

BID DOCUMENT

Name of work: Solarization of Remaining Buildings
KIU (phase-II).



KARAKORAM INTERNATIONAL UNIVERSITY
UNIVERSITY ROAD, GILGIT

1. Definitions:

- 1.1.KIU: Karakoram International University
- 1.2.RFP: Request for Proposal
- 1.3.BOQ: Bill of Quantities
- 1.4.EOF: End of Life
- 1.5.S/F: Supply and Fixation
- 1.6.MAF: Manufacturer Authorization Form
- 1.7.PMP: Project Management Professional
- 1.8.EM: Earnest Money
- 1.9.Warranty/services of items/parts: All hardware, support, repair, replacement, backups etc. and services of all software including its installation, configuration, updates, upgrades, and principal online support
- 1.10. Items: Datacenter, related equipment, components and functionality
- 1.11. Bidder: The participant firm who has submitted the proposal
- 1.12. Selected bidder: Bidder selected for award of tender for a particular work

2. Scope of Work

Following requirements define the scope of work of this tender:

- 2.1.It is a turnkey project and it is required that the bidder should survey the site before submission of the bid. The submitted bid will cover all services, devices or items, mentioned or unmentioned that are required for completion of this project as per specification and accepted standard / best practices required for such projects.
- 2.2.The Selected Bidder will be responsible for the supply, installation, configuration, integration, testing and commissioning of supplied equipment and components at KIU Main Campus/FOE as per requirements of KIU
- 2.3.Selected Bidder must ensure that the supplied equipment is brand new, perform properly, and meet RFP's Technical Specification mentioned in BOQ
- 2.4.At the time of installation and commissioning, Selected Bidder must provide comprehensive documentation of Configuration and Manuals etc.
- 2.5.The selected Bidder shall be responsible for the provisioning of extended warranties and service
- 2.6.Selected bidder shall be responsible for minimum 1 year of Services / Warranty.
- 2.7.The scope of work can be increased or decreased subject to the availability of funds and the contractor is bound to comply.

3. Technical Marking and Bid Evaluation Criteria

The Perspective Bidder shall provide the following documents and incase of failure to provide the documents: -

- 1. The bidder must be registered with PEC registration for 2025-26, (Category-C5 & above relevant Electrical codes EE-02 EE 03 EE-04 EE-06, EE-11) Govt./SECP, Sales Tax, Income Tax departments and should be active tax payer.

2. Relevant references i.e. completion certificate/Purchase Order of deployment of similar works in last 5 years.
3. Submission of undertaking on Rs:100 Stamp Paper duly notarized; that the firm is not bankrupt, blacklisted by any of Provincial or Federal Government Department, Agency, Organization or autonomous body or Private Sector Organization anywhere in Pakistan.
4. The performance of the bidders will be accessed by the procurement/tender committee based on their performance with KIU/other organizations.
5. Detailed Project Schedule with timeline for all activities with undertaking for strict compliance of the schedule.
6. **Compliance to the technical specifications of all items to be procured with detailed product technical Brochure clearly stating the specification that should include specific make and model with clarity of offered specifications must be enclosed with the Technical bid (Missing product specification/duplicate products proposal will be rejected) in the format given below.**

SR#	Description of Items as per BOQ	Specification & name of manufacturer	Broacher with detailed specification
1	Solar Panel		
2	Invertor 12 KW/24 KW		
3	Lithium Ion battery		
4	Automatic Voltage Regulator (AVR)		
5	Cables AC/DC		
6	ATS Panel (SDP)		
7	MCCB		
8	Air Conditioner		

7. Authorization Certificate / document from the principal / Manufacturer/ Distributor for core equipment/product (Inverter, Batteries, solar plates).

A) Qualification criteria

S#	Category	Weightage/Marks
A	General Experience	35
B	Personnel Capabilities	15
C	Equipment capabilities	20
D	Financial Soundness	30
	Total:	100

Note: -

The applicants must score at least 60% marks in each category and 70% marks overall score for qualification.

