

GOVERNMENT OF GILGIT-BALTISTAN



WATER AND POWER DEPARTMENT, GILGIT - BALTISTAN

REQUEST FOR PROPOSAL (RFP)

FOR

HIRING OF CONSULTING FIRM

FOR

**“THIRD PARTY VALIDATION (TPV) SERVICES FOR 100 MW
DISTRIBUTED PHOTOVOLTAIC
SOLAR POWER PLANTS IN GILGIT-BALTISTAN”**

JUNE 2026

**Office of the Project Director, 100 MW Distributed Photovoltaic
Solar Power Plants in Gilgit-Baltistan,
Water and Power Department, Gilgit Baltistan, near Karakoram International
University, Gilgit**

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INVITATION FOR PROPOSALS

The Project Management Unit (PMU) for the "100 MW Distributed Photovoltaic Solar Power Plants in Gilgit-Baltistan", Water and Power Department, Government of Gilgit-Baltistan, invites sealed Proposals from reputable and experienced Third-Party Validation (TPV) Consulting Firms to provide Monitoring, Technical Auditing, and Verification Services from reputed Panel of Experts / Consultants.

Consulting Firms/Consultants, local consulting firm duly registered with PEC and registered with Income Tax Department and who are on Active Tax Payers List of the Federal Board of Revenue (where applicable), whereas foreign firms can participate in conformance to Pakistan Engineering Council (Conduct and Practice of Consulting Engineers) Bye-laws, 1986, having cumulative experience of not less than 300 MW of Solar PV projects and cumulative experience of not less than 50 MWh of Battery Energy Storage Systems commissioned during the last 10 years, as panel of experts to provide monitoring, technical auditing, and verification services as mentioned in TORs. Quality and Cost Based Selection (QCBS) Method will be adopted for hiring of Experts through TPV Consultant as below.

1. Team Leader / Renewable Energy Expert
2. Senior Electrical Engineer, 4 Nos
3. Senior Civil Engineer, 4 Nos
4. Monitoring & Data Systems Expert

The interested consulting firms can obtain Request for Proposal (RFP) documents, containing detailed Terms and Conditions from office of the undersigned on production of written application. The Price of the RFP documents is Rs. 5,000/-

The Consulting firms already engaged with the Project Director 100 MW Distributed Photovoltaic Power Plants in Gilgit-Baltistan are not eligible to apply.

Proposals prepared in accordance with the instructions provided in the RFP documents, shall be delivered to office of the Project Director, 100 MW Distributed Photovoltaic Power Plants in Gilgit-Baltistan, Water and Power Department near Karakoram International University, Gilgit on or before July 31, 2026 at 11:00 AM and the Technical Proposals will be opened on the same day i.e. July 31, 2026 at 11:30 AM in the presence of all consultants or their Authorized Representatives who choose to attend at the office address below.

**Office of the Project Director,
100 MW Distributed Photovoltaic Power Plants in Gilgit-Baltistan,
Water and Power Department near Karakoram International University, Gilgit**

Section 2: INSTRUCTIONS TO CONSULTANTS

1. Introduction

- 1.1 The Employer/Client will select the TPV Consultant in accordance with the method of selection specified in the Data Sheet and detailed in the edition of the Guidelines indicated in the Data Sheet.
- 1.2 The Consultants are invited to submit a Technical and a Financial Proposal, as specified in Data Sheet for consulting services required for the assignment named in the Data Sheet. proposals will be the basis for selection of the TPV Consultant.
- 1.3 The assignment shall be implemented in accordance with the phasing indicated in the Data Sheet. When the assignment includes several phases, the performance of the consultant under each phase must be to the Client's satisfaction before work begins on the next phase.
- 1.4 To obtain firsthand information on the assignment and on the local conditions, Consultants are encouraged to visit the Client before submitting a proposal. The Consultants representative should contact the official(s) named in the Data Sheet to arrange for their visit or to obtain additional information on the pre-proposal conference. Consultants should ensure that this(ese) official(s) is(are) advised of the visit in adequate time to allow him/her(them) to make appropriate arrangements.
- 1.5 The Client will provide the inputs specified in the Data Sheet, assist the firm/individual regarding the services required from TPV and make available relevant project data.
- 1.6 Please note that (i) the costs of preparing the proposal, including a visit to the Client, are not reimbursable as a direct cost of the assignment; and (ii) the Client is not bound to accept any of the proposals submitted.
- 1.7 Client policy requires that Consultants provide professional, objective, and impartial advice and hold the Client's interests paramount at all times, without any consideration for future work, and strictly avoid conflicts with other assignments or their own corporate interests. Consultants shall not be hired for any assignment that would be in conflict with their prior or current obligations to other clients, or that may place them in a position of not being able to carry out the assignment in the best interest of the Client.
 - 1.7.1 The Consultants may be hired for downstream work, when continuity is essential, in which case this possibility shall be indicated in the Data Sheet and the factors used for the selection of the consultant should take the likelihood of continuation into account. It will be the exclusive decision of the Client whether or not to have the downstream assignment carried out, and if it is carried out, which consultant will be hired for the purpose.
 - 1.7.2 Any previous or ongoing participation in relation to the assignment by the Consultants, its professional staff, or its affiliates or associates under a contract with the Client may result in rejection of the proposal. Consultants should clarify their situation in that respect with the Client before preparing the proposal.

2. Clarification and Amendment of RFP Documents

- 2.1 The Consultants may request a clarification of any of the RFP documents up to the number of days indicated in the Data Sheet before the proposal submission date. Any request for clarification must be sent in writing by paper mail, cable, telex, facsimile, or electronic mail to the Client's address indicated in the Data Sheet. The Client will respond by cable, telex, facsimile, or electronic mail to such requests and will send written copies of the response (including an explanation of the query but without identifying the source of inquiry) to all invited consultants who intend to submit proposals.

- 2.2 At any time before the submission of proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by an invited firm/individual consultant, amend the RFP. Any amendment shall be issued in writing through addenda. Addenda shall be sent by mail, cable, telex, facsimile, or electronic mail to all invited consultants and will be binding on them. The Client may at its discretion extend the deadline for the submission of proposals.

3. Preparation of Proposal

Technical Proposal

- 3.1 Consultants are requested to submit proposal (Para 1.2) written in the language(s) specified in the Data Sheet.

In preparing the Technical Proposal, consultants are expected to examine the documents constituting this RFP in detail. Material deficiencies in providing the information requested may result in rejection of a proposal.

- 3.2 While preparing the Technical Proposal, consultants must give particular attention to the following:

- (i) If a firm considers that it does not have all the expertise for the assignment, it may obtain a full range of expertise by associating with individual consultant(s) and/or other firms or entities in a joint venture or Sub-Consultancy, as appropriate. Consultants may associate with the other consultants invited for this assignment only with approval of the Client as indicated in the Data Sheet. The consultants are encouraged to seek the participation of local consultants by entering into a joint venture with, or subcontracting part of the assignment to, national consultants.
- (ii) For assignments on a staff-time basis, the estimated number of professional staff-months is given in the Data Sheet. The proposal shall, however, be based on the number of professional staff-months estimated by the firm. For fixed-budget-based assignments, the available budget is given in the Data Sheet, and the Financial Proposal shall not exceed this budget.
- (iii) It is desirable that the majority of the key professional staff proposed be permanent employees of the firm or has an extended and stable working relationship with it.
- (iv) Proposed professional staff must, at a minimum, have the experience indicated in the Data Sheet, preferably working under conditions similar to those prevailing in the country of the assignment.
- (v) Alternative professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.
- (vi) Reports to be issued by the consultants as part of this assignment must be in the language(s) specified in the Data Sheet. It is desirable that the firm's personnel/individual consultant have a working knowledge of the national language of the beneficiary country.

- 3.3 The Technical Proposal shall provide the following information using the attached Standard Forms:

- (i) A brief description of the firm's organization and an outline of recent experience on assignments of a similar nature. For each assignment, the outline should indicate, *inter alia*, the profiles of the staff proposed, duration of the assignment, contract amount, and firm's involvement.

- (ii) Any comments or suggestions on the Terms of Reference and on the data, a list of services, and facilities to be provided by the Client.
- (iii) A description of the methodology and work plan for performing the assignment.
- (iv) The list of the proposed staff team by specialty, the tasks that would be assigned to each staff team member, and their working hours / timing.
- (v) CVs recently signed by the proposed professional staff and the authorized representative submitting the proposal. Key information should include number of years working for the firm/entity and degree of responsibility held in various assignments.
- (vi) Estimates of the total staff input (professional and support staff; staff time) needed to carry out the assignment, supported by bar chart diagrams showing the time proposed for each professional staff team member.
- (vii) A detailed description of the proposed methodology, staffing, and monitoring of training, if the Data Sheet specifies training as a major component of the assignment.
- (viii) Any additional information requested in the Data Sheet.

3.4 The Technical Proposal shall not include any financial information.

Financial Proposal

- 3.5 In preparing the Financial Proposal, consultants are expected to take into account the requirements and conditions outlined in the RFP documents. The Financial Proposal should follow Standard Forms. It lists all costs associated with the assignment, including (a) remuneration for staff (foreign and local, in the field and at headquarters), and (b) reimbursable expenses such as subsistence (per diem, housing), transportation (international and local, for mobilization and demobilization), services and equipment (vehicles, office equipment, furniture, and supplies), office rent, insurance, printing of documents, surveys, and training, if it is a major component of the assignment. If appropriate, these costs should be broken down by activity and, if appropriate, into foreign and local expenditures.
- 3.6 The Consultant may be subject to local taxes (such as: value added or sales tax, social charges or income taxes on non-resident Foreign Personnel, duties, fees, levies) on amounts payable by the Client under the Contract.
- 3.7 Consultants may express the price of their services in the currency as specified in the RFP. The Client may require consultants to state the portion of their price representing local cost in the national currency if so, indicated in the Data Sheet.
- 3.9 The Data Sheet indicates how long the proposals must remain valid after the submission date. During this period, the consultant is expected to keep available the professional staff proposed for the assignment. If the Client wishes to extend the validity period of the proposals, the consultants who do not agree have the right not to extend the validity of their proposals.

4 Submission, Receipt, and Opening of Proposals

- 4.1 The original proposal (Technical Proposal and, Financial Proposal) shall be prepared in indelible ink. It shall contain no interlineations or overwriting, except as necessary to correct errors made by the firm/individual consultant itself. Any such corrections must be initialed by the persons or person who sign(s) the proposals.
- 4.2 An authorized representative of the firm/individual consultant initials all pages of the

proposal. The representative's authorization is confirmed by a written power of attorney accompanying the proposal.

- 4.3 For each proposal, the consultants shall prepare the number of copies indicated in the Data Sheet. Each Technical Proposal and Financial Proposal shall be marked "ORIGINAL" or "COPY" as appropriate. If there are any discrepancies between the original and the copies of the proposal, the original governs.
- 4.4 The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked "Technical Proposal," and the original and all copies of the Financial Proposal in a sealed envelope clearly marked "Financial Proposal" and warning: "DO NOT OPEN WITH THE TECHNICAL PROPOSAL." Both envelopes shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address and other information indicated in the Data Sheet and be clearly marked, "DO NOT OPEN, EXCEPT IN PRESENCE OF THE EVALUATION COMMITTEE."
- 4.5 The completed Technical and Financial Proposals must be delivered at the submission address on or before the time and date stated in the Data Sheet. Any proposal received after the closing time for submission of proposals shall be returned unopened.
- 4.6 After the deadline for submission of proposals, the Technical Proposal shall be opened immediately by the evaluation committee. The Financial Proposal shall remain sealed and deposited in a safe location until the day and time, these proposals are opened publicly.

5. Proposal Evaluation

General

- 5.1 From the time the proposals are opened to the time the contract is awarded, if any consultant wishes to contact the Client on any matter related to its proposal, it should do so in writing at the address indicated in the Data Sheet. Any effort by the firm/individual consultant to influence the Client in the Client's proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the consultant's proposal.
- 5.2 Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded.

Evaluation of Technical Proposals

- 5.3 The evaluation committee, appointed by the Client will evaluate the proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria, sub criteria (typically not more than three per criteria), and point system specified in the Data Sheet. Each responsive proposal will be given a technical score (St). A proposal shall be rejected at this stage if it does not respond to important aspects of the Terms of Reference or if it fails to achieve the minimum technical score indicated in the Data Sheet.
- 5.4 In the case of Quality-Based Selection, Selection Based on Consultant's Qualifications, and Single-Source Selection, the highest ranked firm/individual consultant or firm/individual consultant selected on a single-source basis is invited to negotiate its proposal and the contract on the basis of the Technical Proposal and the Financial Proposal submitted in accordance with the instructions given in Para 1.2 and the Data Sheet.

Public Opening and Evaluation of Financial Proposals:

Ranking (QCBS, Fixed-Budget, and Least-Cost Selection Methods Only)

- 5.5 After the evaluation of Technical Proposals is completed, the Client shall notify those

consultants whose proposals did not meet the minimum qualifying mark or were considered nonresponsive to the RFP and Terms of Reference, indicating that their Financial Proposals will be returned unopened after completing the selection process. After the evaluation and approval of the Technical Proposal, Financial Proposals of technically accepted proposals will be opened at a time, date and venue announced and communicated to the bidders in advance.

- 5.6 The Financial Proposals shall be opened publicly in the presence of the consultants' representatives who choose to attend. The name of the consultant, the quality scores, and the proposed prices shall be read aloud and recorded when the Financial Proposals are opened. The Client shall prepare minutes of the bids opening.
- 5.7 The evaluation committee will determine whether the Financial Proposals are complete (i.e., whether they have costed all items of the corresponding Technical Proposals; if not, the Client will cost them and add their cost to the initial price as per rules), correct any computational errors, and convert prices in various currencies to the single currency specified in the Data Sheet. The official selling rates used, provided by the source indicated in the Data Sheet, will be those in effect on the date indicated in the Data Sheet.
- 5.8 In case of QCBS, the lowest Financial Proposal (F_m) will be given a financial score (S_f) of 100 points. The financial scores (S_f) of the other Financial Proposals will be computed as indicated in the Data Sheet. Proposals will be ranked according to their combined technical (S_t) and financial (S_f) scores using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; $T + P = 1$) indicated in the Data Sheet: $S = S_t \times T\% + S_f \times P\%$. The Consultant achieving the highest combined technical and financial score will be invited for negotiations.

