



## **BID DOCUMENT**

**SUPPLY, INSTALLATION, & COMMISSIONING OF SOLAR  
POWER AND SURVEILLANCE SYSTEMS, INCLUDING  
RELOCATION OF EXISTING SYSTEMS AT MULTIPLE  
FOREST CHECK POSTS ACROSS GILGIT-BALTISTAN**

**(Single Stage –Two Envelop)**

**Chief Conservator  
Forest Department  
Government of Gilgit-Baltistan**

**April -2026**

## BID DOCUMENT

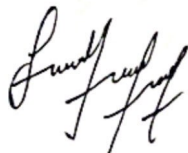
### 1. INSTRUCTIONS TO BIDDERS

- A. All bids must be accompanied by Bid Security (Call deposit), as part of the technical bid and as per provisions of the clause "Bid Security" of this document in favor of "**Chief Conservator Forests, GB**". The complete bids as required under this tender document, must reach the **Office of Chief Conservator Forests GB, Forest Complex Jutial, Gilgit** as mentioned in Data Sheet and Invitation to Bid.
- B. The Technical bid shall be opened in the office of Chief Conservator Forests, GB, Gilgit at **11:30 hours on May, 04 2026**, in case the last date of bid submission falls in/within the official holidays /weekend, the last date for submission of the bids shall be the next working day.
- C. The bidders shall submit bids which comply with the Bidding Document. **Alternative bids and options shall not be considered**. The attention of bidders is drawn to the provisions of this tender document Clause regarding "**Determination of Responsiveness of Bid**" and "**Rejection/Acceptance of the Tender**" for making their bids substantially responsive to the requirements of the Bidding Document.
- D. Bidders are also required to state, in their proposals, the name, title, contact number (landline, mobile), fax number and e-mail address of the bidder's authorized representative through whom all communications shall be directed until the process has been completed or terminated.
- E. All proposals must be typed, stamped and required documents must be attested, Hand written proposals shall be straight away rejected.
- F. Bidders must attach the product brochure/ catalogue with the financial proposal
- G. The procuring agency will not be responsible for any costs or expenses incurred by bidders in connection with the preparation or delivery of bids.
- H. Failure to supply required items/services within the specified time period will invoke a penalty as specified in this document.
- I. While tendering your quotation, the present trend/inflation in the rate of goods and services in the market should be kept in mind. No request for the increase in prices due to market fluctuation in the cost of goods and services shall be entertained after the bid has been submitted. Prices should be valid for the current financial year 2026-2027 and onward until the tender completion and execution and post services.

### 2. INTRODUCTION

The Forest Department, Government of Gilgit-Baltistan, is responsible for the protection, conservation, and sustainable management of forest resources across the region. The department operates an extensive network of forest check posts to regulate the movement of forest produce, prevent illegal logging, and ensure enforcement of forestry laws in remote and ecologically sensitive areas.

To strengthen field-level monitoring and enforcement, the department is undertaking the installation of solar power and surveillance systems at multiple forest check posts. Due to the remoteness of these locations and the lack of reliable grid electricity, the provision of solar energy solutions is essential to ensure uninterrupted functioning of surveillance equipment and associated



infrastructure.

This tender is invited for the **Supply, Installation, and Commissioning of Solar Power and Surveillance Systems, including the Relocation of Existing Systems at Multiple Forest Check Posts across Gilgit-Baltistan**. The scope includes deployment of new systems as well as safe dismantling, transportation, reinstallation, and commissioning of already installed units at designated locations.

### 3. OBJECTIVE:

The objective of this initiative is to enhance real-time monitoring, improve enforcement capacity, and ensure continuous operational readiness of forest check posts. By integrating renewable energy solutions with modern surveillance infrastructure, the Forest Department aims to strengthen forest protection mechanisms, improve transparency in operations, and support effective management of forest resources across Gilgit-Baltistan.

### 4. SCOPE OF THE PROJECT

The scope of this project includes the Supply, Installation, Testing, and Commissioning of Solar Power and Surveillance Systems, including Relocation of Existing Systems at Multiple Forest Check Posts across Gilgit-Baltistan. The contractor shall provide a complete, functional, and operational solution in accordance with departmental requirements.

The scope includes:

#### 1. Supply and Installation

Supply, installation, and integration of solar power systems and surveillance equipment, including all necessary accessories, cabling, mounting structures, and allied works for complete functionality.

#### 2. Relocation of Existing Systems

Dismantling, safe transportation, reinstallation, and commissioning of already installed solar and surveillance systems at designated new locations, ensuring full operational performance.

#### 3. Testing and Commissioning

Complete testing of all systems and final commissioning to ensure reliable and uninterrupted operation at each check post.