Credit Marks for each category shall be awarded on the basis of following qualifications criteria

A) General Experience**Total Marks: 35**

S#	Description	Marks Assigned	Explanation for Marks Obtained
a)	Projects of similar nature and complexity completed in the last 05 (five) years. (i) 45 KW & Above	20	10 Marks will be given to applicant for each project complete to a maximum of 10 marks
b)	Projects of similar Nature & Complexity in hand having or physical progress not less than 50% of the project cost. (i) 45 KW & Above	10	05 Marks will be given to applicant for each project in hand to a maximum of 10 marks
c)	Enlistment with the departments	5	<ul style="list-style-type: none"> One mark will be given to applicant for each enlistment to maximum of 05marks
Total Marks Allocated			35

B) Personnel Capabilities**Total Marks: 15**

Sr. No	Description	Marks Assigned	Explanation for Marks Obtained
i)	B.Sc Electrical/electronic Engineer registered with Pakistan Engineering Council (PEC)	9	<ul style="list-style-type: none"> 03 Marks will be given for the one Electrical Engineer to a maximum of 06 marks. 03 Marks will be given to Electronic Engineer to a maximum of 03 marks.

ii)	Associates Engineers (DAE) Electrical/Electronic	6	<ul style="list-style-type: none"> • 02 Marks will be given to each electrical Technologist to a maximum of 04 marks. • 02 Marks will be given to each Electronic Technologist to a maximum of 02 marks.
Total Marks Allocated			15

C) Financial Soundness

Total Marks: 30

S#	Description	Marks Assigned	Criteria for Marks Obtained
a)	Available Bank Credit Line (Countersigned by higher rank officer than issuing authority)	5	<ul style="list-style-type: none"> • For each 20% of the project cost 01 mark will be given up-to a maximum of 05 marks.
b)	Cash flow	10	Maximum marks will be given the cash flow is equal to or greater than the project cost for the last one year
c)	Available Bank Balance	15	<ul style="list-style-type: none"> • 05 marks will be given if the available bank balance is greater or equal to 15% and less than 30% of the cost of the project. • 10 marks will be given if the available bank balance is greater than 30% and less than 40% of the cost of the project. • 15 marks will be given if the available bank balance is greater than 40% and less than 50% of the cost of the project. • Maximum marks will be given if the available bank balance is greater than 50% of the cost of the project.
Total Marks Allocated			30

D) Equipment Capability

Total Marks: 20

Sr. No.	Description	Marks Assigned
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1	Volt, Resistance and Continuity meter	8
2	Ammeter, Drill Machine and Thimble pressure machine	8
3	Generator welding machine	4
Total Marks Allocated		20

a. Joint Venture (JV)

Joint Venture must comply with the following requirements: -

a) Following are minimum qualification requirements: -

- i)** The lead partner shall meet 80% of all qualifying criteria.
- i)** Each/lag partner shall meet 40% of all the qualifying criteria.
- ii)** The joint venture must collectively satisfy the above criteria.
- b) Any change in a prequalified JV after prequalification, shall be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval may be denied if: -
 - i) Partner(s) withdraw from a JV and remaining partners do not meet the qualifying requirements;
 - ii) The new partners to a JV are not qualified individually or as another JV; or
 - iii) In the opinion of the Employer, a substantial reduction in competition would result.
- c) Bid shall be signed by all members in the JV so as to legally bind all Partners, jointly and severally, and any bid shall be submitted with a copy of the JV agreement providing the joint and several liabilities with respect to the contract.

The prequalification of a JV does not necessarily prequalify any of its partners individually or as a partner in any other JV or association. In case of dissolution of a JV, each one of the constituent firms may prequalify if they meet all the prequalification requirements and any partner of J.V has requested/shall request for the same and then his prequalification shall be subject to the written approval of the Employer.

4. Bids Requirements

The objective of bids requirements is to provide bidders with the information to submit their bid is response of RFP. Bidders must follow requirements for their proposals/bids:

- 4.1. For this tender PPRA'S Para 36(b)" Single stage, two envelope bidding procedure" for open competitive bidding shall be adopted
- 4.2. Bids shall comprise of single envelope containing two separate envelopes
- 4.3. The financial bids of the technically qualified firms will be opened.
- 4.4. **The Technical Bid must be accompanied with Rs. 1.000 million as EM deposited as CDR/pay order from a schedule bank, & must reach at the office of the Director works KIU, GB, clearing the name of project at the envelope.**
- 4.5. Technical proposal shall contain company profile, location of branch offices, company experience and related field, technical staff details, project completed major client list, technical specification (brochures etc.) of quoted hardware, equipment & material with their make (if not enlisted with KIU) and authorized & relationship with principal firms must be updated at EPADS online submission of documents.

5. Selection Procedure

- 5.1. A two-step process will be used for the selection of a bidder of the award of this tender
- 5.2. Only the technically qualified bidders shall be accepted for financial opening
- 5.3. If the specification is not met by the bidder, the bid will be considered as non-responsive and will not be considered for financial evaluations.