6. Negotiations

- 6.1 Negotiations will be held at the address indicated in the Data Sheet. The aim is to reach agreement on all points and sign a contract.
- 6.2 Negotiations will include a discussion of the Technical Proposal, the proposed methodology (work plan), staffing and any suggestions made by the individual consultant to improve the Terms of Reference. The Client and individual consultant will then work out final Terms of Reference, staffing, and bar charts indicating activities, staff, periods in the field and in the home office, staff-months, logistics, and reporting. The agreed work plan and final Terms of Reference will then be incorporated in the "Description of Services" and form part of the contract. Special attention will be paid to getting the most the individual consultant can offer within the available budget and to clearly defining the inputs required from the Client to ensure satisfactory implementation of the assignment.
- 6.3 The financial negotiations will include a clarification (if any) of the firm's/individual consultant's tax liability in the beneficiary's country, and the manner in which it will be reflected in the contract; and will reflect the agreed technical modifications in the cost of the services. Unless there are exceptional reasons, the financial negotiations will involve neither the remuneration rates for staff (no breakdown of fees) nor other proposed unit rates in the cases of QCBS, Fixed-Budget Selection, and the Least-Cost Selection methods. For other methods, the firm/individual consultant will provide consultants with the information on remuneration rates. Negotiations shall not seek changes in rate quoted by the bidders as per PPRA Rules.
- 6.4 Having selected the firm/individual consultant on the basis of, among other things, an evaluation of proposed key professional staff, the Client expects to negotiate a contract on the basis of the experts named in the proposal. Before contract negotiations, the Client will require assurances that the experts will be actually available. The Client will not consider substitutions during contract negotiations unless both parties agree that

undue delay in the selection process makes such substitution unavoidable or that such changes are critical to meet the objectives of the assignment. If this is not the case and if it is established that key staff were offered in the proposal without confirming their availability, the firm may be disqualified.

- 6.5 The negotiations will conclude with a review of the draft form of the contract. To complete negotiations the Client and the firm/individual consultant will initial the agreed contract. If negotiations fail, the Client will invite the firm/individual consultant whose proposal received the second highest score to negotiate a Contract.

7. Award of Contract

- 7.1 The contract will be awarded following negotiations. After negotiations are completed, the Client will promptly notify other consultants on the shortlist that they were unsuccessful and return the unopened Financial Proposals of those consultants who did not pass the technical evaluation.
- 7.2 The firm/individual consultant is expected to commence the assignment on the date and at the location specified in the Data Sheet.

8. Confidentiality

- 8.1 Information relating to evaluation of proposals and recommendations concerning awards shall not be disclosed to the consultants who submitted the proposals or to other persons not officially concerned with the process, until the winning firm/individual consultant has been notified that it has been awarded the contract.

9. Applicable Law

- 9.1 Applicable Law means the laws and any other instruments having the force of law in Islamic Republic of Pakistan.

**Instruction to Consultants
Data Sheet**

ITB Ref	Subject	Key Details
1.1	Method of Selection	Quality and Cost Based Selection (QCBS) as per Regulation No. 3(A) of PPRA Procurement of Consultancy Services Regulations, 2010
1.1	Guidelines	Selection and employment of the Consultant under PEC guideline / PPRA Rules.
1.2	Proposal Submission	The consultants are required to submit both Technical Proposal and Financial Proposal.
1.2 & 1.3	Assignment Details / Project Scope	The Project consists of two major components across the Gilgit, Baltistan, and Diamer divisions: <ol style="list-style-type: none"> 1. Rooftop Component: 18.15 MW solar PV capacity to be installed across 499 designated public Sector buildings. 2. Utility-Scale Component: 82 MW Total Capacity distributed across four strategic Solar Parks: Bunji, Sadpara, Daroba, and Khaplu.
1.2	Scope of Services	The TPV firm shall verify the completion of the installation for each component of the Project in accordance with the signed EPC Contracts / Specifications / Employer's Requirements.
1.2	Source of Funds	To be funded by Government of Gilgit-Baltistan.
1.4	Pre-Proposal Conference	No pre-proposal conference will be held.
1.4	Employer's Official for information related to RFP	Office of Project Director, 100 MW Distributed Photovoltaic Solar Power Plants, Water and Power Department, near Karakoram International University Gilgit.
1.5	Employer's Assistance to the firm/individual in obtaining licenses	Nil
1.6	Cost of Proposal's preparation	The consultants shall bear all preparation costs of Proposals.

1.7.1	Hiring of the Consultant	Applicable subject to requirement of the Project and approval of the Competent Authority.
2.1	Clarification	Written requests due 5 days before bid opening.
2.2	Amendment of RFP	Employer may issue addenda prior to the deadline.
3.1	Language	English.
3.1	RFP Documents	ITB, BDS, ToR, Evaluation Criteria, Staffing Matrix, Schedules A–E.
3.2 (i)	Joint Venture or Sub-Consultancy	Only Joint Venture is allowed.
3.2(ii), (iv), (vi)	Staff Inputs	As per Section 3 of RFP Documents
3.2 (viii)	Proposal Security	PKR 2.0 Million, valid for 28 days past Proposal expiry, to be submitted in favor of the Employer in the form of CDR/Bank Guarantee. Proposal Security must be provided with Technical Proposal, failure to meet the requirement will result in rejection of Proposal.
3.7	Taxation	As per Applicable Laws of Pakistan/GB
3.8	Prices/Currency	Quoted in PKR only; fixed for contract duration
3.10	Proposal Validity	180 days from the opening of Technical Proposals date.
4.4	Proposal Submission	Separate sealed envelopes for Technical and Financial Proposals.
4.5	Proposal's Submission Address, Date, Time	Employer's Office by the date/time in the Invitation for Proposals
5.3	Point System	As per Section 3 of RFP Documents
5.4	QBS/Single Source Selection	Not applicable.
5.7	Financial Proposal Opening	It will be informed after evaluation of Technical Proposals

5.7	Currency	To be quoted in PKR only
5.8	QCBS Scoring	As per Section 3 of RFP Documents
5.9	Fixed-Budget Selection	Not applicable
6.1	Address for Negotiation	Office of Project Director, 100 MW Distributed Photovoltaic Solar Power Plants, Water and Power Department, near Karakoram International University Gilgit.
7.2	Commencement of the Services	Immediately after signing of the Contract. Location: Gilgit Baltistan
8.1	Confidentiality	Influence during evaluation leads to rejection.
Additional Provisions:		
1	Sufficiency of Bid	The consultants must account for GB logistical/terrain complexities.
2	Eligibility and Qualification Requirements	<p>PEC valid license for local consulting firms (every local member in case of JV), and foreign consulting firms must participate as per Pakistan Engineering Council (Conduct and Practice of Consulting Engineers) Bye-laws, 1986</p> <p>local consulting firms (every local member in case of JV) must have registration with FBR, and be on ATL (where applicable),</p> <p>Consulting firms (each member in case of JV) shall submit: No blacklisting declaration Substantiation for 10+ years' of general experience for lead member/Consultant as single entity</p> <p>Fulfilling the Section 3 requirements</p>
3	Conformity	Must include Technical Compliance Sheet
4	Post-Qualification	The Employer may verify all technical/financial data if so required.
5	Award Criteria	Highest Score achieved in QCBS.

6	Award Notice	Letter of Acceptance (LoA) to the successful consultant firm.
7	Integrity Pact	Mandatory for contracts > PKR 10 Million (TECH-12).

Taxation

The individual Experts shall be wholly & exclusively liable for meeting / Paying all tax liabilities arising out of the contract. All taxes, duties and other levies payable by the experts under the contract or for any other cause, as per the law of land, shall be dealt with as per followings:

a- Local direct taxes:

All local direct taxes i.e. income tax, super tax & similar taxes on the expert's income shall be and deemed to be included in the rates and prices and the proposal prices submitted by a bidder.

b-Local indirect taxes, duties, levies etc:

All local indirect taxes, i.e. sales taxes, VAT, Levies, & other charges or similar taxes levies on the expert's invoice, prevailing at the date twenty-eight (28) days prior to the date of proposal submission in the country where the site is located. These taxes will be shown each as a separate line item at the end of Summary cost and will be excluded at the time of evaluation of proposal and will be borne by the Employer and reimbursable to the expert (s) on presentation of original tax payment challans.

Information on the expert's tax obligations in Client's country can be found from websites of Provincial Revenue Authorities & Federal Board of Revenue, Pakistan/GB as the case may be.

Statutory & other Regulation:

Following is added with reference to Tax implications:

Any subsequent addition/reduction due to tax change shall be reimbursed /deducted as per followings:

Local direct taxes: All changes in Direct Taxes i.e. income tax, super tax etc shall be the exclusiveliability of the expert(s).

Local Indirect Taxes: Any change in Indirect Taxes i.e. Sales tax, VAT etc shall be the exclusive liabilityof Client.

Withholding of Income Tax & Sales Tax/PST:

All payments (Gross) and including a payment by way of any sort of advance payable to the experts will be subject to withholding of Income tax & Sales Tax at prescribed rate at the time of payment:

Section 3. TERMS OF REFERENCE (TOR)

3.1 PROJECT BACKGROUND

The Government of Gilgit-Baltistan is implementing the 100 MW Distributed Photovoltaic Solar Power Plants in Gilgit-Baltistan as a strategic initiative aimed at improving energy security, enhancing reliability of electricity supply, reducing dependence on imported fossil fuels, and maximizing the utilization of indigenous renewable energy resources within the region. The Project is being implemented through the Water & Power Department, Government of Gilgit-Baltistan, with financial support under the Public Sector Development Programme (PSDP).

The Project comprises both distributed rooftop solar photovoltaic systems and utility-scale solar power generation facilities integrated with Battery Energy Storage Systems (BESS). The rooftop component consists of approximately 18.15 MWdc of Solar PV systems installed on approximately 499 public sector buildings distributed throughout Gilgit-Baltistan together with approximately 11.1 MWh of Battery Energy Storage Systems. The utility-scale component comprises approximately 82 MW of Solar PV generation integrated with approximately 55 MWh of Battery Energy Storage Systems located at strategically selected sites within the region.

The Project is expected to improve electricity availability, support optimal utilization of hydropower resources, reduce dependence upon diesel-based generation, improve grid stability and facilitate increased penetration of renewable energy within the regional power system.

Pursuant to the directions of the Honorable Prime Minister of Pakistan regarding independent verification of publicly funded Solar PV projects, the Water & Power Department intends to engage an Independent Technical Verification & Validation Consultant to undertake comprehensive technical verification and validation of the Solar PV and Battery Energy Storage System facilities installed under the Project.

The Consultant shall provide an independent and objective assessment of compliance, quality, safety, performance and operational readiness of the Project facilities and shall furnish recommendations regarding acceptance of the facilities by the Employer.

3.2 OBJECTIVES OF THE ASSIGNMENT

The primary objective of the assignment is to independently verify and validate that the Solar Photovoltaic and Battery Energy Storage System facilities installed under the Project have been supplied, installed, tested and commissioned in accordance with the EPC Contracts, approved detailed designs, approved technical specifications and approved material submittals as required from the EPC Contractors.

The assignment is intended to establish an independent assurance mechanism for verification of quality and performance of the Project facilities and to provide

confidence to the Government of Gilgit-Baltistan and the Power Division that public funds have been utilized efficiently and in accordance with Contracted technical requirements of the Project.

The Consultant shall independently verify the conformity of installed equipment with approved specifications through field visits of Solar sites and validate that installation has been done in accordance with the approved designs. The validation activity shall be performed following issuance of satisfactory completion of testing and commissioning activities and validate to the Employer regarding acceptance of the facilities.

3.3 ROLE OF THE THIRD PARTY VALIDATION (TPV) CONSULTANT

The Consultant shall act solely as an Independent Technical Validation Consultant and shall function independently of the EPC Contractors, equipment suppliers, manufacturers, Design & Construction Supervision Consultant and other parties involved in implementation of the Project.

The TPV Consultant shall not undertake the functions of design review, approval of shop drawings, approval of material submittals, construction supervision, contract administration, certification of contractor payments or owner's engineering services. These functions shall remain the responsibility of the Design & Construction Supervision Consultant engaged separately by the Employer.

The TPV Consultant's role shall be limited to independent validation of installed facilities in accordance with the approved Project documentations. The TPV Consultant shall not reinterpret approved designs nor assume responsibility for design adequacy.

The TPV Consultant shall provide objective and evidence-based assessments supported by inspection records, test results and documented findings.

3.4 GENERAL SCOPE OF SERVICES

The Consultant shall undertake all activities necessary to independently validate compliance of the installed facilities with the approved design.

The scope of the Services shall include review of project documentation, field inspections of the Rooftop Solar Sites along with review of testing and commissioning verification.

The Consultant shall deploy suitably qualified personnel and resources necessary for implementation of the assignment and shall maintain adequate field presence throughout Gilgit-Baltistan.

The Consultant shall establish and maintain a structured verification process capable of providing a complete audit trail of all inspections, observations, findings, non-conformities and corrective actions.

3.5 REVIEW OF PROJECT DOCUMENTATION

The TPV Consultant shall undertake a comprehensive review of all project documentations relevant to the assignment.

Such documentation shall include EPC Contracts, approved detailed designs, approved shop drawings, approved material submittals, technical specifications, inspection and test plans, factory acceptance test reports, site acceptance test reports, commissioning procedures, commissioning reports, operation and maintenance manuals, warranty documentation, as-built drawings and any other documentation deemed necessary by the Employer.

The TPV Consultant shall establish a Project Compliance Matrix mapping the requirements of the EPC Contracts, technical specifications and approved designs against the installed facilities and shall identify the verification methodology applicable to each requirement.

Any discrepancies, omissions, inconsistencies or deficiencies identified during documentations review shall be brought to the attention of the Employer.

3.6 VERIFICATION METHODOLOGY

The TPV Consultant shall develop a comprehensive verification methodology covering all components of the Project.

The verification methodology shall be based upon document review and on-site installation verifications.

Verification activities shall be supported by geo-tagged photographs and inspection checklists.

The Consultant shall establish objective acceptance criteria for each inspection activity and shall maintain documentary evidence supporting all verification findings.

The methodology shall provide complete traceability between project requirements, verification activities, inspection findings and final recommendations.

The TPV Consultant shall be required to propose a detailed sampling methodology, subject to the Employer's approval, to ensure that the selected sample provides representative coverage of rooftop installations across different geographical areas/districts, system capacities, EPC Contractors, and installation types. The sampling methodology shall be statistically and technically justified and shall demonstrate that the selected sample is adequate to provide a reliable assessment of the overall quality and compliance of the Project.

3.7 ROOFTOP SOLAR PV VERIFICATION REQUIREMENTS

3.7.1 General

The Consultant shall undertake independent validation of all rooftop Solar Photovoltaic and Battery Energy Storage System installations implemented under Lots I, II and III of

the Project. The On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of 499 public buildings distributed throughout Gilgit-Baltistan and shall include all associated Solar PV, BESS, electrical, monitoring, safety and balance-of-system components.

