expiry.
GCC Sub-Clause 21.1 <i>(Grievance Redressal)</i>	Filed with the Grievance Redressal Committee (GRC), Headquarters ML&C, Saddar, Rawalpindi under Rule 66 of the Public Procurement Rules, 2024.
GCC Sub-Clause 21.6 <i>(Sole Arbitrator Forum)</i>	The standard multi-person DAAB / international ICC framework is deleted. Initial administrative grievances must be formally filed with the Grievance Redressal Committee (GRC), ML&C Headquarters, Rawalpindi under the strict timelines of Rule 66 of the Public Procurement Rules, 2024. Unresolved contractual claims are finalized under the Arbitration Act, 1940 before the Regional Director of Military Lands & Cantonments (DML&C) of the concerned region acting as the Sole Arbitrator. The arbitral award is final and unappealable, with physical hearings held at the respective Regional Directorate Office in the English language.