6. Minimum requirements for the Service Level Agreements (SLA)

Following requirements for SLA applicable for this RFP:

- 6.1. The selected bidder shall provide 1-year warranty/services/hardware parts replacement support. The bidder shall ensure all equipment (items) and its part are new and free from any sort of defects.
- 6.2. Any cause of delay in response and rectification of fault will lead to financial penalties to the selected bidder and details of penalties will be incorporated in SLA

7. Terms of payments:

- 7.1. No payment shall be made in advance.
- 7.2. Payment will be made after successful completion of solution subject to certification of university technical committee/ third party validation.
- 7.3. Ten percent (10%) of the payable amount against contract value will be retained as security/ retention money, which will be released after successful completion of one-year warranty services.
- 7.4. Payments shall be made through cross cheque in the Pak rupees.
- 7.5. Taxes will be deducted at source as per government rules at the time of payment.
- 7.6. Income tax in case of local suppliers will be deducted as per rates applicable in GB and in case of suppliers from down country; income tax will be as per Federal Government rates.

8. Liquidated Damages.

8.1. Liquidated damages shall be applicable as under:

- a) A penalty of 0.01% per day up to a maximum of 10% of contract cost can be imposed for delays in project completion. LD shall be imposed if the project completion timelines are over.
- b) Project completion timelines are Three month (90 days) from the award of Contract

9. Terms and conditions of successful bidder

- 9.1. The selected bidder shall provide the technical documentation as well as user's manual for each item both in the form of hard copy and soft copy
- 9.2. All the material required for work completion other than explicitly mentioned in the BOQ of this RFP will be responsibility of the successful bidder.
- 9.3. Successful bidder is responsible to fix/install, configure and test each at main campus according to BOQ
- 9.4. University's inspection committee will provide clearance for supplied items and reject the equipment, if not found according to the accepted specifications.
- 9.5. The University reserves the right to claim compensation for the losses caused by delaying the delivery of equipment.
- 9.6. Selected bidder must certify that the OEM original branded and new equipment is supplied and installed
- 9.7. The selected bidder will arrange for the return of all erroneously ordered or shipped items at no cost to the University.
- 9.8. OEM shall replace, without charge, any equipment that fails to perform as its benchmark.
- 9.9. Additional terms and conditions may be added to the work orders/ agreements by KIU.
- 9.10. The successful bidder responsible to provide onsite operational training for KIU Staff.

10. General terms and conditions:

The following General terms and conditions apply to all categories of this RFP

- 10.1. A bank draft/pay order equal to Rs. 01 million of any scheduled bank in favor of Director works, Karakoram international University should as earnest money. The tender without earnest money or less than Rs. 01 million will be considered as void tender and is liable to be rejected.
- 10.2. The earnest money in shape of cheque will not be accepted and bid will be cancelled
- 10.3. If there is a discrepancy between unit price in the submitted bid which is obtained by multiplying the unit price and quantity, the unit price shall prevail and total price shall be corrected. If there is discrepancy between the words and figures, the amount in words shall prevail. If there is a mistake in addition /totaling, that shall be corrected. If the bidder does not accept the corrected amount of bid, his bid shall be rejected and his bid security forfeited.
- 10.4. Incomplete and conditional tenders will not be entertained.

- 10.5. The earnest money of Rs. 1.000 million of the successful bidder shall be deposited in security deposit account of KIU after supply of items as mentioned in BOQ and will be adjusted in final bill of the supplier
- 10.6. The University reserves the rights to reject all or any of the bids as per clause 33 of the Public Procurement Rules, 2004
- 10.7. Validity period of the bids shall be 90 days
- 10.8. Bids are liable to be rejected, if they are not in line with the terms, conditions and specifications stipulated in this RFP.
- 10.9. During the examination, evaluation and comparison of bids the KIU, at its sole direction, may ask the bidder for clarification of its bid.
- 10.10. The request for the clarification and response shall be in writing/email and no change in price or substance of the bid shall be sought, offered or permitted
- 10.11. Project completion timelines should not exceed more than Three month (90 Days) from the date of start order
- 10.12. After award of the contract the bidder has to submit performance guarantee from AA+ rating insurance company or Schedule Bank for 10% of the contract Price.
- 10.13. The Contractor/firm has to submit ALL Risk Insurance Guarantee of Contract Price + 15% in the name of Karakoram International University from AA+ rating insurance company.
- 10.14. The work will be increased and decreased as per requirements of the university.