The Consultant shall verify that the systems installed at each site conform to the approved designs, approved equipment schedules, approved material submittals and technical specifications. The Consultant shall establish a digital inventory of all rooftop assets and verify the operational status and compliance of each installation.

The verification process shall be undertaken in a manner that provides a complete audit trail of inspection activities and enables independent confirmation of the quality and compliance of all installed facilities.

3.7.2 Site Verification Activities for Rooftop Solar

The validation shall include confirmation of site location, GPS coordinates, building identification, installed Solar PV capacity, installed BESS capacity, equipment serial numbers, commissioning status and operational status.

The Consultant shall validate that the installed capacities at each site are consistent with approved designs and contractual requirements and shall identify any discrepancies requiring corrective action.

3.7.3 Monitoring System Verification

The Consultant shall verify functionality of monitoring systems associated with rooftop installations.

Verification shall include assessment of data acquisition systems, communication interfaces, monitoring software, alarms, reporting functions and data storage arrangements. The Consultant shall verify that operational data is being accurately recorded and transmitted and that system operators are able to effectively monitor performance of installed systems.

3.8 UTILITY SCALE SOLAR PV VERIFICATION REQUIREMENTS

3.8.1 General

The TPV Consultant shall undertake comprehensive verification of all utility-scale Solar PV facilities implemented under the Project.

Utility-scale facilities shall be subject to one hundred percent (100%) inspection and verification.

The TPV Consultant shall verify compliance of all facilities with approved designs, approved material submittals, technical specifications and contractual requirements.

3.8.2 Civil Works Verification

The Consultant shall verify quality and compliance of all civil works associated with utility-scale facilities.

Verification shall include site grading, drainage systems, access roads, foundations, retaining structures, fencing, control buildings, equipment foundations and associated infrastructure.

The Consultant shall assess workmanship quality, dimensional compliance and structural integrity and shall identify deficiencies requiring corrective action.

3.8.3 Solar PV Array Verification

The Consultant shall verify that Solar PV arrays have been installed in accordance with approved designs and specifications.

Verification shall include module layout, string configuration, mounting structures, module installation quality, torque settings, cable management arrangements and identification systems.

The Consultant shall undertake detailed inspections of representative strings and shall verify conformity of installed equipment with approved material submittals.

3.8.4 Inverter Stations and Power Conversion Equipment

The TPV Consultant shall verify installation and operation of inverter stations, transformers, switchgear and associated power conversion equipment.

Verification shall include assessment of electrical clearances, ventilation arrangements, protection settings, operational status and compliance with approved specifications.

The TPV Consultant shall review test records and commissioning documentation and shall validate satisfactory completion of all required tests.

3.8.5 Plant Monitoring Systems

The Consultant shall verify functionality of all plant-level monitoring systems included within the EPC scope. Verification shall include assessment of data acquisition systems, communications infrastructure, event logging, reporting functions and operational dashboards.

3.8.6 Performance and Data Validation

In addition to verification of installation compliance, the scope of validation shall also include verification of Performance Ratio (PR), system availability, Battery Energy Storage System Round-Trip Efficiency (BESS RTE) and the SCADA/data acquisition and validation systems associated with the utility-scale facilities.

3.9 TESTING AND COMMISSIONING VERIFICATION REQUIREMENTS

3.9.1 General

The TPV Consultant shall independently verify that all testing and commissioning activities associated with the Project have been carried out in accordance with approved designs and EPC Contract requirements.

3.9.2 Testing Verification

The Consultant shall validate electrical testing records where deemed necessary.

Validation shall include:

DC System Tests

- Polarity Verification;
- Continuity Tests;
- Insulation Resistance Tests;
- String Open Circuit Voltage Tests;
- String Current Tests.

AC System Tests

- Continuity Tests;
- Insulation Resistance Tests;
- Functional Tests;
- Synchronization Tests;
- Protection Verification Tests.

Earthing System Tests

- Earth Resistance Measurements;
- Continuity Verification;
- Bonding Verification.

The Consultant shall verify that all measured values are within acceptable limits and comply with approved specifications.

3.10 DIGITAL INSPECTION PLATFORM, GIS ASSET REGISTER, REPORTING REQUIREMENTS AND DELIVERABLES

3.10.1 General

The TPV Consultant shall establish and maintain a comprehensive digital inspection, verification and reporting system throughout the duration of the assignment. The objective of the system shall be to provide the Employer with a transparent, auditable and continuously updated record of validation activities, inspection findings, compliance status, non-conformities, corrective actions and overall project status.

The digital system shall serve as the primary repository of all technical verification records generated under the assignment and shall remain accessible to authorized representatives of the Employer throughout the contract period.

The Consultant shall ensure that all records generated under the assignment are maintained in a secure, searchable and structured manner and that appropriate backup and data protection mechanisms are implemented.

3.10.2 Digital Inspection Management System

Within sixty (60) days of commencement of services, the Consultant shall establish a Digital Inspection Management System (DIMS) for management of all inspection and verification activities.

The system shall enable:

- Planning and scheduling of inspections;
- Digital inspection forms;
- Geo-tagged photographic records;
- NCR generation and tracking;
- Corrective Action tracking;
- Asset verification tracking;
- Progress monitoring;
- Dashboard reporting;
- Report generation.

The system shall permit generation of inspection records directly from the field using tablets, smartphones or other digital devices. All inspection records shall be electronically timestamped and geo-referenced.

The Consultant shall ensure that the system provides complete traceability between inspection findings, non-conformities, corrective actions and verification outcomes.

3.10.3 GIS-Based Asset Register

The Consultant shall establish and maintain a GIS-based Asset Register covering all Project facilities. The Asset Register shall include all rooftop installations, utility-scale facilities, Battery Energy Storage Systems and associated infrastructure.

The Asset Register shall contain, at a minimum:

Site Information

- Site Name
- Region
- District
- GPS Coordinates
- Site Code
- Contractor Name

Solar PV Information

- Installed Capacity
- Number of Modules
- Module Manufacturer
- Module Model Number
- Module Serial Numbers
- Module Warranty Information

Inverter Information

- Manufacturer

- Model Number
- Ratings
- Serial Numbers
- Warranty Information

BESS Information

- Manufacturer
- Battery Chemistry
- Capacity
- Serial Numbers
- Warranty Information
- Date of Commissioning

Electrical Infrastructure

- Transformer Details
- Switchgear Details
- Protection System Details
- Metering Information

Verification Status

- Inspection Status
- NCR Status
- Compliance Status
- Certification Status

The GIS platform shall permit visualization of all project facilities on a map-based interface.

3.10.4 Digital Photographic Records

The Consultant shall maintain a comprehensive photographic record of all verification activities.

All photographs shall be:

- Geo-tagged;
- Date stamped;
- Time stamped;
- Linked to inspection records.

The Consultant shall establish a structured digital archive of photographs categorized by:

- Site;
- Equipment Type;
- Inspection Date;
- Inspection Category.

The archive shall be provided to the Employer upon completion of the assignment.

3.10.5 Project Compliance Matrix

The Consultant shall develop and maintain a Project Compliance Matrix.

The Compliance Matrix shall provide a comprehensive mapping, against actual installed facilities, of:

- EPC Requirements;
- Approved Designs;
- Approved Material Submittals;
- Technical Specifications;
- Applicable Standards;

The Compliance Matrix shall identify:

- Compliance Status;
- Verification Method;
- Inspection Reference;
- Supporting Evidence;
- Outstanding Actions.

The Compliance Matrix shall be updated throughout the assignment.

3.10.6 Non-Conformance Classification System

The Consultant shall manage all deficiencies identified during verification activities through a structured, three-tier Non-Conformance Classification System comprising Critical, Major and Minor Non-Conformance Reports (NCRs) and Observations. Each Non-Conformance Report issued under the Assignment shall be classified strictly in accordance with this Section and shall be prepared in the format prescribed under Annexure-D.

Critical NCR: A deficiency that poses an immediate risk to life, safety or property, or that renders the affected equipment or facility incapable of safe or reliable operation, including but not limited to fire safety system failures, structural failures, electrical safety hazards and BESS thermal safety deficiencies. Critical NCRs shall be reported to the Employer and the relevant Contractor within forty-eight (48) hours of identification.

Major NCR: A deficiency that does not present an immediate safety risk but materially affects compliance with approved designs, technical specifications, contractual requirements or performance guarantees. Major NCRs shall be issued within five (5) working days of identification.

Minor NCR: A localized or workmanship-related deficiency that does not materially affect safety, compliance or performance. Minor NCRs shall be recorded in the Digital Inspection Management System and tracked to closure, ordinarily within thirty (30) days, or within such period as may be agreed with the Contractor and accepted by the Employer.

Observation: A noted item that does not constitute a non-conformance but reflects a potential improvement opportunity, an emerging risk or a good practice worth

recording. Observations shall be logged for information and shall not require formal corrective action tracking unless subsequently reclassified as an NCR.

The Consultant shall maintain a consolidated NCR Register within the Digital Inspection Management System, recording the classification, status and closure history of every NCR, and shall report the status of all open and closed NCRs in each Validation Report in accordance with Annexure-C.

3.11 REPORTING REQUIREMENTS

3.11.1 General

The Consultant shall prepare and submit reports in accordance with the requirements of this Section.

All reports shall be submitted in both editable electronic format and searchable PDF format.

The Consultant shall ensure that reports are concise, technically sound and supported by adequate evidence.

All findings shall be supported by documentary evidence, inspection records, test records and photographic documentation.

3.11.2 Inception Report

The Consultant shall submit an Inception Report within seven (07) days of commencement.

The report shall include:

- Understanding of Assignment;
- Mobilization Status;
- Staffing Plan;
- Detailed Work Plan;
- Inspection Methodology;
- Reporting Framework;
- Risk Assessment.

The Inception Report shall be subject to approval by the Employer.

3.11.3 Validation Methodology Report

Within fifteen (15) days of commencement, the Consultant shall submit a detailed Verification Methodology Report.

The report shall include:

- Inspection Methodologies;
- Sampling Methodologies;
- Verification Criteria;
- Acceptance Criteria;
- Reporting Procedures;
- Digital Inspection Framework.

3.11.4 Validation Reports

The Consultant shall submit Validation Reports for each lot of the Contract.

Reports shall be submitted within twenty (20) days following the notice by the Employer for each lot.

Each report shall include:

- Activities Undertaken;
- Inspections Conducted;
- Compliance Status;
- NCR Status;
- Corrective Actions;
- Risks and Issues;
- Recommendations.

3.11.5 Validation Certificates

Following satisfactory completion of inspections and closure of major deficiencies, the Consultant shall issue Validation Certificate for Each Lot confirming compliance of facilities with Project requirements.

Separate Validation Certificates shall be issued for each Lot of:

- Rooftop Facilities;
- Utility Scale Facilities;

3.11.6 Final Validation Report

Upon completion of all verification activities, the Consultant shall prepare a comprehensive Final Validation Report.

The report shall provide:

- Summary of Assignment;
- Verification Methodology;
- Compliance Assessment;
- Performance Assessment;
- Safety Assessment;
- Outstanding Issues;
- Recommendations.

3.11.7 Final Acceptance Recommendation

The Consultant shall submit a Final Acceptance Recommendation to the Employer.

The recommendation shall clearly state whether:

- The facilities satisfy contractual requirements;
- Major deficiencies remain outstanding;
- Final Acceptance is recommended.

The recommendation shall be supported by objective evidence and shall form the basis for the Employer's decision regarding final acceptance of the Project facilities.

3.12 DELIVERABLES, PAYMENT MILESTONES AND PAYMENT PROCEDURES

3.12.1 General

The Consultant shall be compensated on the basis of successful completion and acceptance of deliverables specified under this Section. Payments shall be linked to achievement of clearly defined milestones and submission of deliverables acceptable to the Employer. No payment shall become due solely on the basis of elapsed time. All payments shall be subject to satisfactory performance of services and acceptance of deliverables by the Employer.

The Consultant shall be responsible for all costs associated with execution of the assignment including personnel, office facilities, vehicles, accommodation, inspection equipment, software, communication facilities, logistics, insurance and all other resources necessary for performance of the Services.

3.12.2 Deliverables

The Consultant shall submit the following deliverables during the course of the assignment.

D-1 Inception Report

The Inception Report shall be submitted within seven (07) days of commencement of services and shall contain the Consultant's understanding of the assignment, staffing arrangements, work plan, inspection methodology, reporting framework and risk assessment.

D-2 Validation Methodology Report

The Verification Methodology Report shall describe the detailed approach to inspections, verification activities, compliance assessment, testing verification, NCR management and reporting.

D-3 Digital Inspection Management System

The Consultant shall establish and operationalize the Digital Inspection Management System and GIS Asset Register within fifteen (15) days of commencement.

D-4 Validation Reports

Validation reports shall summarize inspections conducted, compliance status, NCR status, corrective actions and progress achieved.

D-5 Digital Asset Register

The Consultant shall establish and maintain a verified digital asset register for all Project facilities and shall update the register throughout the assignment.

D-6 Rooftop Component Validation Certificates

The Consultant shall issue Third Party Validation Certificates confirming compliance of rooftop Solar PV and BESS installations following completion of inspections and closure of major deficiencies.

D-7 Utility Scale Component Validation Certificates

The Consultant shall issue Third Party Validation Certificates confirming compliance of utility-scale Solar PV and BESS facilities following completion of inspections and closure of major deficiencies.

D-8 Final Validation Report

The Consultant shall prepare a comprehensive report summarizing all verification activities, findings, compliance assessments and recommendations.

D-9 Final Acceptance Recommendation

The Consultant shall submit an independent recommendation regarding final acceptance of the Project facilities.

3.12.3 Payment Milestones

Payments shall be made in accordance with the following schedule:

Milestone	Deliverable	Payment (%)
PM-1	Advance Payment on Mobilization	20
PM-2	<ul style="list-style-type: none">• Acceptance of Inception Report,• Acceptance of Verification Methodology Report, Operationalization of Digital Inspection Management System and GIS Asset Register	10
PM-3	Validation Report for Lot I of Rooftop Solar	15
PM-4	Validation Report for Lot II of Rooftop Solar	10
PM-5	Validation Report for Lot III of Rooftop Solar	10
PM-6	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot I	20
PM-7	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot II	5
PM-8	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot III	10
PM-9	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot IV	10
PM-10	Submission and Acceptance of Final Validation Report	10
Total = (PM-2 + PM-3 + PM-4 + PM-5 + PM-6 + PM-7 + PM-8 + PM-9 + PM-10)		100

Advance Payment on Mobilization:

The Client shall made the advance payment within fourteen (14) days after:

- a. The Contract has been signed between the parties and the Consultants has mobilized to the satisfaction of the Client.