#### 4. Warranty, Replacement, and Uninterrupted Operations

During the warranty period, the contractor shall:

- Replace/repair any faulty or defective equipment promptly at no additional cost
- In case of equipment failure, provide immediate alternatives or backup arrangements to ensure **uninterrupted operation** of surveillance and power systems
- Ensure continuity of services so that check post operations remain unaffected at all times
- Quarterly maintenance visits as per frame work agreement

#### 5. Training and Documentation

Provide basic training to departmental staff at each site and submit essential documentation, including manuals, warranties, and system layouts.

### 5. Eligibility/Qualification Criteria for Service Provider

Following are the essential knockout clauses for the Service Provider:



- a. Registration certificate of Service Provider with SECP/Form C (attested copy)
- b. The Service Provider should be a single company/firm, JV is strictly not allowed
- c. All proposals must be typed, stamped and required documents must be attested. Hand written proposals shall be straight away rejected.
- d. This invitation for bids is open to only Energy & Surveillance authorized firms or companies registered purely related to energy and surveillance solutions having relevant experience in Pakistan and registered for supply and commissioning.
- e. The registered company must have a well-established office and outlet registered in the name of same company or firm in Gilgit.
- f. Brochures/catalogue of each supplying product must be attached with technical proposal without quoting the price
- g. Attested financial bank statements
- h. The bidders must have installed at least 2 similar projects in government sector The Service Provider shall submit the Completion Certificate(s) of installed projects. (attested)
- i. Authorized distributor certificate for both surveillance and solar supply.
- j. All Mandatory Affidavits enlisted in the technical evaluation criteria on a stamp paper of 100
- k. A Service Provider shall be disqualified at any stage, if found that the Service Provider has made misleading or false representation in the form, statements and attachments in the proof of the qualification requirements.
- l. The Service Provider must be an active registered taxpayer with FBR unless exempted under any law/rules.
- m. The Service Provider shall submit all above requisite documents duly attested justifying the proof of eligibility otherwise the firm shall be disqualified.
- n. The Service Provider shall provide a local support for complaint redressal and GB based presentation to address real time complaints pertaining to solar system, surveillance system or any tender related complaints. The companies will pay visits to deployment sites for field queries.

## 6. Eligible goods and services

- 1.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries and all expenditures made under the contract shall be limited to such goods and services.
- 1.2 All the goods and services to be supplied under the contract should meet the criterion set in the equipment specifications given at technical specifications of tender document attached. No other equipment will be accepted.
- 1.3 **All goods and services shall be supplied across the GB and post services shall be asked anywhere in GB as and whenever required under the framework agreement after winning the bid.**
- 1.4 The Guarantee of products should be local and as per standards
- 1.5 The Contractor will be sole responsible for complete replacement, alternate arrangement for continued operations, claim and installation of product under the product warranty claims and shall bear all operational and logistic expenses as long as warranty of product intact.
- 1.6 While tendering your quotation, the present trend/inflation in the rate of goods and services in the market should be kept in mind. No request for the increase in prices due to market fluctuation in the cost of goods and services shall be entertained after the bid has been submitted.
- 1.7 Bid Prices should be valid for 120 days and inclusive of all types of taxes, and onward until the tender completion and execution and post services.



## 7. Bid Currencies

Prices shall be quoted in Pak Rupees.

### 7.1 Estimated Budget

Estimated budget for this bidding (supply, installation, & commissioning of solar power and surveillance systems, including relocation of existing systems at multiple forest check posts across Gilgit-Baltistan and post maintenance/ services for two years) is **7.6 million** inclusive of all type of taxes.

Any escalated bid offered beyond the estimated budget will not be entertained.

The offered bid price lower than 25% of the estimated budget shall be treated as irrational and shall not be entertained.

## 8. PREPARATION / SUBMISSION OF TENDER

Please read all mandatory knock out classes while filling the bid documents

- 1.8 The bidder may apply for bids for the entire solution.
- 1.9 The Tender and all documents relating to the Tender, exchanged between the Tenderer and the Procuring Agency, shall be in **English, typed, properly flagged with proper page numbering, stamped and in booklet form. Hand Written bids shall be straightaway rejected.**
- 1.10 The Tender shall be in two parts i.e. the technical proposal and the financial proposal.
- 1.11 Technical Proposal shall comprise the following, copy of CDR must be attached without quoting the price.
- 1.12 Undertakings (All terms & conditions and qualifications listed anywhere in this tender document have been satisfactorily vetted) and Affidavit.
- 1.13 Certificate of Company/Firm Registration/Incorporation under the laws of Pakistan
- 1.14 Covering letter duly signed and stamped by an authorized representative.
- 1.15 Evidence of Conformity of the Goods / the Services to the Tender Document
- 1.16 Undertaking and Evidence that the quoted Goods are genuine, brand new, non-refurbished, un-altered in any way, of the most recent/current model, imported through proper channel, and incorporate all recent improvements in design and materials.
- 1.17 Brochures /Literature of products must be attached with technical bid
- 1.18 Details of Warranty and After-Sale Service must be attached with financial bid and provide in undertaking as listed in evaluation criteria.
- 1.19 Power of Attorney if an authorized representative is appointed

## 9. EVALUATION CRITERIA

The technical proposals of the qualified bids after evaluation as per eligibility criteria shall be evaluated. The financial proposal will be opened if technical proposal meet the outlined criteria in technical evaluation.