11.0 **Clarification**

Quires regarding this RFP shall be submitted in writing to:

Executive Engineer

Ph.: 05811-960010-13(Ext 163)

xen@kiu.edu.pk

Assistant Engineer (E)

Ph.: 05811-96001013(Ext 219)

Mob.# 3449115854

gurbanali@kiu.edu.pk

I have read and accept all the terms and condition **(to be filled by bidder)**

Bidder name: _____

CNIC number: _____

Designation: _____

Signature: _____

BILL OF QUANTITIES

Name of work:- Solarization of Remaining Buildings KIU phase -II

Abstract of Cost

S/N o.	Name of Building	Capacity	Amount
1	Exam and Transport section	24KW	
2	Old Building KIU	36 KW	
3	Mining Engineering	24 KW	
4	Electrical & civil Engg.	24 KW	
5	Ski & sports	12 KW	
6	Girls Hostel-1	24 KW	
7	Girls Hostel-2	24 KW	
8	Civil Work	---	
	Total	168KW	

DETAILED BOQ

24-KW Hybrid Solar System for Exam and Transport section KIU (A)

Item Description	QTY	Unit	Unit Cost (Rs)	Total Cost(Rs)
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1	Supply installation and commissioning of Solar Panel PV Module (600W and above) PERC Mono Crystalline, A Grade TUV N-type bifacial. Certified Tier-1 Brand: LONGI, CANADIAN SOLAR, JONKO. ASTRO. product Warranty: 12 Years Performance Warrnty-25 years	25,000	Watt		
2	Supply installation and commissioning of INVERTER Hybrid- 3-Phase, Pure Sine Wave, Online Monitoring Enabled, IP65, Parallel Operations Enabled. 12KWx2 or 24KWx1, total capacity =24KW Nitrox Inverex, Huawei, GROWATT, KNOX, SOLIS, GoodWe, zewnic. Replacement Warranty: 5 Years	1	Set		
3	Supply installation and commissioning of Lithium Ion battery 100AH/ 48V, Charging Cycles greater than 6000 cycles Total= 600AH/48V (Pylontech, Narada,DJDC, Topak, KNOX,SUNWODA) Replacement Warranty: 5 years	06	Nos		
4	Battery Rack	2	Nos		
5	Supply, fabrication and installation of MS Iron Elevated ground mounted, H-beam shed type structure for 24KW solar panels with angle Iron steel rafters of size 1-200x120x4x5mm, Column size 1-200x120x4x5mm with base plate of size 300x300x12mm including RCC foundation complete as per given drawing suitable for 42 solar panels of rating 580 watts Etc. complete	01 job	Nos		
6	Providing and fixing High Quality Distribution Box. Distribution box Should be including Phase failure, Phase distribution. Pure copper lightening arrester and DC Earthing with 6mm Earthing wire.	2	job		

7	supply and installation of Lightning Arrester and AC / DC Earthing. As per requirement approx. Depth 6ft using earthing rod.	1	Set		
8	Supply installation and commissioning of ATS panel 3 phase 100-150 Amp. including all requisite accessories i-e MCCBs, Magnetic contactors, phase sequence relay, Inc. MOR enabled. as per instruction of Engineer incharge	1	No.		
9	Supply and installing of DC Inverter AC 1 ton for the System room to Maintain Temperature for Battery (Gree, Haier, Dawlance or equivalent)	1	No		
10	Supply installation and commissioning of Automatic voltage Stabilizer 30KW, 3-phase 4 wire 220-230/380-440V voltage range 50HZ frequency controlled by serve motor including high and low voltage protection etc. complete(Stabematic or equivalent)	1	No		
11	High insulation protection DC wire 6mm Pure Copper XLPO, including PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent	450	mtr		
12	High insulation protection DC wire 25mm Pure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent	30	mtr		
13	Supply and fixing of single core PVC insulated and sheathed cable 10 mm sq. inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent	700	mtr		
Total Amount Rs.					