- b. The Client has received the advance payment guarantee issued by (i) a Scheduled Bank in Pakistan or (ii) foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan, in amounts and currency equal to advance payment.

The guarantee shall remain valid until the Consultants has performed his obligation under the Contract. The guarantee shall be returned to the Consultants within fourteen (14) days upon full recovery of advance payment.

Advance payment shall be recovered at amortization rate of 22.3% of amount of each invoice against milestones, starting from PM-2 till the advance has been fully recovered.

3.12.4 Invoice Submission

The Consultant shall submit invoices together with supporting documentation demonstrating completion of the relevant deliverable.

Each invoice shall include:

- Reference to Contract;
- Deliverable Description;
- Invoice Amount;
- Supporting Documents;
- Tax Documentation.

Invoices not supported by required documentation may be rejected by the Employer.

3.12.5 Review and Approval of Deliverables

The Employer shall review submitted deliverables and may provide comments requiring clarification, revision or additional information.

The Consultant shall address all comments and resubmit revised deliverables within the period specified by the Employer.

Acceptance of deliverables shall occur only after the Employer is satisfied that the deliverables comply with contractual requirements.

3.12.6 Performance-Based Adjustments

Where the Consultant fails to perform services in accordance with the requirements of the Contract, the Employer may:

- Withhold payments;
- Apply contractual penalties;
- Reject deliverables;
- Require re-performance of services.

The Consultant shall not be entitled to additional compensation for re-performance of services arising from deficiencies attributable to the Consultant.

3.12.7 Key Performance Indicators (KPIs)

The Consultant shall be evaluated against the following KPIs:

Reporting Timeliness

- Validation Reports submitted within 20 days of notice from the Employer.

NCR Management

- NCRs issued within 5 working days of identification.
- Verification of closure within 10 working days of corrective action completion.

Inspection Coverage

- On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities. 100% verification of utility-scale facilities.

Digital Database Management

- Continuous updating of GIS Asset Register.
- Continuous updating of Compliance Matrix.

Failure to achieve KPIs may result in withholding of payments or application of contractual remedies.

3.12.8 Final Payment

The final payment shall be released only after:

- Completion of all services;
- Acceptance of Final Validation Report;
- Acceptance of Final Acceptance Recommendation;
- Handover of all records, databases and deliverables;
- Resolution of all outstanding contractual matters.

3.13 QUALIFICATION AND EXPERIENCE REQUIREMENTS OF THE CONSULTANT

3.13.1 General

The Consultant shall demonstrate that it possesses the technical capability, financial capacity, organizational resources and professional expertise necessary to successfully perform the Assignment.

The Consultant shall be responsible for ensuring that all proposed personnel, methodologies, resources and systems are adequate to undertake the assignment in accordance with the requirements of the Contract.

The Employer reserves the right to verify any information provided by the Consultant and to seek independent confirmation of experience, qualifications and financial information submitted in support of the Proposal.

3.13.2 Legal Eligibility

The Consultant shall be a legally constituted entity authorized to provide consulting services in its country of incorporation.

The Consultant shall possess all registrations, licenses and authorizations necessary for performance of the Assignment.

The Consultant shall provide documentary evidence demonstrating:

- Legal status of the firm;
- Registration certificate;
- Tax registration;
- Active taxpayer status;
- Power of Attorney of authorized signatory;
- Joint Venture Agreement (where applicable).

The Consultant shall certify that it is not subject to bankruptcy, insolvency, receivership or liquidation proceedings.

3.13.3 Joint Venture Requirements

Foreign consulting firms shall be permitted to participate only through a Joint Venture with a consulting firm registered in Pakistan.

The local partner shall hold a minimum participation share of thirty percent (30%) in the Joint Venture.

The Joint Venture Agreement shall clearly identify:

- Lead Partner;
- Roles and responsibilities of each partner;
- Percentage participation;
- Authorized representative.

All Joint Venture partners shall be jointly and severally liable for performance of the Contract.

The Lead Partner (International consulting firm) shall possess the majority of relevant international experience and shall be responsible for overall management and delivery of the Assignment.

The local partner shall be responsible for local coordination, field support, stakeholder engagement, logistics and facilitation of field activities.

3.13.4 Conflict of Interest

The Consultant shall be independent of all parties directly involved in implementation of the Project.

The following entities shall not be eligible:

- EPC Contractors;
- Equipment Suppliers;
- Manufacturers supplying major equipment under the Project;
- Design & Construction Supervision Consultant;
- Affiliates of the above entities.

The Consultant shall submit a Conflict-of-Interest Declaration confirming its independence from all parties associated with Project implementation.

Any actual or potential conflict of interest identified during the procurement process or assignment execution shall be immediately disclosed to the Employer.

3.13.5 Financial Capacity Requirements

The Consultant shall demonstrate adequate financial capacity to perform the Assignment. The Consultant shall submit audited financial statements for the last three financial years. The Consultant shall satisfy the following minimum requirements:

Average Annual Turnover

The Consultant shall have an average annual turnover of not less than PKR 500 million or equivalent during the last three financial years.

Net Worth

The Consultant shall have a positive net worth during each of the last three financial years.

Financial Stability

The Consultant shall demonstrate satisfactory financial stability and capability to mobilize personnel and resources without reliance upon advance payments.

The Employer reserves the right to request additional financial information where necessary.

3.13.6 General Consulting Experience

The Lead Partner/Consultant as single entity shall possess a minimum of ten (10) years of experience in engineering consultancy, technical advisory services, owner's engineering, independent engineering, technical due diligence, project supervision or related professional services. The Consultant shall demonstrate successful completion of assignments involving renewable energy projects, electrical infrastructure, power generation facilities or energy storage systems. Experience shall be supported by completion certificates, client references or equivalent documentary evidence.

3.13.7 Solar PV Experience Requirements

The Consultant shall demonstrate substantial experience in Solar Photovoltaic projects. The Lead Partner shall have cumulative experience of not less than three hundred megawatts (300 MW) of Solar PV projects commissioned during the last ten years.

Experience may include:

- Utility Scale Solar PV Projects;
- Distributed Solar PV Projects;
- Rooftop Solar PV Projects;

- Independent Engineer Assignments;
- Owner's Engineer Assignments;
- Technical Due Diligence Assignments;
- Third Party Validation Assignments.

The Consultant shall provide details of project capacities, locations, clients and scope of services performed. Preference shall be given to firms demonstrating experience in projects incorporating both Solar PV and Battery Energy Storage Systems.

3.13.8 Battery Energy Storage System Experience Requirements

Given the significant BESS component of the Project, the Consultant shall demonstrate specific experience in Battery Energy Storage Systems. The Lead Partner shall have cumulative experience of not less than fifty megawatt-hours (50 MWh) of Battery Energy Storage Systems commissioned during the last ten years.

Experience shall include one or more of the following:

- Design Review;
- Owner's Engineering;
- Independent Engineering;
- Technical Due Diligence;
- Construction Supervision;
- Third Party Validation;

The Consultant shall demonstrate familiarity with lithium-ion battery systems, battery management systems, power conversion systems, thermal management systems and fire protection systems.

3.13.9 Similar Assignment Requirements

The Consultant shall have successfully completed at least three (3) assignments of similar nature during the last ten years.

For the purpose of this RFP, similar assignments shall include:

- Independent Engineer;
- Owner's Engineer;
- Lender's Engineer;
- Technical Due Diligence;
- Technical Verification;
- Third Party Validation;
- Construction Monitoring.

The assignments shall involve Solar PV projects, Battery Energy Storage Systems or comparable electrical infrastructure.

The Employer may give additional weightage to assignments involving both Solar PV and BESS facilities.

3.13.10 Regional and Developing Country Experience

The Consultant shall demonstrate experience working in developing countries and remote geographical regions.

Preference may be given to firms having prior experience in:

- Pakistan;
- South Asia;
- Central Asia;
- Mountainous Regions;
- Remote Infrastructure Projects.

Such experience shall be considered beneficial in view of the logistical and operational challenges associated with implementation in Gilgit-Baltistan.

3.13.11 Availability of Resources

The Consultant shall demonstrate availability of sufficient personnel, equipment, software and organizational resources necessary for successful execution of the Assignment. The Consultant shall establish a Project Office in Gilgit within thirty (30) days of commencement of services and shall maintain the office throughout the duration of the assignment.

The Consultant shall provide all necessary:

- Vehicles;
- Inspection Equipment;
- Communication Facilities;
- Computers;
- Software Licenses;
- Survey Equipment;
- Safety Equipment.

The Employer shall not provide logistical support or office facilities.

3.13.12 Mandatory Key Experts

The Consultant shall propose, at a minimum, the following Key Experts:

- Team Leader / Renewable Energy Expert;
- Senior Electrical Engineer, 4 Nos;
- Senior Civil Engineer, 4 Nos;
- Monitoring & Data Systems Expert.

Failure to propose any mandatory Key Expert shall render the Proposal non-responsive. The qualifications, experience and responsibilities of each expert shall be as specified elsewhere in the RFP.

3.13.13 Replacement of Key Experts

Key Experts proposed in the Technical Proposal shall not be replaced without prior written approval of the Employer. Replacement shall only be permitted under exceptional circumstances and the replacement expert shall possess qualifications and experience equal to or better than those of the originally proposed expert. The Employer reserves the right to reject proposed replacements.

3.13.14 Verification of Qualifications

The Employer may independently verify qualifications, experience, certifications and references submitted by the Consultant. Any material misrepresentation or submission of false information shall result in disqualification and may lead to debarment in accordance with applicable procurement rules.

3.13.15 Minimum Qualification Threshold

Only Consultants meeting all mandatory qualification requirements specified under this Section shall qualify for detailed technical evaluation. Failure to satisfy any mandatory requirement will result in rejection of the Proposal without further evaluation.

3.13.16 Minimum Qualification Requirements for Key Experts

The minimum qualification and experience requirements for each mandatory Key Expert referred to under Section 3.13.12 are set out below. The Consultant shall propose Key Experts who, at a minimum, satisfy these requirements, supported by signed CVs, educational certificates, professional certifications and documentary evidence of relevant experience. Proposals in which any proposed Key Expert fails to meet the minimum requirements specified below shall be liable to rejection in accordance with Section 3.13.15.

Team Leader / Renewable Energy Expert

- Bachelor's degree in Electrical Engineering, Power Engineering or a closely related discipline from a recognized university; a Master's degree in a relevant field shall be considered an advantage.
- Registered/licensed engineer with a recognized professional engineering body (e.g., Pakistan Engineering Council for Pakistani nationals, or an equivalent recognized body for foreign nationals).
- Minimum fifteen (15) years of general professional experience in renewable energy, power sector consultancy, owner's engineering, independent engineering or technical advisory services.
- Minimum five (5) years of experience specific to Solar PV projects, including at least one assignment involving Battery Energy Storage Systems.

- Demonstrated experience as Team Leader, Independent Engineer or Owner's Engineer on at least two (2) assignments of comparable scale and complexity.

Key Responsibilities: Overall management and quality control of the Assignment; liaison with the Employer; supervision and coordination of all Key Experts; review and sign-off of all deliverables, Verification Certificates and the Final Acceptance Recommendation. Team Leader shall be based in the Project Area (preferably in Gilgit) for the entire Project duration.

Senior Electrical Engineer

- Bachelor's degree in Electrical Engineering, Electronics Engineering or a closely related discipline.
- Minimum ten (10) years of experience in design, EPC supervision, testing and commissioning, owner's engineering or independent verification of Solar PV systems and minimum eight (8) years of experience in Battery Energy Storage Systems, power electronics or energy storage system integration, including design review, owner's engineering, construction supervision or independent verification.
- Demonstrated involvement in Solar PV projects with a cumulative installed capacity of not less than fifty (50) MW, including both utility-scale and distributed/rooftop installations where possible and Demonstrated experience on at least one (1) Battery Energy Storage System project of not less than five (5) MWh capacity.

Key Responsibilities: Verification of Solar PV modules, mounting structures, array configuration, inverters and associated balance-of-system equipment; performance assessment of Solar PV facilities; technical input to the Compliance Matrix and Verification Certificates and Verification of battery modules, battery management systems, power conversion systems, thermal management and fire safety systems; assessment of BESS performance and degradation; input to BESS Verification Certificates.

Senior Civil Engineer

- Bachelor's degree in Civil Engineering, Structural Engineering or a closely related discipline.
- Minimum ten (10) years of experience in the design, construction supervision, quality assurance/quality control (QA/QC), owner's engineering or independent verification of civil and structural works for power, renewable energy or industrial infrastructure projects, including a minimum of five (5) years of experience in Solar PV plants and Battery Energy Storage System (BESS) facilities.
- Demonstrated involvement in Solar PV projects with a cumulative installed capacity of not less than fifty (50) MW, including utility-scale and distributed/rooftop installations where applicable.

- Experience in the review and verification of geotechnical investigations, foundations, structural steel and reinforced concrete structures, equipment foundations, cable trenches, and associated civil infrastructure in accordance with applicable international standards and project specifications.

Key Responsibilities: Verification of site grading, earthworks, cable trenches; verification of foundations for PV module mounting structures, inverter stations, transformers and Battery Energy Storage System (BESS) containers/buildings; assessment of structural adequacy, construction quality, material compliance and as-built works; review of geotechnical and structural documentation; technical input to the Compliance Matrix and Verification Certificates for civil and structural works associated with Solar PV and BESS facilities.

Monitoring & Data Systems Expert

- Bachelor's degree in Geographic Information Systems, Geomatics, Surveying, Computer Science or a closely related discipline.
- Minimum seven (7) years of experience in GIS, geo-database design, digital asset management or remote sensing, including the establishment of GIS-based asset registers or digital inspection platforms for infrastructure projects.
- Working knowledge of GIS software platforms, geo-tagged photographic, and database/dashboard reporting tools.

Key Responsibilities: Establishment and maintenance of the Digital Inspection Management System and GIS-Based Asset Register; management of geo-tagged photographic, dashboard reporting and data integrity assurance.

Replacement Key Experts proposed during the course of the Assignment shall, at a minimum, satisfy the qualification and experience requirements specified above for the relevant position, in accordance with Section 3.13.13.

3.14 TECHNICAL EVALUATION CRITERIA AND DETAILED SCORING MATRIX

3.14.1 Evaluation Methodology

Selection of the Consultant shall be undertaken through the Quality and Cost Based Selection (QCBS) Method using a Single Stage Two Envelope Procedure.