### 1. FINAL EVALUATION

The final evaluation will be based on the Mandatory Documentary evidence out charted in Technical



Evaluation Criteria and financial criteria. Only the Bidder fulfilling the technical criteria, their respective bids shall be opened for financial.

## 2. Financial Evaluation:

Hand Written financial bids are straight away rejected

**The responsive firms/companies offering the most advantageous (lowest) financial bid shall be declared the successful bidder.**

## 3. Technical Evaluation Criteria:

Firms/companies will be straightaway rejected if any single mandatory documents missing or not provided by bidders. Only technically qualified bidders shall be qualified for Financial Bids opening.

Financial bid of the rejected bidders will be returned un-opened.

S No	Qualification and Relevant Experience	Proof of documents / Remarks
1	Firm Profile: only relevant to Solar Energy and surveillance with outlet in the name of same company, Local support Service facility in Gilgit-Baltistan Form C /PEC/ SECP verified JV and other sector registered companies are straight away rejected Note: PEC codes are only applied to PEC registered firms that are required to produce PEC codes of both EE11 & EE02 while it does not apply on Form C / SECP firms	
2	Profile of team members of Service Provider (Will be verified) Profile of Project Manager/ Team Lead of Service Provider for this project: Relevant Engineering Degree attested with a CV Profile of at least three other team members dedicated for this project (List of professional staff proposed for this project and last degree obtained attested copy and CV of each professional staff proposed must be attached)	
3	Projects: Completion Certificate of two similar nature projects both solar and surveillance in government sector (attested)	
4	Financial strength of Service Provider Annual Turnover Up to PKR 10 million with a closing balance of 3.00 million Original Bank Statement of last year (attested)	
5	Affidavit of the following on a stamp paper of 100 1. Non-Blacklisting 2. No litigation against the Government/Semi Government organization 3. originality of product and warranty claim as per specification 4. Post installation, complains compliance service for two years 5.. Shifting of previously installed solar system and install on relocated place anywhere in GB 6. Authorized Dealer/distribution of products and services for both solar and surveillance ( copies of authorized dealer/ distribution from the companies of both surveillance and solar must be attached and attested)	
6	Brochures/ catalogue / literature of the product	

## 10. Bid Security

There will be 5% Bid Security of quoted price.



## 11. PERFORMANCE SECURITY

Successful bidders will be required to submit performance security equal to 10% of the total bid price in the form of a CDR from any scheduled bank, made out in the name of the Chief Conservator Forest, on submission his 5% bid security will be released. This must be submitted within 15 days of bid acceptance and shall be retained for a period of three years and will be renewed conditional to products warranty under the frame work agreement.

## 12. TENDER VALIDITY

The Tender shall have a minimum validity period of ninety (120) days from the last date for submission of the Tender. The Procuring Agency may solicit the bidder's consent to an extension of the validity period of the Tender. The request and the response thereto shall be made in writing. If the Tenderer agrees to an extension of the validity period of the Tender, the validity period of the Bid Security shall also be suitably extended. The Tenderer may refuse the extension of the validity period of the Tender, without forfeiting the Bid security.

## 13. MODIFICATION / WITHDRAWAL OF THE TENDER

1. The bidder may, by written notice served on the Procuring Agency, modify, or withdraw the Tender after submission of the Tender, prior to the deadline for submission of the Tender.
2. The Tender, withdrawn after the deadline for submission of the Tender and prior to the expiration of the period of the Tender validity, shall result in forfeiture of the Bid Security and black listing.

## 14. Sealing and Marking of Bids

- 14.1 All bids must be typed, stamped and relevant documents must be attested
- 14.2 The envelope shall be marked as "**Tender for SUPPLY, INSTALLATION, & COMMISSIONING OF SOLAR POWER AND SURVEILLANCE SYSTEMS,**" in bold and legible letters to avoid confusion.
- 14.3 The technical and financial envelopes should be separate, sealed, stamped and written in bold letter to avoid any confusion.
- 14.4 The envelope shall be addressed to the Chief Conservator of Forest, Forest Complex Jutial, Gilgit.