Name of Work:36-KW Hybrid Solar System for Old Building KIU (B)

	Item Description	QTY	Unit	Unit Cost (Rs)	Total Cost(Rs)
1	Supply installation and commissioning of Solar Panel PV Module (600W & above) PERC Mono Crystalline, A Grade TUV Certified Tier-1 Brand: JINKO, LONGI, CANADIAN SOLAR, ASTRO. Product Warranty: 12 Years Performance Warranty: 25 Years	36,000	Watt		
2	Supply installation and commissioning of INVERTER Hybrid- 3-Phase, Pure Sine Wave, Online Monitoring Enabled, IP65, Parallel Operations Enabled. 12KWx3 or 24KW+12 total capacity = 36KW Nitrox Inverex, Huawei, GROWATT, KNOX, SOLIS, GoodWe zewnic. Replacement Warranty: 5 Years	1	Set		
3	Supply installation and commissioning of Lithium Ion battery 100AH 48V, greater than 6000 charging cycles IP65 (Pylontech, Narada,DJDC, Topak, KNOX, SUNWODA) Replacement Warranty: 5 years	8	Nos		
4	Bttery rack	2	Nos		
5	Supply installation of steel Structure L2, 14 gauge of iron angle frame for PV panels suitable for RCC Roof. Drilled on RCC roof and Sealed with Epoxy for Leakages. Etc. complete	32	Nos		
6	Providing and fixing High Quality Distribution Box. Distribution box Should be including Phase failure, Phase distribution. Pure copper lightening arrester and DC Earthing with 6mm Earthing wire.	2	job		
7	Supply and installation of Lightning Arrester and AC / DC Earthing. As per requirement approx. Depth 6ft using earthing rod.	1	Set		

8	Supply installation and commissioning of ATS panel 3 phase 100-150 Amp. including all requisite accessories i-e MCCBs, Magnetic contactors, phase sequence relay, Inc. MOR enabled. as per instruction of Engineer incharge	1	no		
9	Supply and installing of DC Inverter AC 1 ton for the System room to Maintain Temperature for Battery (Gree, Haier, Dawlance or equivalent)	1	no		
10	Supply installation and commissioning of Automatic voltage Stabilizer 40 KW, 3phase 4 wires, 380-440 volt range 50HZ frequency controlled by serve motor including high and low voltage protection etc. complete	1	No		
12	High insulation protection DC wire 6mm Pure Copper XLPO Inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent	400	mtr		
13	High insulation protection DC wire 25mm Pure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent	50	mtr		
14	S/f of single core pvc insulated and sheathed cable 10mm" dia inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent	600	mtr		
15	S/F of 16mm sq. 4 core cable PVC insulated and PVC sheathed cable from solar control room to existing MPB at GF.	120	mtr		
	Laptop HP Pro Book 450 G9, Core i7 12th Gen. 16GB Ram, SSD 512 brand new	1	No		
Total Amount Rs.					

Name of Work:24-KW Hybrid Solar System for Mining Engineering KIU (C)

	Item Description	QTY	Unit	Unit Cost (Rs)	Total Cost(Rs)
1	Supply installation and commissioning of Solar Panel PV Module (600W & above) PERC Mono Crystalline, A Grade TUV Certified Tier-1 Brand: LONGI, CANADIAN SOLAR, JONKO. ASTRO. Product Warranty: 12 Years Performance Warranty: 25 Years	24,000	Watt		
2	Supply installation and commissioning of INVERTER Hybrid- 3-Phase, Pure Sine Wave, Online Monitoring Enabled, IP65, Parallel Operations Enabled. 12KWx2 or 24KWx1, total capacity =24KW Nitrox Inverex, Huawei, GROWATT, KNOX, SOLIS, GoodWe zewnic. Replacement Warranty: 5 Years	1	No		
3	Supply installation and commissioning of Lithium Ion battery 100AH 48V, greater than 6000 charging cycles (Pylontech, Narada,DJDC, Topak, KNOX, SUNWOODA) Replacement Warranty: 5 years	5	Nos		
4	battery Rack	1	Nos		
5	Supply installation of steel Structure L2, 14 gauge frame for PV panels suitable for RCC Roof. Drilled on RCC roof and Sealed with Epoxy for Leakages. Etc. complete	21	Nos		
6	Providing and fixing High Quality Distribution Box. Distribution box Should be including Phase failure, Phase distribution. Pure copper lightening arrester and DC Earthing with 6mm Earthing wire.	2	job		