Technical and Financial Proposals shall be submitted at the same time by a Single Stage Two Envelopes procedure.

The Technical Proposal shall be evaluated first. Financial Proposals shall be opened only for those Consultants achieving the minimum qualifying technical score specified in this Section.

The Consultant obtaining the highest combined technical and financial score shall be ranked first and invited for contract negotiations.

3.14.2 Evaluation Framework

The Technical Proposal shall be evaluated out of a maximum of one hundred (100) marks. The Financial Proposal shall subsequently be evaluated in accordance with the QCBS methodology. The final ranking shall be determined using the following

weightages:

Component	Weight
Technical Proposal	80%
Financial Proposal	20%
Total	100%

Only Consultants obtaining a minimum overall technical score of seventy-five (75) marks and 50% of score assigned each category/criterion given below for shall qualify for opening of Financial Proposals. In case of JV, a minimum overall technical score of seventy-five (75) and lead member must also obtain a minimum 50% of the technical score assigned for each category/criterion given hereunder, including

- A. Firm Experience and Capability
- B. Similar Assignments
- C. Methodology and Work Plan
- D. Key Experts

3.14.3 TECHNICAL EVALUATION CRITERIA

A. Firm Experience and Capability

Maximum Marks: 30

The purpose of this criterion is to assess the overall capability of the Consultant and its ability to successfully execute assignments of comparable complexity and scale.

A.1 General Consulting Experience

Experience	Marks
10–15 Years	5
16–20 Years	8
More than 20 Years	10

A.2 Solar PV Experience

Cumulative Experience	Solar	PV	Marks
300–500 MW			5
501–1000 MW			8
Above 1000 MW			10

Only commissioned projects shall be considered.

A.3 Battery Energy Storage Experience

Cumulative BESS Experience	Marks
50–100 MWh	3
101–250 MWh	6
Above 250 MWh	8

A.4 Local Presence and Regional Experience

Criteria	Marks
Experience in Pakistan	1
Experience in Mountainous / Remote Areas	1
Total	2

B. Similar Assignments

Maximum Marks: 20

The objective of this criterion is to evaluate experience specifically relevant to the assignment.

Only assignments completed within the last ten (10) years shall be considered.

B.1 Independent Engineer / Owner's Engineer Assignments

Number of Assignments	Marks
3	5
4–5	8
More than 5	10

B.2 Solar PV Verification Assignments

Number of Assignments	Marks
2–3	3
4–5	5
More than 5	7

B.3 BESS Verification Assignments

Number of Assignments	Marks
1–2	1
3–4	2
More than 4	3

C. Methodology and Work Plan

Maximum Marks: 25

The Consultant shall demonstrate a clear understanding of the assignment and present a practical, innovative and technically sound approach for execution of the services.

C.1 Understanding of Assignment

Assessment shall include:

- Understanding of Project Objectives;
- Understanding of Verification Requirements;
- Understanding of Risks and Challenges.

Maximum Marks: **5**

C.2 Verification Methodology

Assessment shall include:

- Inspection Methodology;
- Compliance Verification Approach;
- Testing Verification Approach;
- Quality Assurance Procedures.

Maximum Marks: **10**

C.3 Digital Inspection and Asset Management System

Assessment shall include:

- GIS Platform;
- Digital Asset Register;
- Mobile Inspection System;
- NCR Tracking System;
- Dashboard Reporting.

Maximum Marks: **5**

C.4 Work Plan and Mobilization Strategy

Assessment shall include:

- Staffing Deployment;
- Site Coverage Strategy;
- Inspection Schedule;
- Logistics Arrangements.

Maximum Marks: **5**

D. Key Experts

Maximum Marks: 25

Evaluation shall be based upon qualifications, experience and suitability of proposed personnel.

D.1 Team Leader / Renewable Energy Expert

Maximum Marks: **7**

Criteria	Sub-Criteria	Marks
Education	Bachelor's in Electrical/Power Eng	1
General Experience	Min. 15 yrs in renewable energy/power sector consultancy	2
Solar PV Experience	Min. 5 years specific to Solar PV projects	2
BESS Experience	At least one assignment involving Battery Energy Storage Systems	1
Similar Assignments	2 comparable assignments	1

D.2 Senior Electrical Engineer (4 Nos.)

Maximum Marks: **2**

Criteria	Sub-Criteria	Marks
Education	Bachelor's in Electrical/Power Eng	1
Experience	Min. 10 yrs in Solar PV design, commissioning or independent verification	0.5
Solar Projects	Cumulative installed capacity ≥ 50 MW (utility-scale & distributed)	0.5

D.3 Senior Civil Engineer (4 Nos.)

Maximum Marks: 2

Criteria	Sub-Criteria	Marks
Education	Bachelor's in Civil Engineering	1
Experience	Min. 10 yrs in experience in Solar design, construction supervision, quality assurance/quality control (QA/QC), owner's engineering or independent verification of civil and structural works for power, renewable energy or industrial infrastructure projects.	0.5
BESS Projects	Cumulative installed capacity ≥ 50 MW (utility-scale & distributed)	0.5

D.4 Monitoring & Data Systems Expert

Maximum Marks: 2

Criteria	Sub-Criteria	Marks
Education	Bachelor's in GIS, Geomatics, Surveying or Computer Science; closely related discipline acceptable	1
Experience	Min. 7 yrs GIS, geo-database, digital asset management or remote sensing	1

3.14.4 Summary of Technical Evaluation

Criterion	Maximum Marks
Firm Experience & Capability	30
Similar Assignments	20
Methodology & Work Plan	25
Key Experts	25
Total Technical Score	100

Minimum Qualifying Technical Score: **75 Marks**

3.14.5 Financial Evaluation

Only Financial Proposals of technically qualified Consultants shall be opened.

The lowest evaluated Financial Proposal shall receive a Financial Score of one

hundred (100).

The Financial Score of other Consultants shall be determined as follows:

$$Sf = 100 \times \frac{Fm}{F}$$

Where:

- **Sf** = Financial Score
- **Fm** = Lowest Evaluated Financial Proposal
- **F** = Financial Proposal under Evaluation

3.14.6 Combined Evaluation

The Final Combined Score shall be calculated as follows:

$$S = (0.80 \times St) + (0.20 \times Sf)$$

Where:

- **S** = Combined Score
- **St** = Technical Score
- **Sf** = Financial Score

The Consultant obtaining the highest combined score shall be ranked first.

3.14.7 Clarifications and Presentations

The Employer reserves the right to invite Consultants for technical presentations and clarifications during the evaluation process.

Such presentations may cover:

- Understanding of Assignment;
- Verification Methodology;
- Digital Inspection System;
- Mobilization Plan;
- Staffing Strategy.

No additional marks shall be awarded during presentations; however, presentations may be used to clarify ambiguities in proposals.

3.14.8 Disqualification Criteria

A Proposal may be rejected if:

- Minimum qualification requirements are not met;
- Mandatory experts are not proposed;
- Financial information is included in the Technical Proposal;

- Conflict of interest exists;
- False or misleading information is provided;
- Proposal Security is not furnished;
- Proposal is materially non-responsive.
-

SECTION 4. PROPOSAL PREPARATION AND SUBMISSION REQUIREMENTS

4.1 General

The Consultant shall prepare and submit a Technical Proposal and a Financial Proposal in accordance with the requirements of this Request for Proposals. The Proposal shall clearly demonstrate the Consultant's understanding of the assignment, technical capability, organizational resources, experience and financial offer for execution of the services. The Proposal shall be prepared in the English language.

All costs associated with preparation and submission of the Proposal shall be borne solely by the Consultant.

4.2 Proposal Structure

The Proposal shall comprise:

Envelope No. 1

Technical Proposal

Containing:

- Technical Submission Form
- Consultant Information
- JV Information
- Firm Experience
- Similar Assignments
- Methodology
- Work Plan
- Staffing Schedule
- CVs of Experts
- Expert Availability Certificates
- Conflict of Interest Declaration
- Integrity Pact
- Affidavit of Blacklisting
- Supporting Documents

Envelope No. 2

Financial Proposal

Containing:

- Financial Submission Form
- Summary Cost Schedule
- Professional Fee Schedule
- Reimbursable Cost Schedule
- Payment Schedule

Note: No financial information shall be included in the Technical Proposal. Inclusion of financial information in the Technical Proposal shall render the Proposal non-responsive.

4.3 Technical Proposal Forms

TECH-1

TECHNICAL PROPOSAL SUBMISSION FORM

To:

*The Project Director,
Water & Power Department,
Government of Gilgit-Baltistan,
Gilgit, Pakistan.*

Subject: Technical Proposal for Hiring of Independent Technical Verification & Validation Consultant for 100 MW Distributed Photovoltaic Solar Power Plants in Gilgit-Baltistan

Dear Sir,

We, the undersigned, hereby submit our Technical Proposal for the above Assignment.

We confirm that:

- We have examined the RFP;
- We accept all conditions of the RFP;
- We possess the qualifications required for the Assignment;
- We agree to perform the services if selected.

We further certify that the information contained in this Proposal is true and correct.

Name: _____

Designation: _____

Firm: _____

Date: _____

Signature: _____

TECH-2
CONSULTANT INFORMATION FORM

The Consultant shall provide:

General Information

- Name of Firm _____
- Country of Registration _____
- Date of Incorporation _____
- Registered Address _____
- Telephone _____
- Email _____
- Website _____

Registration Details

- Registration Number _____
- NTN _____
- GST Registration _____
- Active Taxpayer Status _____

Contact Person

- Name _____
- Designation _____
- Telephone _____
- Email _____

TECH-3

JOINT VENTURE INFORMATION FORM

Where applicable, Consultants shall provide:

JV Composition

JV Partner: _____ **Country:** _____ **Share (%)** _____

Lead Partner: _____

Authorized Representative: _____

Roles and Responsibilities: _____

The Consultant shall attach:

- JV Agreement
- Power of Attorney
- Board Resolution

TECH-4

GENERAL EXPERIENCE FORM

The Consultant shall provide details of corporate experience during the last ten years.

Year	Assignment	Client	Country	Value

TECH-5

SIMILAR ASSIGNMENT EXPERIENCE FORM

The Consultant shall provide details of assignments relevant to this RFP.

Project	Client	Capacity (MW)	BESS (MWh)	Scope

For each assignment the Consultant shall attach:

- Completion Certificate;
- Client Reference;
- Contract Summary.

TECH-6

METHODOLOGY AND WORK PLAN

The Consultant shall provide a detailed narrative describing:

- **Understanding of Assignment**
- **Verification Methodology**
- **Inspection Framework**
- **BESS Verification Methodology**
- **Digital Inspection System**
- **Risk Management Strategy**
- **Quality Assurance Framework**
- **Reporting Framework**

TECH-7
IMPLEMENTATION SCHEDULE

The Consultant shall submit a detailed implementation schedule showing:

- Mobilization
- Documentation Review
- Site Inspections
- Testing Verification
- Commissioning Verification
- Reporting Activities

A Gantt Chart shall be provided.

TECH-8
STAFFING SCHEDULE

The Consultant shall provide deployment schedules for all experts.

Expert	Position	Input (Months)	Mobilization Date

TECH-9
CURRICULUM VITAE

Each proposed expert shall submit a CV including:

- **Personal Information**
- **Educational Qualifications**
- **Professional Certifications**
- **Employment History**
- **Relevant Project Experience**
- **Role in Assignment**
- **Language Skills**
- **Contact Information**

The CV shall be signed by:

- Expert
- Authorized Representative

TECH-10

EXPERT AVAILABILITY CERTIFICATE (On Letterhead)

I, the undersigned, certify that:

- I have reviewed the Terms of Reference;
- I am available for the proposed assignment;
- I am not committed to another assignment that would conflict with this engagement.

Name: _____

Position: _____

Signature: _____

Date: _____

TECH-11

CONFLICT OF INTEREST DECLARATION

The Consultant shall certify that neither the Consultant nor any affiliate:

- Participated in EPC activities;
- Supplied equipment under the Project;
- Participated in design approval;
- Participated in material approval;
- Participated in construction supervision.

Authorized Signatory:

Date:

TECH-12
INTEGRITY PACT

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

Contract No. _____ Dated _____ Contract Value: _____

Contract Title: _____

..... [name of 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 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 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 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 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 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 Contractor:

Signature:

[Seal]

TECH-13

AFFIDAVIT OF NON-BLACKLISTING

[Please provide an affidavit that the bidder has not been blacklisted by any government / public department/donor agencies at the time of submission of bid/proposal.]

4.4 FINANCIAL PROPOSAL FORMS

FIN-1

FINANCIAL PROPOSAL SUBMISSION FORM

To:

*The Project Director,
Water & Power Department,
Government of Gilgit-Baltistan,
Gilgit, Pakistan.*

Subject: Financial Proposal for Hiring of Independent Technical Verification & Validation Consultant for 100 MW Distributed Photovoltaic Solar Power Plants in Gilgit-Baltistan

Dear Sir,

We hereby submit our Financial Proposal and agree to remain bound by this Proposal for the period specified in the RFP.

Authorized Signatory:

Name:

Designation:

Date:

FIN-2
SUMMARY COST SCHEDULE

Cost Component	Amount (PKR)
Professional Fees	
Reimbursable	
Taxes	
Total	

FIN-4

REIMBURSABLE COST SCHEDULE

Item	Quantity	Unit Rate	Amount

Items may include:

- Travel
- Accommodation
- Vehicles
- Inspection Equipment
- Software
- Communications

FIN-5

DELIVERABLE-BASED PAYMENT SCHEDULE

Deliverable	Amount (PKR)
Inception Report	
Methodology Report	
Digital Inspection System	
Validation Reports	
Verification Certificates	
Final Validation Report	
Final Acceptance Recommendation	

4.5 SECURITIES AND UNDERTAKINGS

Bid Security

The Consultant shall furnish Bid Security equal to PKR 2.0 Million. The Bid Security shall remain valid for at least twenty-eight (28) days beyond the proposal validity period.

Declaration of Truthfulness

The Consultant shall certify that all information submitted is true, complete and accurate. Any misrepresentation shall result in disqualification and may lead to debarment.