## 15. 14. The Bidding Procedure

- 14.1 For this tender PPRA'S Para 39(a) "Single stage, two envelopes bidding procedure" for open competitive bidding shall be adopted. The bid shall comprise a single package containing two envelopes.
- 14.2 The procuring agency shall evaluate the mandatory documents first without reference to the price and reject any proposal in case of missing of any mandatory document along the bid proposal.
- 14.3 No hand written submitted bid shall be accepted

Page 7 of 27



## 16. Award of Contract

### Acceptance of Bid and Award criteria

- 16.1 The bidders qualifying the lowest financial bid after technical qualification shall be awarded the bid.
- 16.2 The Bidder with successful mandatory clauses evaluation and lowest financial bid, if not in conflict with any other law, rules, regulations or policy of the Government, shall be awarded the contract, with in the original or extended period of bid validity.
- 16.3 The evaluation committee/authority has the right to reject partially or wholly any bid without assigning any reasons.
- 16.4 If the project is extended to any other area/location/city through revision of this project, the firm will be bound to complete that project within the same price and terms and conditions agreed during the existing project.
- 16.5 The Contractor will be sole responsible for complete replacement, alternate arrangement for continued operations, claim and installation of product under the product warranty claims and shall bear all operational and logistic expenses as long as warranty of product intact.
- 16.6 The Contractor will provide a full set of manuals and operating instructions including training to the field staff at deployed sites

## 17. Schedule of Requirement


- The assignment shall be completed within 60 days after the date of issue of work order.
- The installation work must be started after pre installation inspection.
- In case of late completion of the assignment beyond the period specified in the schedule of Requirements, Penalty @ 0.05% per 15 days of the cost not exceeding 10% of the purchase order value for late completion shall be imposed upon the supplier.

## 18. Ensuring storage / Installation Arrangements

To ensure storage and installation arrangements for the intended supplies, the Supplier shall inform end user for pre-requisites well in time for proper installation. In case the supplier abides by the given time frame he shall not be penalized for delay.

## 19. Payment

- The payment will be made to the successful bidder in two stages which include progressive payments up to 50% after delivery of equipment and final payment after installation. However, following conditions will be adhered:
- Inspection committee will inspect the equipment before installation. For progressive payment report of the inspection committee will be mandatory.
- The Contractor will be responsible for installation, configuration and two years post installation complain compliance, guarantee of equipment's on all deployed sites as per framework agreement.
- Final Payment will be made only after post- installation report is received from the inspection committee.



## 20. Warranty period

- All items shall be in local warranty not in international warranty and warranty shall start on the day of installation.
- Replacement of items during warranty period solely lies on contractors/Firms.
- The contractor shall be responsible for maintenance visits and complain addressing, queries, post installation for a period of two years.
- The Contractor will be sole responsible for complete replacement, alternate arrangement for continued operations in case of fault, claim and installation of product under the product warranty claims and shall bear all operational and logistic expenses as long as warranty of product intact.
- The Contractor will provide the employer with details of telephone, email address and WhatsApp numbers for reporting such defects.
- The contractor will have in operation a system whereby all service visits are recorded on a multi-part form, a copy of which will be left on site. The form will used to record the date and time of the fault being reported, the nature of the reported fault, the date and time of the visit and the actual fault together with the remedial work carried out.

## 21. Maintenance.

- The contractor is to submit a full schedule of maintenance to be carried out on the system during the warranty period and under subsequent maintenance contracts.
- For support service of the system, the bidder will nominate at least two technical person for two years in Gilgit to troubleshoot the issues in respective category to run the system smoothly.

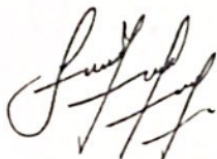
## 22. Operating instructions

- On completion of the contract, and before the issue of a Certificate of Completion, the Contractor will provide a full set of manuals and operating instructions including training to the field staff at deployed sites. This is to include comprehensive descriptive brochures and technical manuals for all equipment forming part of the contract. It should include as-fitted wiring and schematic diagrams.
- An A4 laminated sheet is to be provided with short form operating instructions.
- SOP & Manuals: Issuance of Standard Operating Procedures and operating manuals will be mandatory and part of project completion criteria.
- All warranty claims cards

## 23. Arbitration.

After signing of procurement contract any dispute between parties to the contract shall be settled through arbitration. Method of arbitration would be as under: -

- i) Aggrieved party shall submit an appeal against any decision/act of the Authority (within 15 days) before the Chief Conservator of Forests GB who shall nominate a suitable officer to examine the case and submit his report before the CCF GB within 15 days.