7	Accessories of Lightning Arrester and AC / DC Earthing. As per requirement approx. Depth 6ft using earthing rod.	1	Set		
8	Supply installation and commissioning of ATS panel 3 phase 100-150 Amp. including all requisite accessories i-e MCCBs, Magnetic contactors, phase sequence relay, Inc. MOR enabled. as per instruction of Engineer incharge	1	no		
9	Supply installation and commissioning of Automatic voltage Stabilizer 30 KW, 3phase 4 wires 380-440 voltage range 50HZ frequency controlled by serve motor including high and low voltage protection etc complete	1	No		
10	High insulation protection DC wire 6mm Pure Copper XLPO Inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent)	400	mtr		
11	High insulation protection DC wire 25mm Pure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent)	30	mtr		
12	S/f of single core pvc insulated and sheathed cable 10mm ² inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent)	600	mtr		
13	S/F of 16mm sq. 4 core cable PVC insulated and PVC sheathed cable from solar control room to existing MPB at GF.	65	mtr		
14	Supply and installing of DC Inverter AC 1 ton for the System room to Maintain Temperature for Battery (Gree, Haier, Dawlance or equivalent)	1	No.		
Total Amount Rs.					

Name of Work: 24-KW Hybrid Solar System for Electrical and civil Engineering KIU (D)

	Item Description	QTY	Unit	Unit Cost (Rs)	Total Cost(Rs)
1	Supply installation and commissioning of Solar Panel PV Module (545W-580W) PERC Mono Crystalline, A Grade TUV Certified Tier-1 Brand: LONGI, CANADIAN SOLAR, JONKO. ASTRO. Warranty: 12 Years	24,000	Watt		
2	Supply installation and commissioning of INVERTER Hybrid- 3-Phase, Pure Sine Wave, Online Monitoring Enabled, IP65, Parallel Operations Enabled. 12KWx2 or 24KWx1, total capacity =24KW Nitrox Inverex, Huawei, GROWATT, KNOX, SOLIS, GoodWe zewnic. Replacement Warranty: 5 Years	1	No		
3	Supply installation and commissioning of Lithium Ion battery 100AH 48V, greater than 6000 charging cycles. (Pylontech, Narada,DJDC, Topak, KNOX, SUNWODA) Replacement Warranty= 05 years	5	Nos		
4	Battery Rack	1	Nos		
5	Supply installation of steel Structure L2, 14 gauge frame for PV panels suitable for RCC Roof. Drilled on RCC roof and Sealed with Epoxy for Leakages. Etc. complete	21	Nos		
6	Providing and fixing High Quality Distribution Box. Distribution box Should be including Phase failure, Phase distribution. Pure copper lightning arrester and DC Earthing with 6mm Earthing wire.	2	job		

7	Supply and Installation of Lightning Arrester and AC / DC Earthing. As per requirement approx. Depth 6ft using earthing rod.	1	Set		
8	Supply installation and commissioning of ATS panel 3 phase 100-150 Amp. including all requisite accessories i-e MCCBs, Magnetic contactors, phase sequence relay, Inc. MOR enabled. as per instruction of Engineer incharge	1	no		
9	Supply installation and commissioning of Automatic voltage Stabilizer 30 KW, 3 phase 4 wires 380-440 voltage range 50HZ frequency controlled by serve motor including high and low voltage protection etc complete	1	No		
10	High insulation protection DC wire 6mm Pure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent)	400	mtr		
11	High insulation protection DC wire 25mm Pure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent)	30	mtr		
12	S/f of single core pvc insulated and sheathed cable 10mm ² dia inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent)	550	mtr		
13	S/F of 16mm sq. 4 core cable PVC insulated and PVC sheathed cable from solar control room to existing MPB at GF.	70	mtr		
14	Supply and installing of DC Inverter AC 1 ton for the System room to Maintain Temperature for Battery and other equipment(Gree, Haier, Dawlance or equivalent)	1	No		
Total Amount Rs.					

Name of Work:12-KW Hybrid Solar System for SKI Center KIU (E)

	Item Description	QTY	Unit	Unit Cost (Rs)	Total Cost(Rs)
1	Supply installation and commissioning of Solar Panel PV Module (600W & above) PERC Mono Crystalline, A Grade TUV Certified Tier-1 Brand: LONGI, CANADIAN SOLAR, JONKO. ASTRO. Warranty: 12 Years	12,000	Watt		
2	Supply installation and commissioning of INVERTER Hybrid- 3-Phase, 12 KW, Pure Sine Wave, Online Monitoring Enabled, IP65, Parallel Operations Enabled. Nitrox Inverex, Huawei, GROWATT, KNOX, SOLIS, GoodWe, zewnic. Replacement Warranty: 5 Years	1	No		
3	Supply installation and commissioning of Lithium Ion battery 100AH 48V, charging Cycles greater than 6000 Cycles. (Pylontech, Narada,DJDC, Topak, KNOX, SUNWODA) Replacement Warranty: 5 years	2	Nos		
4	Battery Rack	1	Nos		
5	Supply installation of steel Structure L2, 14 gauge frame for PV panels suitable for RCC Roof. Drilled on RCC roof and Sealed with Epoxy for Leakages. Etc complete	11	Nos		
6	Providing and fixing High Quality Distribution Box. Distribution box Should be including Phase failure, Phase distribution. Pure copper lightening arrester and DC Earthing with 6mm Earthing wire.	2	job		
7	Supply and installation of Lightning Arrester and AC / DC Earthing. As per requirement approx. Depth 6ft using earthing rod.	1	Set		