SECTION 5: FORM OF CONTRACT AGREEMENT AND CONDITIONS OF CONTRACT

CONTRACT FOR ENGINEERING CONSULTANCY SERVICES

between

(NAME OF THE CLIENT)

and

(NAME OF THE CONSULTANTS)

for

_____ **(BRIEF SCOPE OF SERVICES)**
OF _____ **(NAME OF PROJECT)**

Month and Year

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FORM OF CONTRACT

- [Notes: 1. Use this Form of Contract when the Consultants perform Services as Sole Consultants.*
- 2. In case the Consultants perform Services as a Member of the joint venture, use the Form included at the end.*
- 3. All notes should be deleted in the final text.]*

This CONTRACT (hereinafter called the "Contract") is made on the ___ day of ___ month) of ___ (year), between, on the one hand _____ (hereinafter called the "Client" which expression shall include the successors, legal representatives and permitted assigns) and, on the other hand, _____ (hereinafter called the "Consultants" which expression shall include the successors, legal representatives and permitted assigns).

WHEREAS

- (a) the Client has requested the Consultants to provide certain consulting services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the "Services"); and
- (b) the Consultants, having represented to the Client that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract;

NOW THEREFORE the Parties hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
- (a) the General Conditions of Contract;
- (b) the Special Conditions of Contract;
- (c) the following Appendices:

[Note: If any of these Appendices are not used, the words "Not Used" should be inserted below/next to the title of the Appendix and on the sheet attached hereto carrying the title of that Appendix.]

Appendix A : Description of the Services

Appendix B : Reporting Requirements

Appendix C : Key Personnel and Subconsultants

Appendix D : Breakdown of Contract Price in Foreign Currency (Not Used)

Appendix E : Breakdown of Contract Price in Local Currency

Appendix F : Services & Facilities to be Provided by the Client

Appendix G: Integrity Pact (for Services above Rs. 10 million)

2. The mutual rights and obligations of the Client and the Consultants shall be as set forth in the Contract, in particular:
- (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names in two identical counterparts, each of which shall be deemed as the original, as of the day, month and year first above written.

For and on behalf of

Witness

(CLIENT)

Signatures _____

Signatures _____

Name _____

Name _____

Title _____

Title _____

(Seal)

For and on behalf of

Witness

(CONSULTANTS)

Signatures _____

Signatures _____

Name _____

Name _____

Title _____

Title _____

(Seal)

II. GENERAL CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) "Applicable Law" means the laws and any other instruments having the force of law in the Islamic Republic of Pakistan, as those may be issued and in force from time to time;
- (b) "Contract" means the Contract signed by the Parties, to which these General Conditions of Contract (GC) are attached, together with all the documents listed in Clause 1 of such signed Contract;
- (c) "Contract Price" means the price to be paid for the performance of the Services, in accordance with Clause 6;
- (d) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Sub-Clause 2.1;
- (e) "GC" means these General Conditions of Contract;
- (f) "Government" means the Government of the Islamic Republic of Pakistan and/or Provincial Government(s);
- (g) "Foreign Currency" means currency other than the currency of Islamic Republic of Pakistan.;
- (h) "Local Currency" means the currency of the Islamic Republic of Pakistan;
- (i) "Member" in case the Consultants consist of a joint venture of more than one entity, means any of the entities, and "Members" means all of these entities;
- (j) "Party" means the Client or the Consultants, as the case may be, and "Parties" means both of them;
- (k) "Personnel" means persons hired by the Consultants or by any Subconsultant as employees and assigned to the performance of the Services or any part thereof;
- (l) "SC" means the Special Conditions of Contract by which the GC are amended or supplemented;

- (m) "Services" means the work to be performed by the Consultants pursuant to this Contract, as described in Appendix A;
- (n) "Subconsultant" means any entity to which the Consultants subcontract any part of the Services in accordance with the provisions of Sub-Clause 3.6;
- (o) "Third Party" means any person or entity other than the Client, the Consultants or a Subconsultant; and
- (p) "Project" means the work specified in SC for which engineering consultancy services are desired.

1.2 Law Governing the Contract

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

1.3 Language

This Contract has been executed in the English language which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. All the reports and communications shall be in the English language.

1.4 Notices

Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an Authorized Representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, or facsimile to such Party at the address of the Authorized Representatives specified under Sub-Clause SC 1.6. A Party may change its address for notice hereunder by giving the other Party notice of such change.

1.5 Location

The Services shall be performed at such locations as are specified in Appendix A and, where the location of a particular task is not so specified, at such locations as mutually agreed by the Parties.

1.6 Authorized Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Client or the Consultants shall be taken or executed by the Authorized Representatives specified in the SC.

1.7 Taxes and Duties

Unless specified in the SC, the Consultants, Subconsultants, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.

1.8 Leader of Joint Venture

In case the Consultants consist of a joint venture of more than one entity, the Consultants shall be jointly and severally bound to the Client for fulfillment of the terms of the Contract and designate the Member named in the SC to act as leader of the Joint Venture, for the purpose of receiving instructions from the Client.

2. COMMENCEMENT, COMPLETION, MODIFICATION, AND TERMINATION OF CONTRACT

2.1 Effectiveness of Contract

This Contract shall come into force and effect on the date (the "Effective Date") of the Client's notice to the Consultants instructing the Consultants to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SC have been met.

2.2 Termination of Contract for Failure to Become Effective

If this Contract has not become effective within such time period after the date of the Contract signed by the Parties as shall be specified in the SC, either Party may, by not less than twenty eight (28) days written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party except for the work (if any) already done or costs already incurred by a Party at the request of the other Party.

2.3 Commencement of Services

The Consultants shall begin carrying out the Services at the end of such time period after the Effective Date as shall be specified in the SC.

2.4 Expiration of Contract

Unless terminated earlier pursuant to Sub-Clause 2.9, this Contract shall expire when, pursuant to the provisions hereof, the Services have been completed and the payments of remunerations including the direct costs if any, have been made. The Services shall be completed within a period as is

specified in the SC, or such extended time as may be allowed under Sub-Clause 2.6.

The term "Completion of Services" is as specified in the SC.

2.5 Modification

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made in writing, which shall be signed by both the Parties.

2.6 Extension of Time for Completion

If the scope or duration of the Services is increased:

- (a) the Consultants shall inform the Client of the circumstances and probable effects;
- (b) the increase shall be regarded as Additional Services; and
- (c) the Client shall extend the time for Completion of the Services accordingly.

2.7 Force Majeure

2.7.1 Definition

- (a) For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial actions (except where such strikes, lockouts or other industrial actions are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.
- (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Subconsultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both (A) take into account at the time of the conclusion of this Contract and (B) avoid or overcome in the carrying out of its obligations hereunder.
- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

2.7.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations under the Contract shall not be considered to be a breach of, or default under this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event; (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract; and (b) has informed the other Party in writing not later than fifteen (15) days following the occurrence of such an event.

2.7.3 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

2.7.4 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultants shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purpose of the Services and in reactivating the Services after the end of such period.

2.8 Suspension of Payments by the Client

The Client may, by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform any of their obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of such notice of suspension.

2.9 Termination

2.9.1 By the Client

The Client may terminate this Contract, by not less than thirty (30) days written notice of termination to the Consultants, to be given after the occurrence of any of the events specified in paragraphs (a) through (e) of this Sub-Clause 2.9.1 and sixty (60) days' in the case of the event referred to in paragraph (f):

- (a) if the Consultants do not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being

notified or within any further period as the Client may have subsequently approved in writing;

- (b) if the Consultants become (or, if the Consultants consist of more than one entity, if any of their Members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- (c) if the Consultants fail to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 7 hereof;
- (d) if the Consultants submit to the Client a statement which has a material effect on the rights, obligations or interests of the Client and which the Consultants know to be false;
- (e) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
- (f) if the Client, in its sole discretion, decides to terminate this Contract.

2.9.2 By the Consultants

The Consultants may terminate this Contract, by not less than thirty (30) days written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Sub-Clause 2.9.2:

- (a) if the Client fails to pay any monies due to the Consultants pursuant to this Contract and not subject to dispute pursuant to Clause 7 within forty-five (45) days after receiving written notice from the Consultants that such payment is overdue;
- (b) if the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultants may have subsequently approved in writing) following the receipt by the Client of the Consultants' notice specifying such breach;
- (c) if, as a result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
- (d) if the Client fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 7 hereof.

2.9.3 Cessation of Services

Upon receipt of notice of termination under Sub-Clause 2.9.1, or giving of notice of termination under Sub-Clause 2.9.2, the Consultants shall take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultants, and equipment and materials furnished by the Client, the Consultants shall proceed as provided, respectively, by Sub-Clauses 3.8 or 3.9.

2.9.4 Payment upon Termination

Upon termination of this Contract pursuant to Sub-Clauses 2.9.1 or 2.9.2, the Client shall make the following payments to the Consultants:

- (a) remuneration and reimbursable direct costs expenditure pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination. Effective date of termination for purposes of this Sub-Clause means the date when the prescribed notice period would expire;
- (b) except in the case of termination pursuant to paragraphs (a) through (d) of Sub-Clause 2.9.1, reimbursement of any reasonable cost incidental to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel, according to Consultants Traveling Allowance Rules.

In order to compute the remuneration for the part of the Services satisfactorily performed prior to the effective date of termination, the respective remunerations shall be proportioned.

2.9.5 Disputes about Events of Termination

If either Party disputes whether an event specified in paragraphs (a) through (e) of Sub-Clause 2.9.1 or in paragraph (a) through (d) of Sub-Clause 2.9.2 hereof has occurred, such Party may, within forty-five (45) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause 7 hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

3. OBLIGATIONS OF THE CONSULTANTS

3.1 General

The Consultants shall perform the Services and carry out their obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe

methods. The Consultants shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Subconsultants or third parties.

3.2 Consultants Not to Benefit from Commissions, Discounts, etc.

The remuneration of the Consultants pursuant to Clause 6 shall constitute the Consultants' sole remuneration in connection with this Contract or the Services, and the Consultants shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Consultants shall use their best efforts to ensure that the Personnel, any Subconsultants, and agents of either of them similarly shall not receive any such additional remuneration.

3.3 Confidentiality

The Consultants, their Subconsultants, and the Personnel of either of them shall not, either during the term or after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Client's business or operations without the prior written consent of the Client.

3.4 Liability of the Consultants

The Consultants are liable for the consequence of errors and omissions on their part or on the part of their employees in so far as the design of the Project is concerned to the extent and with the limitations as mentioned hereinbelow.

If the Client suffers any losses or damages as a result of proven faults, errors or omissions in the design of a project, the Consultants shall make good such losses or damages, subject to the conditions that the maximum liability as aforesaid shall not exceed twice the total remuneration of the Consultants for design phase in accordance with the terms of the Contract.

The liability of the Consultants expires after one (1) year from the stipulated date of completion of construction or after three (3) years from the date of final completion of the design whichever is earlier.

The Consultants may, to protect themselves, insure themselves against their liabilities but this is not obligatory. The extent of the insurance shall be up to the limit specified in second para above. The Consultants shall procure the necessary cover before commencing the Services and the cost of procuring such cover shall be borne by the Consultants up to a limit of one percent of the total remuneration of the Consultants for the design phase for every year of keeping such cover effective.

The Consultants shall, at the request of the Client, indemnify the Client against any or all risks arising out of the furnishing of professional services by the Consultants to the Client, not covered by the provisions contained in the first para above and exceeding the limits set forth in second para above provided the actual cost of procuring such indemnity as well as costs exceeding the limits set forth in fourth para above shall be borne by the Client.

3.5 Other Insurance to be Taken out by the Consultants

The Consultants (a) shall take out and maintain, and shall cause any Subconsultants to take out and maintain, at their (or the Subconsultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage, as are specified in the SC; and (b) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums have been paid.

3.6 Consultants' Actions Requiring Client's Prior Approval

The Consultants shall obtain the Client's prior approval in writing before taking any of the following actions:

- (a) appointing such Personnel as are listed in Appendix-C merely by title but not by name;
- (b) entering into a subcontract for the performance of any part of the Services, it being understood (i) that the selection of Subconsultants and the terms and conditions of the subcontract shall have been approved in writing by the Client prior to the execution of the subcontract, and (ii) that the Consultants shall remain fully liable for the performance of the Services by the Subconsultants and its Personnel pursuant to this Contract;
- (c) any other action that may be specified in the SC.

3.7 Reporting Obligations

The Consultants shall submit to the Client the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.

3.8 Documents Prepared by the Consultants to be the Property of the Client

All plans, drawings, specifications, reports, and other documents and software prepared by the Consultants in accordance with Sub-Clause 3.7 shall become and remain the property of the Client, and the Consultants shall, not later than upon termination or expiration of this Contract, deliver (if not already delivered) all such documents and software to the Client, together with a

detailed inventory thereof. The Consultants may retain a copy of such documents and software.

Restriction(s) about the future use of these documents is specified in the SC.

3.9 Equipment and Materials Furnished by the Client

Equipment and materials made available to the Consultants by the Client, or purchased by the Consultants with funds provided exclusively for this purpose by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultants shall make available to the Client an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the Client's instructions or afford salvage value of the same. While in possession of such equipment and materials, the Consultants, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value.

3.10 Accounting, Inspection and Auditing

The Consultants (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time charges, and cost, and the basis thereof, and (ii) shall permit the Client or its designated representatives periodically, and up to one year from the expiration or termination of this Contract, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Client.

4. CONSULTANTS' PERSONNEL AND SUBCONSULTANTS

4.1 Description of Personnel

The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Consultants' Key Personnel are described in Appendix C. The Key Personnel and Subconsultants listed by title and/or by name, as the case may be, in Appendix C are deemed to be approved by the Client.

4.2 Removal and/or Replacement of Personnel

- (a) Except as the Client may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultants, it becomes necessary to replace any of the Key Personnel, the Consultants shall provide as a replacement a person of equivalent or better qualifications;
- (b) If the Client, (i) finds that any of the Personnel have committed serious misconduct or have been charged with having committed a criminal action; or (ii) has reasonable cause to be dissatisfied with the

performance of any of the Personnel, then the Consultants shall, at the Client's written request specifying the grounds therefor, provide as a replacement a person with qualifications and experience acceptable to the Client.

- (c) Except as the Client may otherwise agree, the Consultants shall; (i) bear all the additional travel and other costs arising out of or incidental to any removal and/or replacement; and (ii) bear any additional remuneration, to be paid for any of the Personnel provided as a replacement to that of the Personnel being replaced.

5. OBLIGATIONS OF THE CLIENT

5.1 Assistance, Coordination and Approvals

5.1.1 Assistance

The Client shall use its best efforts to ensure that the Client shall:

- (a) provide at no cost to the Consultants, Subconsultants and Personnel such documents prepared by the Client or other consulting engineers appointed by the Client as shall be necessary to enable the Consultants, Subconsultants or Personnel to perform the Services. The documents and the time within which such documents shall be made available, are as specified in the SC;
- (b) assist to obtain the existing data pertaining or relevant to the carrying out of the Services, with various Government and other organizations. Such items unless paid for by the Consultants without reimbursement by the Client, shall be returned by the Consultants upon completion of the Services under this Contract;
- (c) issue to officials, agents and representatives of the concerned organizations, all such instructions as may be necessary or appropriate for prompt and effective implementation of the Services;
- (d) assist to obtain permits which may be required for right-of-way, entry upon the lands and properties for the purposes of this Contract;
- (e) provide to the Consultants, Subconsultants, and Personnel any such other assistance and exemptions as may be specified in the SC.