- ii) The affected party can file a revision appeal (within 15 days of the decision) to the Secretary Forest, Wildlife & Environment Department GB against the decision of the inquiry officer.



## 1. Affidavit of non-blacklisting

### AFFIDAVIT

I, \_\_\_\_\_, S/o \_\_\_\_\_, CNIC No. \_\_\_\_\_,  
\_\_\_\_\_, authorized representative of M/s \_\_\_\_\_,  
\_\_\_\_\_, having its registered office at \_\_\_\_\_,  
\_\_\_\_\_, do hereby solemnly affirm and declare that:

1. The firm/company has **never been blacklisted** by any Government, Semi-Government, Autonomous, or Private Organization in Pakistan or abroad
2. The firm is not currently under any declaration of ineligibility for corrupt or fraudulent practices.

I further affirm that the above statement is true and correct to the best of my knowledge and belief.

#### DEPONENT

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Attested by Oath Commissioner)



2. Affidavit of non-default

AFFIDAVIT

I, \_\_\_\_\_, S/o \_\_\_\_\_, CNIC No. \_\_\_\_\_, authorized representative of M/s \_\_\_\_\_, do hereby solemnly affirm and declare that:

1. The firm/company has **not defaulted** on any contract, agreement, or obligation with any Government or Semi-Government organization.
2. There are no outstanding liabilities due to non-performance or breach of contract.

I further affirm that the above statement is true and correct.

DEPONENT

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Attested by Oath Commissioner)



### 3. Affidavit of No Litigation

#### AFFIDAVIT

I, \_\_\_\_\_, S/o \_\_\_\_\_, CNIC No \_\_\_\_\_, authorized representative of M/s \_\_\_\_\_, do hereby solemnly affirm and declare that:

1. The firm/company is **not involved in any litigation** against any Government or Semi-Government organization.
2. No legal proceedings are pending that may affect the execution of the contract.

I further affirm that the above statement is true and correct.

#### DEPONENT

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Attested by Oath Commissioner)



#### 4. Affidavit of Product Originality and Warranty

##### AFFIDAVIT

I, \_\_\_\_\_, S/o \_\_\_\_\_, CNIC No. \_\_\_\_\_, authorized representative of M/s \_\_\_\_\_, do hereby solemnly affirm and declare that:

1. All products supplied under this tender shall be **brand new, original, and genuine** and shall strictly conform to the given specifications.
2. The firm shall provide **warranty/guarantee** for all equipment as specified in the bidding documents.
3. Any defective or substandard product shall be replaced without additional cost within the stipulated time.

I further affirm that the above statement is true and correct.

##### DEPONENT

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Attested by Oath Commissioner)



## 5. Affidavit of Post-Installation Complaint Compliance (Two Years)

### AFFIDAVIT

I, \_\_\_\_\_, S/o \_\_\_\_\_, CNIC No  
\_\_\_\_\_, authorized representative of M/s  
\_\_\_\_\_, do hereby solemnly affirm and declare that:

1. The firm shall provide **post-installation complain handling and maintenance services** for a minimum period of **two (02) years**.
2. All complaints shall be addressed promptly and resolved within a reasonable time to ensure uninterrupted operations.
3. The firm shall be responsible for complete replacement, alternate arrangement for continued operations in case of fault, claim and installation of product under the product warranty claims and shall bear all operational and logistic expenses as long as warranty of product intact

I further affirm that the above statement is true and correct.

### DEPONENT

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Attested by Oath Commissioner)



## 6. Affidavit for Relocation of Existing Systems

### AFFIDAVIT

I, \_\_\_\_\_, S/o \_\_\_\_\_, CNIC No. \_\_\_\_\_, authorized representative of M/s \_\_\_\_\_, do hereby solemnly affirm and declare that:

1. The firm shall undertake **dismantling, shifting, transportation, and reinstallation** of previously installed solar and surveillance systems.
2. The relocation shall be carried out **at any designated location within Gilgit-Baltistan**, as directed by the department.
3. The systems shall be made fully operational after relocation without any compromise on performance.

I further affirm that the above statement is true and correct.

### DEPONENT

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Attested by Oath Commissioner)



**7. Affidavit of Authorized Dealership/Distribution (please mention both solar and surveillance in the same affidavit)**

**AFFIDAVIT**

I, \_\_\_\_\_, S/o \_\_\_\_\_, CNIC No. \_\_\_\_\_, authorized representative of M/s \_\_\_\_\_, do hereby solemnly affirm and declare that:

1. The firm is a **duly authorized dealer/distributor** of the proposed solar and surveillance equipment.
2. Valid authorization certificates from the respective manufacturers/principals shall be provided.
3. The firm is fully capable of providing after-sales services, support, and warranty claims for the offered products.