8	Supply installation and commissioning of ATS panel 3 phase 100-150 Amp. including all requisite accessories i-e MCCBs, Magnetic contactors, phase sequence relay, Inc. MOR enabled. as per instruction of Engineer incharge	1	no		
9	Supply installation and commissioning of Automatic Voltage Stabilizer 15 KW, 3-phase 4 wires 380-440 voltage range 50HZ frequency controlled by serve motor including high and low voltage protection etc complete. (Stabematic or equivalent)	1	No		
10	High insulation protection DC wire 6mmPure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent)	350	mtr		
11	High insulation protection DC wire 25mmPure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent)	25	mtr		
12	S/f of single core pvc insulated and sheathed cable 10mm sq. dia inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent)	400	mtr		
13	S/F of 16mm sq. 4 core cable PVC insulated and PVC sheathed cable from solar control room to existing MPB at GF.	60	mtr		
14	Supply and installing of DC Inverter AC 1 ton for the System room to Maintain Temperature for Battery and other equipment. (Gree, Haier, Dawlance or equivalent)	1	No		
	Total Amount Rs.				

Name of Work:24-KW Hybrid Solar System for Girl Hostel No-1 KIU (F)

	Item Description	QTY	Unit	Unit Cost (Rs)	Total Cost(Rs)
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1	Supply installation and commissioning of Solar Panel PV Module (600W & above) PERC Mono Crystalline, A Grade TUV Certified Tier-1 Brand: LONGI, CANADIAN SOLAR, JONKO. ASTRO. Warranty: 12 Years	24,000	Watt		
2	Supply installation and commissioning of INVERTER Hybrid- 3-Phase, Pure Sine Wave, Online Monitoring Enabled, IP65, Parallel Operations Enabled. 12KWx2 or 24KWx1, total capacity =24KW Nitrox Inverex, Huawei, GROWATT, KNOX, SOLIS, GoodWe, zewnics. Replacement Warranty: 5 Years	1	No		
3	Supply installation and commissioning of Lithium Ion battery 100AH 48V, charging cycles greater than 6000 cycles (Pylontech, Narada,DJDC, Topak, KNOX, SUNWODA) Replacement Warranty: 5 years, Performance Warranty : 10 years	4	Nos		
4	Battery Rack	1	Nos		
5	Supply installation of steel Structure L2, 14 gauge frame for PV panels suitable for RCC Roof. Drilled on RCC roof and Sealed with Epoxy for Leakages. Etc complete	22	Nos		
6	Providing and fixing High Quality Distribution Box. Distribution box Should be including Phase failure, Phase distribution. Pure copper lightening arrester and DC Earthing with 6mm Earthing wire.	2	job		
7	Supply and installation of Lightning Arrester and AC / DC Earthing. As per requirement approx. Depth 6ft using earthing rod.	1	Set		

8	Supply installation and commissioning of ATS panel 3 phase 100-150 Amp. including all requisite accessories i-e MCCBs, Magnetic contactors, phase sequence relay, Inc. MOR enabled. as per instruction of Engineer incharge	1	no		
9	Supply installation and commissioning of Automatic voltage Stabilizer 30 KW, 170-230 voltage range 50HZ frequency controlled by serve motor including high and low voltage protection etc complete(Stabematic or equivalent)	1	No		
10	High insulation protection DC wire 6mm Pure Copper XLPO Inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent	350	mtr		
11	High insulation protection DC wire 25mm sq. Pure Copper XLPO inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent	30	mtr		
12	S/f of single core pvc insulated and sheathed cable 10mm sq. dia inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent	500	mtr		
13	S/F of 16mm sq. 4 core cable PVC insulated and PVC sheathed cable from solar control room to existing MPB at GF.(Fast, Newage,Pakistan)	50	mtr		
Total Amount Rs.					