5.1.2 Co-ordination

The Client shall:

- (a) coordinate and get or expedite any necessary approval and clearances relating to the work from any Government or Semi-Government

Agency, Department or Authority, and other concerned organization named in the SC.

(b) coordinate with any other consultants employed by him.

5.1.3 Approvals

The Client shall accord approval of the documents within such time as specified in the SC, whenever these are applied for by the Consultants.

5.2 Access to Land

The Client warrants that the Consultants shall have, free of charge, unimpeded access to all land of which access is required for the performance of the Services.

5.3 Change in the Applicable Law

If, after the date of this Contract, there is any change in the Applicable Law which increases or decreases the cost of the Services rendered by the Consultants, then the remunerations and direct costs otherwise payable to the Consultants under this Contract shall be increased or decreased accordingly, and corresponding adjustment shall be made to the amounts referred to in Sub-Clause 6.2 (a) or (b), as the case may be.

5.4 Services and Facilities

The Client shall make available to the Consultants, Subconsultants and the Personnel, for the purpose of the Services and free of any charge, the services, facilities and property described in Appendix F at the times and in the manner specified in said Appendix F, provided that if such services, facilities and property shall not be made available to the Consultants as and when so specified, the Parties shall agree on; (i) any time extension that it may be appropriate to grant to the Consultants for the performance of the Services; (ii) the manner in which the Consultants shall procure any such services, facilities and property from other sources; and (iii) the additional payments, if any, to be made to the Consultants as a result thereof pursuant to Clause 6 hereinafter.

5.5 Payments

In consideration of the Services performed by the Consultants under this Contract, the Client shall make to the Consultants such payments and in such manner as is provided by Clause 6 of this Contract.

6. PAYMENTS TO THE CONSULTANTS

6.1 Lump Sum Remuneration

The Consultants' total remuneration shall not exceed the Contract Price and shall be a fixed lump sum including all staff costs, incurred by the Consultants in carrying out the Services described in Appendix A. Other reimbursable direct costs expenditure, if any, are specified in the SC. Except as provided in Sub-Clause 5.3, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.5, 2.6, 5.4 or 6.6.

6.2 Contract Price

- (a) Foreign currency payment shall be made in the currency or currencies specified as foreign currency or currencies in the SC, and local currency payment shall be made in Pakistani Rupees.
- (b) The SC shall specify the breakup of remuneration to be paid, respectively, in foreign and in local currencies.

6.3 Terms and Conditions of Payment

Payment will be made to the account of the Consultants and according to the payment schedule stated in the SC. Payments shall be made after the conditions listed in the SC for such payments have been met, and the Consultants have submitted an invoice to the Client specifying the amount due.

6.4 Period of Payment

- (a) Advance payment to the Consultants shall be affected within the period specified in the SC, after signing of the Contract Agreement between the Parties.
- (b) Any other amount due to the Consultants shall be paid by the Client to the Consultants within twenty-eight (28) days in case of local currency and fifty six (56) days in case of foreign currency after the Consultants' invoice has been delivered to the Client.

6.5 Delayed Payments

If the Client has delayed payments beyond the period stated in paragraph (b) of Sub-Clause 6.4, financing charges shall be paid to the Consultants for each day of delay at the rate specified in the SC.

6.6 Additional Services

Additional Services means:

- (a) Services as approved by the Client outside the Scope of Services described in Appendix A;
- (b) Services to be performed during the period extended pursuant to Sub-Clause 2.6, beyond the original schedule time for completion of the Services; and
- (c) any re-doing of any part of the Services as a result of Client's instructions.

If, in the opinion of the Client, it is necessary to perform Additional Services during the currency of the Contract for the purpose of the Project, such Additional Services shall be performed with the prior concurrence of both the Parties. The Consultants shall inform the Client of the additional time (if any), and the additional remuneration and reimbursable direct costs expenditure for such Additional Services. If there is no disagreement by the Client within two weeks of this intimation, such additional time, remuneration and reimbursable direct costs expenditure shall be deemed to become part of the Contract. Such remuneration and reimbursable direct costs expenditure shall be determined on the basis of rates provided in Appendices D and E, in case the Additional Services are performed during the scheduled period of the Services, otherwise remuneration for Additional Services shall be determined on the basis of Consultants' billing rates prevailing at the time of performing the Additional Services.

6.7 Consultants' Entitlement to Suspend Services

If the Client fails to make the payment of any of the Consultants' invoice (excluding the advance payment), within twenty-eight (28) days after the expiry of the time stated in paragraph (b) of Sub-Clause 6.4, within which payment is to be made, the Consultants may after giving not less than fourteen (14) days' prior notice to the Client, suspend the Services or reduce the rate of carrying out the Services, unless and until the Consultants have received the payment.

This action will not prejudice the Consultants entitlement to financing charges under Sub-Clause 6.5.

7. SETTLEMENT OF DISPUTES

7.1 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

7.2 Dispute Settlement

Any dispute between the Parties as to matters arising pursuant to this Contract which cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions of the Arbitration Act, 1940 (Act No.X of 1940) and of the Rules made thereunder and any statutory modifications thereto.

Services under the Contract shall, if reasonably possible, continue during the arbitration proceedings and no payment due to or by the Client shall be withheld on account of such proceedings.

8. INTEGRITY PACT

8.1 If the Consultant or any of his Subconsultants, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Consultant as Appendix-G to this Form of Contract, then the Client shall be entitled to:

- (a) recover from the Consultant an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Consultant or any of his Subconsultant, agents or servants;
- (b) terminate the Contract; and
- (c) recover from the Consultant any loss or damage to the Client as a result of such termination or of any other corrupt business practices of the Consultant or any of his Subconsultant, agents or servants.

On termination of the Contract under Sub-Para (b) of this Sub-Clause, the Consultant shall proceed in accordance with Sub-Clause 2.9.3. Payment upon such termination shall be made under Sub-Clause 2.9.4 (a) after having deducted the amounts due to the Client under Sub-Para (a) and (c) of this Sub-Clause.

III. SPECIAL CONDITIONS OF CONTRACT

No. Amendments of, and Supplements to, Clauses in the General Conditions
of GC of Contract
Clause

1.1 Definitions

"Project" means "Third Party Validation (TPV) Services for 100 MW
Distributed Photovoltaic Solar Power Plants in Gilgit-Baltistan.

1.6 Authorized Representatives

The Authorized Representatives are the following:

For the Client:

**Project Director 100 MW Distributed Photovoltaic Solar Power Plants in
Gilgit-Baltistan.**

Telephone : + 92 5811 942609

email : pd100mwpvsolar@gmail.com

For the Consultants:

_____ (Name of Project Manager)

_____ (Project)

_____ (Address)

Telephone : _____

Facsimile : _____

email : _____

1.7 Taxes and Duties

[Note: To be included in this Sub-Clause as agreed with the Client.]

[All notes should be deleted in final text. All blanks should be filled in.]

1.8 Leader of the Joint Venture

The leader of the Joint Venture is (name of the Member of the Joint Venture).

[Note: If the Consultants do not consist of more than one entity, the Sub-Clause-1.8 should be deleted.]

2.1 Effectiveness of Contract

The date on which this Contract shall come into force and effect is the date when the Contract is signed by both the Parties.

2.2 Termination of Contract for Failure to Become Effective

Since the Contract shall become effective upon its signing by the Parties, this Sub-Clause shall not be applicable. The time period shall be twenty eight (28) days, or such other period as the Parties may agree in writing.

2.3 Commencement of Services

The Consultants shall commence the Services within Fourteen (14) days after the date of signing of Contract Agreement, or such other time period as the Parties may agree in writing.

2.4 Expiration of Contract

The period of completion of Services shall be 18 months from the Commencement Date of the Services or such other period as the Parties may agree in writing. The Services are estimated to be completed by 31st December 2027.

"Completion of Services" means submission of the Final Validation Report by the Consultant and its subsequent Acceptance by the Employer.

3.4 Liability of the Consultants

Sub-Clause 3.4 is deleted in its entirety and substituted with the following:

The Consultants shall provide insurance, not less than the remunerations cost, on part of the Consultant to cover the professional liability of the Consultants and its necessary costs shall be borne by the Consultants.

3.5 Insurance to be Taken out by the Consultants

The risks and the coverages shall be as follows:

- (a) Third Party motor vehicle liability insurance in respect of motor vehicles operated in Pakistan by the Consultants or their Personnel or any Subconsultants or their Personnel, with a minimum coverage as per applicable Law.
- (b) Insurance against loss of or damage to equipment purchased in whole or in part with funds provided under the Contract.

3.8 Documents Prepared by the Consultants to be the Property of the Client

The Client and the Consultants shall not use these documents for purposes unrelated to this Contract without the prior written approval of the other Party.

5.1.2 Coordination

- (a) The departments, agencies, other stakeholders including Project Consultants.

5.1.3 Approvals

The Client shall accord approval of the documents immediately but not later than fourteen (14) days from the date of their submission by the Consultants.

6.1 Lump Sum Remuneration

[Note: In case there are other expenditures in respect of which reimbursement is allowed in addition to the lump sum remuneration, details of such reimbursable direct costs expenditure which may include Subconsultants' costs, printing, communications, travel, accommodation etc., may be indicated herein. Each item shall be specified whether it is payable on the basis of (a) lump sum monthly rate; or (b) reimbursement of actual expenditures.]

6.2 Contract Price

- (a) The amount in foreign currency is: Nil
The amount in local currency is Pakistani Rupees.....
- (b) The break up of foreign and local currencies shall be as under:

[to be filled in as per RFP Terms]

6.3 Terms and Conditions of Payment

For Services of Third Party Validation

A lump sum amount in foreign and local currencies referred under SC 6.2 shall be paid to the Consultants for the Services to be completed within the period specified in SC 2.4.

Payments shall be made according to the following schedule:

Milestone	Deliverable	Payment (%)
PM-1	Advance Payment on Mobilization	20
PM-2	<ul style="list-style-type: none"> • Acceptance of Inception Report, • Acceptance of Verification Methodology Report, Operationalization of Digital Inspection Management System and GIS Asset Register 	10
PM-3	Validation Report for Lot I of Rooftop Solar	15
PM-4	Validation Report for Lot II of Rooftop Solar	10
PM-5	Validation Report for Lot III of Rooftop Solar	10
PM-6	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot I	20
PM-7	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot II	5
PM-8	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot III	10
PM-9	Completion of Utility Scale Components Verification and Acceptance of Verification Certificates for Utility Scale Lot IV	10
PM-10	Submission and Acceptance of Final Validation Report	10
Total = (PM-2 + PM-3 + PM-4 + PM-5 + PM-6 + PM-7 + PM-8 + PM-9 + PM-10)		100

Advance Payment on Mobilization:

The Client shall made the advance payment within fourteen (14) days after:

- c. The Contract has been signed between the parties and the Consultants has mobilized to the satisfaction of the Client.
- d. The Client has received the advance payment guarantee issued by (i) a Scheduled Bank in Pakistan or (ii) foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan, in amounts and currency equal to advance payment.

The guarantee shall remain valid until the Consultants has performed his obligation under the Contract. The guarantee shall be returned to the Consultants within fourteen (14) days upon full recovery of advance payment.

Advance payment shall be recovered at amortization rate of 22.3% of amount of each invoice against milestones, starting from PM-2 till the advance has been fully recovered.

6.4 Period of Payment

(a) *[to be filled in as per RFP Terms]*

The time period for advance payment shall be Thirty (30) days after signing of Contract Agreement by both the Parties and submission of the Bank Guarantee.

6.5 Delayed Payments

Financing charges are as under:

- | | | | |
|------|----------------------|---|----------------|
| (i) | for foreign currency | = | Not applicable |
| (ii) | for local currency | = | Nil |

6.6 Additional Services

Sub-Clause 6.6 (b) shall be deleted in its entirety.

IV APPENDICES

Appendix A

Description of the Services

[Give detailed descriptions of the Services to be provided, dates for completion of various tasks, place of performance for different tasks, specific tasks to be approved by Client, etc.]

Appendix B

Reporting Requirements

Pursuant to Sub-Clause GC-3.7, the Consultants shall submit the following reports:

[List format, frequency, and contents of reports; persons to receive them; dates of submission and the number of copies of each submittal; etc. If no reports are to be submitted, state here "Not applicable"]

Appendix C

Key Personnel and Subconsultants

- [List under:
- C-1 Title [and names, if already available], activities of job descriptions of key Personnel to be assigned to work and staff-months for each.
 - C-2 List of approved Subconsultants (if already available); same information with respect to their Personnel as in C-1.]

Appendix D

Breakdown of Contract Price in Foreign Currency

[NOT USED]

Appendix E

Breakdown of Contract Price in Local Currency

[List here the elements of cost used to arrive at the breakdown of the Contract Price-local currency portion:

1. Remuneration for various items on the basis of rates as mutually agreed.
2. Other reimbursable direct costs expenditure related to:
 - (a) Support staff, and work charged staff;
 - (b) Office expenditures related to:
 - (i) rentals;
 - (ii) furnishing and equipment;
 - (iii) operation and maintenance of office, office equipment and furniture, office supplies.
 - (c) Transport including running and maintenance, and other associated costs;
 - (d) Travelling etc.
 - (e) Other costs
3. Total, remuneration and reimbursable direct costs expenditure = (1 + 2).

Note:

1. *Each item of reimbursable direct costs expenditure shall be specified whether it is payable on the basis of (a) lump sum monthly rate; or (b) reimbursement of actual expenditures.*
2. *This appendix will exclusively be used for determining remuneration for Additional Services in accordance with Sub-Clause GC 6.6.]*

Appendix F

Services and Facilities to be Provided by the Client

[NOT USED]

Appendix G

(INTEGRITY PACT)

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

[To be inserted the one, submitted with the Proposal]

CONTRACT FOR ENGINEERING CONSULTANCY SERVICES

LUMP SUM REMUNERATION

between

(NAME OF THE CLIENT)

and

(NAME OF THE JOINT VENTURE OF THE CONSULTANTS)

for

_____ **(BRIEF SCOPE OF SERVICES)**

OF _____ **(NAME OF PROJECT)**

Month and Year

_____ **(NAME OF THE JOINT VENTURE OF THE CONSULTANTS)**

_____ **(Name of Individual Consultants)**

_____ **(Name of Individual Consultants)**

FORM OF CONTRACT

[Note: Use this Form of Contract when the Consultants performs Services as Joint Venture.