I further affirm that the above statement is true and correct.

**DEPONENT**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Attested by Oath Commissioner)



**FINANCIAL BID FOR INSTALLATION SOLAR SYSTEM AND VIDEO SURVEILLANCE SYSTEM**

**RATES OFFERED BY M/S \_\_\_\_\_**

S #	Equipment/ Items	Specification	Qty	Unit Cost	Total Cost	Product warranty in Years																										
1	<p>Supply and installation of High Voltage Solar Inverter 4.6 KW (hybrid) with rating IP 65</p> <p><b>Main Features</b></p> <ul style="list-style-type: none"> <li>• Pure Sine Wave Solar Inverter</li> <li>• Output Power Factor 1</li> <li>• Selectable High-Power Charging Current</li> <li>• Wide DC Input range</li> <li>• Selectable input voltage range for home appliances and personal computers</li> <li>• Configuring AC/Solar input priority via LCD setting</li> <li>• Compatible to mains voltage or generator power</li> <li>• Auto restart while AC is recovering</li> <li>• Overload and short circuit protection, Insulation protection, anti-islanding protection, AC Short Circuit, DC reverse Polarity protection, Built in SPD, Over Current/ over voltage, Transformer less topology</li> <li>• Smart battery charger design for optimization of battery performance, equalization and lifecycles</li> <li>• Cold start function</li> </ul>	<table border="1"> <tr><td>Rated Power</td><td>4.6KW/4600W</td></tr> <tr><td>Voltage</td><td>230-240 VAC</td></tr> <tr><td>Frequency Range</td><td>50 Hz / 60 Hz (Auto Sensing)</td></tr> <tr><td>Surge Power</td><td>9600</td></tr> <tr><td>Efficiency (Peak)</td><td>94%</td></tr> <tr><td>Battery Voltage</td><td>85-450 VDC</td></tr> <tr><td>Insulation Monitoring</td><td>Yes</td></tr> <tr><td>Overcharge Protection</td><td>Yes</td></tr> <tr><td>Max. PV Array Open Circuit Voltage</td><td>600 VDC</td></tr> <tr><td>Max PV Array Power</td><td>6000W</td></tr> <tr><td>Maximum AC Charge Current</td><td>30-40A</td></tr> <tr><td>Max Efficiency</td><td>98%</td></tr> <tr><td>IP Grade rating</td><td>IP 65</td></tr> </table>	Rated Power	4.6KW/4600W	Voltage	230-240 VAC	Frequency Range	50 Hz / 60 Hz (Auto Sensing)	Surge Power	9600	Efficiency (Peak)	94%	Battery Voltage	85-450 VDC	Insulation Monitoring	Yes	Overcharge Protection	Yes	Max. PV Array Open Circuit Voltage	600 VDC	Max PV Array Power	6000W	Maximum AC Charge Current	30-40A	Max Efficiency	98%	IP Grade rating	IP 65	5			
Rated Power	4.6KW/4600W																															
Voltage	230-240 VAC																															
Frequency Range	50 Hz / 60 Hz (Auto Sensing)																															
Surge Power	9600																															
Efficiency (Peak)	94%																															
Battery Voltage	85-450 VDC																															
Insulation Monitoring	Yes																															
Overcharge Protection	Yes																															
Max. PV Array Open Circuit Voltage	600 VDC																															
Max PV Array Power	6000W																															
Maximum AC Charge Current	30-40A																															
Max Efficiency	98%																															
IP Grade rating	IP 65																															