Name of Work:24-KW Hybrid Solar System for Girls Hostel No-2 KIU (G)

	Item Description	QTY	Unit	Unit Cost (Rs)	Total Cost(Rs)
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1	Supply installation and commissioning of Solar Panel PV Module (600W & above) PERC Mono Crystalline, A Grade TUV Certified Tier-1 Brand: LONGI, CANADIAN SOLAR, JONKO. ASTRO. Warranty: 12 Years	24,000	Watt		
2	Supply installation and commissioning of INVERTER Hybrid- 3-Phase, Pure Sine Wave, Online Monitoring Enabled, IP65, Parallel Operations Enabled. 12KWx2 or 24KWx1, total capacity =24KW Nitrox Inverex, Huawei, GROWATT, KNOX, SOLIS, GoodWe, zewnic. Replacement Warranty: 5 Years	1	Set		
3	Supply installation and commissioning of Lithium Ion battery 100AH 48V charging cycles greater than 6000 cycles (Pylontech, Narada,DJDC, Topak, KNOX, SUNWODA) Replacement Warranty: 5 years,	4	Nos		
4	Battery Rack	1	Nos		
5	Supply installation of steel Structure L2, 14 gauge frame for PV panels suitable for RCC Roof. Drilled on RCC roof and Sealed with Epoxy for Leakages. Etc complete	21	Nos		
6	Providing and fixing High Quality Distribution Box. Distribution box Should be including Phase failure, Phase distribution. Pure copper lightening arrester and DC Earthing with 6mm Earthing wire.	2	job		
7	Supply and installation of Lightning Arrester and AC / DC Earthing. As per requirement approx. Depth 6ft using earthing rod.	1	Set		

8	Supply installation and commissioning of ATS panel 3 phase 100-150 Amp. including all requisite accessories i-e MCCBs, Magnetic contactors, phase sequence relay, Inc. MOR enabled. as per instruction of Engineer incharge	1	no		
9	Supply installation and commissioning of Automatic voltage Stabilizer 30 KW, 220-230 /380-440 voltage range 50HZ frequency controlled by serve motor including high and low voltage protection etc complete	1	No		
10	High insulation protection DC wire 6mm Pure Copper XLPO inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent	370	Mtr		
11	High insulation protection DC wire 25mm Pure Copper XLPO Inc. PVC duct as required. (Pakistan cables, Newage. Fast cables or equivalent	50	Mtr		
12	S/f of single core pvc insulated and sheathed cable 10mm2 dia Inc. PVC conduits as required. (Pakistan cables, Newage. Fast cables or equivalent	500	Mtr		
13	S/F of 16mm sq. 4 core cable PVC insulated and PVC sheathed cable from solar control room to existing MPB at GF. (Fast, Newage, pakistan cables or eq)	80	Mtr		
	Total Amount Rs.				
CIVIL WORK					
	Description	Qty	Unit	Rate	Amount
				(RS)	(RS)
1	Providing and laying in situ 1:2:4 cement concrete using screened graded bajri 3/4 inch (19 mm) and down gauge in pillars and	250.00	100cft	44,302.55	110,756

	columns of any shape (excluding T and L) in superstructure including compacting, curing, cost of from work and its removal etc., complete in ground floor.				
2	Providing and fixing fully glazed Silver anodized aluminium Fixed windows Partition as per British standard manufactured by Lucky, Alcop, Krudson, Pakistan Cables and A.C.P. (fixing through approved fabricators) Economy model box section 76.2mm x 38.1mm and 2mm thick including the cost of aluminium fittings, with all accessories cutting hole etc. and making good damages to walls etc. complete as required in any floor as per direction of engineer-in-charge, but excluding the cost of glass pans.	220.00	100 Sft	822.22	180,888
3	Providing and fixing fully glazed Silver anodized aluminium Swing door with frame as per British standard manufactured by Lucky, Alcop, Krudson, Pakistan cable and A.C.P. (fixing through their approved fabricators), Deluxe model section, 76.2mm x 38.1mm and 1.6mm thick including the aluminium fittings, with all accessories cutting hole etc. and making good damages to walls etc. complete as required in any floor as per direction of engineer-in-charge, but excluding the cost of glass pans.	44.00	100 Sft	1740.63	76,588
					368,232
	Add % above on SR items				
	TOTAL				
4	P/F of 5mm glass approved design etc	200.0	psft		

5	P/F of lassani press sheet 3/4" thick partition i/c wooden frame 2" x2 1/2" size with all accessories etc	240.0	psft		
	Total civil work				
	G. Total				

Executive Engineer

Director Works