2	Supply and installation of Solar Panels 640 watt and installation	<p>640W MONO PERC Bifacial N-type SOLAR PANEL TR-1 Grade A with documents</p> <p><b>Operating Parameters</b> Operational Temperature -40°C ~ +85°C Power Output Tolerance 0 ~ 3% Voc and Isc Tolerance ±3% Maximum System Voltage DC1500V (IEC/UL) Maximum Series Fuse Rating 30A Nominal Operating Cell Temperature 45±2°C Protection Class II</p> <p><b>Mechanical Loading</b> Front Side Maximum Static Loading 5400Pa Rear Side Maximum Static Loading 2400Pa Hailstone Test 25mm Hailstone at the speed of 23m/s</p> <p><b>Temperature Ratings</b> (STC) Temperature Coefficient of Isc +0.050%/°C Temperature Coefficient of Voc -0.230%/°C Temperature Coefficient of Pmax -0.290%/°C</p>	30																											
3	Supply and installation of Batteries 10KWH + IP65 ingress protection	<p>• <b>Electrical Specifications</b></p> <table border="0"> <tr> <td>Battery Type</td> <td>LFP (LiFePO<sub>4</sub>)</td> </tr> <tr> <td>Nominal Energy [kWh]</td> <td>11.52 kwh</td> </tr> <tr> <td>Nominal Voltage [V]</td> <td>384</td> </tr> <tr> <td>Operating Voltage [V]</td> <td>348 ~ 438</td> </tr> <tr> <td>Max. Charge/Discharge Current [A]*1</td> <td>30</td> </tr> <tr> <td>Recommend Charge Current [A]</td> <td>15</td> </tr> <tr> <td>Peak Charge Current [A]</td> <td>36 @5s</td> </tr> <tr> <td>Battery Pack Round-Trip Efficiency [%]</td> <td>≥95</td> </tr> <tr> <td>Depth of Discharge [%]</td> <td>90</td> </tr> <tr> <td>Communication</td> <td>yes</td> </tr> <tr> <td>Display</td> <td>LED*5</td> </tr> <tr> <td>Remote Monitoring</td> <td>IOS Application</td> </tr> </table>	Battery Type	LFP (LiFePO <sub>4</sub> )	Nominal Energy [kWh]	11.52 kwh	Nominal Voltage [V]	384	Operating Voltage [V]	348 ~ 438	Max. Charge/Discharge Current [A]*1	30	Recommend Charge Current [A]	15	Peak Charge Current [A]	36 @5s	Battery Pack Round-Trip Efficiency [%]	≥95	Depth of Discharge [%]	90	Communication	yes	Display	LED*5	Remote Monitoring	IOS Application	3			
Battery Type	LFP (LiFePO <sub>4</sub> )																													
Nominal Energy [kWh]	11.52 kwh																													
Nominal Voltage [V]	384																													
Operating Voltage [V]	348 ~ 438																													
Max. Charge/Discharge Current [A]*1	30																													
Recommend Charge Current [A]	15																													
Peak Charge Current [A]	36 @5s																													
Battery Pack Round-Trip Efficiency [%]	≥95																													
Depth of Discharge [%]	90																													
Communication	yes																													
Display	LED*5																													
Remote Monitoring	IOS Application																													



		<ul style="list-style-type: none"> <li>• Performance</li> <li>• Cycle Life: ≥ 6000 cycles (80% capacity retention)</li> <li>• Environmental</li> <li>• Operating Temperature (Charge): 0 °C to 55 °C</li> <li>• Operating Temperature (Discharge): -20 °C to 60 °C</li> <li>• Safety &amp; Compliance</li> <li>• Protection: Over-charge, over-discharge, over-current, short-circuit</li> <li>• Certificates</li> <li>• IEC62619 EN IEC 61000-6-1/2/3/4 UN38.3 IP65</li> </ul>		
<p>4</p> <p>Supply and installation of Batteries</p> <p>5KWH+</p> <p>IP65 ingress protection</p>	<ul style="list-style-type: none"> <li>• <b>Electrical Specifications</b></li> </ul>	<p>Battery Type LFP (LiFePO<sub>4</sub>)</p> <p>Nominal Energy [kWh] 5.18 kWh</p> <p>Nominal Voltage [V] 192</p> <p>Operating Voltage [V] 174 ~ 219</p> <p>Max. Charge/Discharge Current [A]*1 27</p> <p>Recommend Charge Current [A] 13.5</p> <p>Peak Charge Current [A] 32.4 @5s</p> <p>Battery Pack Round-Trip Efficiency [%] ≥95</p> <p>Depth of Discharge [%] 90</p> <p>Communication yes</p> <p>Display LED*5</p> <p>Remote Monitoring IOS Application</p>	2	



		<ul style="list-style-type: none"> <li>• Performance</li> <li>• Cycle Life: ≥ 6000 cycles (80% capacity retention)</li> <li>• Environmental</li> <li>• Operating Temperature (Charge): 0 °C to 55 °C</li> <li>• Operating Temperature (Discharge): -20 °C to 60 °C</li> <li>• Safety &amp; Compliance</li> <li>• Protection: Over-charge, over-discharge, over-current, short-circuit</li> </ul>			
		<p>Certificates IEC62619 EN IEC 61000-6-1/2/3/4 UN38.3 IP65</p> <p>Brackets for Mounting Solar Panel: stainless steel or aluminum.</p> <p>Clamps for Mounting Solar Panels: stainless steel set screws.</p> <p>Strut Channel for Solar Panel Mounting: Strut channels, along with rails, clamps, and other fittings of standard material</p>	30		
				Standard Grade & quality	LS
5	Supply and installation of Solar Structure L2/L3 and installation				
6	Supply and installation of Solar Cable/Accessories and installation				
7	Supply and installation of Smart IP Cameras installation and configuration with outdoor box conduit piping and complete cabling	<p><b>4 MP IP Smart enrich IR, Night Color Vision</b>          POE Power Supply with mic support          Smart Android app and PC software with storage functionality          motion detector          IR enrich minimum 100 cm          Water proof and dust proof          Easy Ip configuration          Auto Focus and Web Focus          Max 25 fps@4MP (16:9 video output) · 120 dB true WDR, 3D NR</p>			





		<p>Storage Temperature</p> <p>-40 °C to +60 °C (-40 °F to +140 °F); &lt; 95% (no condensation)</p>	
<p>8 Supply and installation of Network Video Recorder and installation (16 Channel)</p>		<ul style="list-style-type: none"> <li>• New 4.0 user interface, Security baseline 2.1</li> <li>• H.264, H.265, Smart H.264+, and Smart H.265+, H.265 auto switch</li> <li>• Max. decoding capability: 8 × 1080p@30 fps. Supports adaptive decoding</li> <li>• Supports mainstream cameras of ONVIF and RTSP protocols</li> <li>• P2P remote surveillance, video play on mobile device</li> <li>• VGA/HDMI simultaneous video output, maximum resolution of HDMI is 4K</li> <li>• AI by Camera: Face detection, perimeter protection, IVS, people counting, heat map, and SMD</li> <li>• 4 TB Data storage ( 4 TB for Three site and 2TB for two sites)</li> <li>• Must have mobile software to be integrated online with central control room and remote monitoring through SMART Phone.</li> <li>• Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.</li> <li>• Face detection is to detect if there is any human face appearing in the video. This technology adopts a deep learning algorithm to support face detection, tracking, optimization and capturing, and then output the best face snapshot.</li> <li>• DMSS The DMSS app is available on the iOS/ App Store and Google Play. It makes surveillance easy and simple, allowing you to remotely access back-end devices, view live video, receive event push notifications, and search for recorded videos from an iPhone, iPad, or Android phone at any time from virtually anywhere.</li> </ul>	



9	Supply and installation of Smart LED 40" and installation	<p>4k Display wifi integration Bluetooth USB Dual HDMI Active Screen Area inch): 40" Aspect Ratio: 16:9 Panel Model: Samsung LSC320AN10-H</p> <p>Resolution: 1366*768</p> <p>Brightness(cd/m2): 220 Refresh Rate: 60Hz Live TV: Yes</p> <p>Brightness(cd/m2) in Energy Saving Mode: ≥65%</p> <p>Contrast Ratio: 35000:1 Color Dept 16.7M</p> <p>USB ports: 2(USB 2.0) SD CARD: 1(TF CARD)</p> <p>Ethernet LAN: Wireless WIFI Access and Network</p> <p>CPU: ARM A53*4@1.1GHZ</p> <p>Graphics: Mali470MP3</p> <p>RAM: 1G Byte DDR3</p>	5			
---	---	---	---	--	--	--

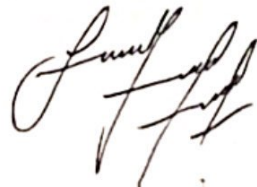




**Details of Project Sites for Implementation**

S.No	Project Sites	Location/Check Post	Scope of Work
1.	Jutial Depot	Forest Complex Jutial Gilgit	Complete Surveillance Solution Complete Solar Solution
2.	Padi Forest Depot	Padi Bangla Gilgit	Uninstallation of existing Solar & Surveillance System Installation of complete new Solar System Installation of completely new Surveillance System
3.	Raikot CP	Raikot Bridge Diamer	Uninstallation of existing Solar & Surveillance System Installation of complete new Solar System Installation of completely new Surveillance System
4.	Zero Point CP	Zero Point Chilas	Upgradation of existing Surveillance system and additional work of solar as per field requirements
5.	Shahtote CP	Haramosh Valley Gilgit	Complete Surveillance Solution Complete Solar Solution

**Note: The Capacity of Solar system and surveillance system to be installed on above CP and Depots will be finalized in frame work agreement along with relocation of previously installed solar and surveillance sites to new location.**



### Details of Project Sites for Relocation and Installation

S.No	Previous Project Sites	New Location/Check Post	Scope of Work
1.	Padi	Dambudas Rondu	Installation and complete commissioning of extracted equipment
2.	Raikot	Darel CP	Installation and complete commissioning of extracted equipment
3.	Zero-point CP	Hudor	Installation and complete commissioning of extracted equipment
4.	Any Available panel or spare panels to be available as per need	Botogah	Installation and commissioning of spared equipment
5.	Any Available panel or spare panels to be available as per need	Tangir	Installation and commissioning of spared equipment

**Note: The Capacity of Solar system and surveillance system to be installed on above CP and Depots will be finalized in frame work agreement along with relocation of previously installed solar and surveillance sites to new location.**