This CONTRACT (hereinafter called the "Contract") is made on the _____ day of _____
[month] of _____ [year], between, on the one hand, _____

(hereinafter called the "Client" which expression shall include the successors, legal representatives and permitted assigns) and, on the other hand, a joint venture consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultants' obligations under this Contract, namely:

(hereinafter collectively called the "Consultants" which expression shall include its successors, legal representatives and permitted assigns).

WHEREAS

- (a) the Client has requested the Consultants to provide certain consulting services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the "Services"); and
- (b) the Consultants, having represented to the Client that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract;

NOW THEREFORE the Parties hereby agree as follows:

- 1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
 - (a) the General Conditions of Contract;
 - (b) the Special Conditions of Contract;
 - (c) the following Appendices:

[Note: If any of these Appendices are not used, the words "Not Used" should be inserted below next to the title of the Appendix and on the sheet attached hereto carrying the title of that Appendix.]

- Appendix A: Description of Services
- Appendix B: Reporting Requirements
- Appendix C: Key Personnel and Subconsultants
- Appendix D: Breakdown of Contract Price in Foreign Currency (Not Used)
- Appendix E: Breakdown of Contract Price in Local Currency
- Appendix F: Services & Facilities to be Provided By the Client (Not Used)
- Appendix G: Integrity Pact (for Services above Rs. 10 Million)

2. The mutual rights and obligations of the Client and the Consultants shall be as set forth in the Contract, in particular:
- (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names in two identical parts each of which shall be deemed as the original, as of the day, month and year first above written.

For and on behalf of

CLIENT'S NAME

Witness

Signature _____

Name _____

Title _____

Signature _____

Name _____

Title _____

(Seal)

For and on behalf of

NAME OF THE JOINT VENTURE OF THE CONSULTANTS

Name of Member No. 1

Witness

Signature _____
Name _____
Title _____

Signature _____
Name _____
Title _____
(Seal)

Name of Member No. 2

Witness

Signature _____
Name _____
Title _____

Signature _____
Name _____
Title _____
(Seal)

Name of Member No. 3

Witness

Signature _____
Name _____
Title _____

Signature _____
Name _____
Title _____
(Seal)

FORM OF MOBILIZATION ADVANCE GUARANTEE

Guarantee No. _____ Date _____

WHEREAS _____ (hereinafter called the 'Client')

has entered into a Contract for _____
(Particulars of Contract)

with _____ (hereinafter called the
"Consultants").

AND WHEREAS, the Client has agreed to advance to the Consultants, at the Consultant's request, an amount of Pak Rupees _____ (PKR _____) which amount shall be advanced to the Consultants as per provisions of the Contract.

AND WHEREAS, the Client has asked the Consultants to furnish Guarantee to secure the mobilization advance for the performance of his obligations under the said Contract.

AND WHEREAS, _____

(hereinafter called the "Guarantor") at the request of the Consultants and in consideration of the Client agreeing to make the above advance to the Consultants, has agreed to furnish the said Guarantee.

NOW, THEREFORE, the Guarantor hereby guarantees that the Consultants shall use the advance for the purpose of above mentioned Contract and if he fails and commits default in fulfilment of any of his obligations for which the advance payment is made, the Guarantor shall be liable to the Client for payment not exceeding the aforementioned amount.

Notice in writing of any default, on the part of the Consultants, of which the Client at his discretion of making decision, shall be given by the Client to the Guarantor, and on such first written demand, payment shall be made by the Guarantor of all sums then due under this Guarantee without any reference to the Consultants and without any objection.

This Guarantee shall remain in force until the Consultants has performed his obligations under the said Contract or until _____ whichever is earlier. (Date)

The Guarantor's liability under this Guarantee shall not in any case exceed the sum of PKR _____. (Pak Rupees _____)

This Guarantee shall remain valid up to the aforesaid date and shall be null and void after the aforesaid date provided that the Guarantor agrees that the aforesaid period of validity shall be deemed to be extended if on the abovementioned date the Consultants has not performed his obligations under the said Contract.

Guarantor
(Scheduled Bank)

WITNESS:

1. _____

Corporate Secretary (Seal)

2. _____

Name, Title & Address

Signature _____

Name _____

Title _____
Corporate Guarantor (Seal)

ANNEXURES

ANNEXURE – A

PROJECT COMPLIANCE MATRIX TEMPLATE (Sample Only)

A.1 Objective

The purpose of the Project Compliance Matrix is to provide a comprehensive, traceable and auditable record demonstrating compliance of all Project facilities with contractual requirements, approved designs, approved material submittals, approved technical specifications and applicable standards.

The Compliance Matrix shall serve as the principal verification document maintained by the Independent Technical Verification & Validation Consultant throughout the assignment.

The Consultant shall continuously update the Compliance Matrix and submit revised versions together with Validation Reports, Quarterly Technical Audit Reports and the Final Validation Report.

A.2 Compliance Matrix Structure

The Compliance Matrix shall establish traceability between:

- EPC Contract Requirements;
- Approved Detailed Designs;
- Approved Shop Drawings;
- Approved Material Submittals;
- Technical Specifications;
- Applicable Standards;
- Verification Activities;
- Supporting Evidence;
- Compliance Status.

A.3 General Compliance Matrix Format

Sr. No.	Requirement Category	Requirement Description	Reference Document	Verification Method	Supporting Evidence	Compliance Status	Remarks
1	Solar Module	Minimum 580 Wp Module	Approved Material Submittal	Site Inspection	Serial No. & Photo	Compliant	-
2	Inverter	100 kW String Inverter	Approved Design	Visual Verification	Serial No.	Compliant	-
3	BESS	200 kWh Battery System	EPC Specification	Capacity Verification	Test Record	Non-Compliant	Capacity Shortfall
4	Earthing	Earth Resistance < 5 Ohms	Approved Design	Field Measurement	Test Report	Compliant	-

A.4 Compliance Status Classification

The Consultant shall classify each requirement as follows:

Status	Definition
Compliant	Requirement fully satisfied
Partially Compliant	Minor deviations observed
Non-Compliant	Requirement not satisfied
Not Verified	Verification not yet completed
Not Applicable	Requirement not applicable

A.5 Rooftop Solar PV Compliance Matrix

The Consultant shall maintain a separate compliance matrix for each rooftop site.

The matrix shall include verification of:

Site Information

- Site Name
- Building Name
- GPS Coordinates
- Installed Capacity
- Commissioning Date

Solar PV Modules

Requirement	Verification Activity
Manufacturer	Verify nameplate
Model Number	Verify installed equipment
Capacity	Verify rating
Serial Numbers	Verify traceability
Certifications	Verify IEC certificates
Warranty	Verify warranty documentation

Mounting Structures

Requirement	Verification Activity
Material Grade	Verify documentation
Galvanization	Visual Inspection
Fasteners	Visual Inspection
Structural Integrity	Physical Inspection

Inverters

Requirement	Verification Activity
Manufacturer	Verify installed equipment
Model Number	Verify documentation
Rating	Verify nameplate
Communication Interface	Functional Test
Protection Functions	Test Verification

BESS

Requirement	Verification Activity
Capacity	Capacity Verification
Battery Chemistry	Documentation Review
Serial Numbers	Site Verification
BMS Functionality	Functional Test
HVAC System	Operational Verification
Fire Protection	Functional Verification

A.6 Utility Scale Solar PV Compliance Matrix

The Consultant shall maintain a separate Compliance Matrix for each utility-scale facility.

The matrix shall include:

Civil Works

Requirement	Verification Method
Foundations	Site Inspection
Drainage	Physical Inspection
Roads	Physical Inspection
Fencing	Visual Verification

PV Arrays

Requirement	Verification Method
Module Layout	Site Verification
String Configuration	Design Review
Structure Installation	Physical Inspection
Torque Compliance	Installation Records

Electrical Systems

Requirement	Verification Method
Transformers	Site Verification
Switchgear	Inspection
Protection Relays	Functional Testing
Metering Systems	Verification Testing

A.7 Battery Energy Storage System Compliance Matrix

The Consultant shall maintain a dedicated Compliance Matrix for all Battery Energy Storage Systems.

The matrix shall include verification against all the applicable standards as per the RFP.

Battery System Verification

Requirement	Verification Method
Battery Manufacturer	Documentation Review
Capacity	Capacity Testing
Cycle Life Warranty	Documentation Review
Degradation Guarantee	Warranty Verification
Safety Certification	Certificate Review

BMS Verification

Requirement	Verification Method
Cell Monitoring	Functional Testing
Alarm Functions	Functional Testing
Communication	Interface Testing
SOC Calculation	Operational Verification

Thermal Management Verification

Requirement	Verification Method
HVAC Operation	Functional Test
Redundancy	Operational Verification

Fire Protection Verification

Requirement	Verification Method
Detection System	Functional Test
Suppression System	Functional Test
Emergency Shutdown	Functional Test

A.8 Compliance Evidence Requirements

No requirement shall be marked "Compliant" unless supported by documented evidence.

Acceptable evidence shall include:

- Inspection Records;
- Test Reports;
- Photographs;
- Serial Number Records;
- Manufacturer Certificates;
- Commissioning Reports;
- Warranty Documentation;
- Functional Test Records.

All evidence shall be referenced in the Compliance Matrix.

A.9 Non-Conformance Linkage

Where a requirement is identified as Non-Compliant or Partially Compliant, the Consultant shall generate a corresponding NCR.

The Compliance Matrix shall include:

NCR No. Requirement Status Closure Status

The matrix shall remain open until satisfactory closure of the NCR.

A.10 Final Compliance Certification

Prior to issuance of the Final Validation Certificate, the Consultant shall certify that:

1. All requirements included within the Compliance Matrix have been verified.
2. All Critical NCRs have been closed.
3. All Major NCRs have been closed or accepted by the Employer.
4. Supporting evidence has been archived.
5. Compliance status has been independently verified.

The Final Compliance Matrix shall be appended to the Final Validation Report and shall constitute one of the principal records supporting the Consultant's recommendation regarding Final Acceptance of the Project.

ANNEXURE – B

MINIMUM INSPECTION AND VERIFICATION COVERAGE REQUIREMENTS

B.1 Purpose

This Annexure prescribes the minimum inspection, testing and verification coverage requirements that shall be implemented by the Independent Technical Verification & Validation Consultant during execution of the Assignment.

The requirements specified herein represent minimum obligations of the Consultant. The Consultant may increase inspection coverage where deemed necessary to satisfy the objectives of the Assignment.

The Employer reserves the right to direct additional inspections whenever deficiencies, recurring non-conformities or quality concerns are identified.

B.2 General Principles

The Consultant shall ensure that verification activities are:

- Risk-based;
- Evidence-based;
- Statistically representative where sampling is permitted;
- Fully documented;
- Traceable through digital records.

Verification activities shall be supported by:

- Inspection Records;
- Geo-tagged Photographs;
- Test Reports;
- Compliance Matrices;
- Asset Registers.

B.3 Rooftop Solar PV Component

B.3.1 Site Verification Coverage

The Consultant shall undertake:

Asset Verification

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

Verification shall include:

- Site Location;
- Building Identification;
- GPS Coordinates;
- Installed Solar PV Capacity;
- Installed BESS Capacity;
- Commissioning Status.

Total Sites:

Approximately 499 Buildings.

Required Coverage:

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

B.3.2 Detailed Physical Inspection Coverage

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology of rooftop facilities.

B.3.3 Solar Module Verification

The Consultant shall verify:

Installed Quantity

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

Serial Numbers

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

Nameplate Ratings

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

Visual Inspection

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology of rooftop facilities.

B.3.4 Inverter Verification

The Consultant shall verify:

- Manufacturer;
- Model Number;
- Serial Number;
- Nameplate Rating;
- Communication Interface.

Coverage Requirement:

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

B.3.5 Battery Verification

The Consultant shall verify:

Installed Capacity

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

Serial Numbers

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

BMS Functionality

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

Warranty Information

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology, with 100% online verification of rooftop facilities.

B.3.6 Earthing Verification

The Consultant shall measure earth resistance values at:

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology of rooftop facilities. Where deficiencies are identified, inspection coverage shall be expanded.

B.3.7 Lightning Protection Verification

The Consultant shall inspect lightning protection systems at:

On-site verification shall be undertaken in accordance with the Employer-approved sampling methodology of rooftop facilities.

B.4 Utility Scale Solar PV Component

B.4.1 General

All utility-scale facilities shall be subject to one hundred percent (100%) inspection and verification.

No statistical sampling shall be permitted unless approved by the Employer.

B.4.2 Civil Works Verification

Coverage:

100%

Including:

Foundations;

- Roads;
- Drainage;
- Fencing;
- Buildings.

B.4.3 Solar PV Arrays

The Consultant shall verify:

Module Installation

Minimum 10% of installed modules.

String Configuration

100% verification through documentation and field checks.

Mounting Structures

Minimum 10% physical inspection.

B.4.4 Combiner Boxes

Coverage:

100%

Verification shall include:

- Wiring;
- Labels;
- Fuses;
- Surge Protection Devices.

B.4.5 Inverters

Coverage:

100%

Verification shall include:

- Serial Numbers;
- Ratings;
- Operational Status;
- Protection Settings.

B.4.6 Transformers

Coverage:

100%

Verification shall include:

- Nameplate Data;
- Test Records;
- Protection Systems.

B.4.7 Switchgear

Coverage:

100%

Verification shall include:

- Protection Relays;

- Interlocking Systems;
- Metering Functions.

B.5 Battery Energy Storage Systems

B.5.1 General

All Battery Energy Storage Systems shall be subject to one hundred percent (100%) verification.

B.5.2 Battery Containers

Coverage:

100%

Verification shall include:

- Installation;
- Access Control;
- Environmental Conditions.

B.5.3 Battery Modules

The Consultant shall verify:

Quantity

100% verification.

Serial Numbers

Minimum 100% physical verification of Utilities.

Capacity Records

100% verification.

B.5.4 Battery Management System

Coverage:

100%

Verification shall include:

- Cell Monitoring;
- Alarm Functions;
- Event Logs;
- Communication Systems.

B.6 Testing Verification Coverage

The Consultant shall verify:

Solar PV Testing

100% review of commissioning test records.

BESS Testing

100% review of:

- Capacity Tests;
- Charge-Discharge Tests;
- Efficiency Tests;
- Functional Tests.

Electrical Testing

100% review of:

- Insulation Tests;
- Continuity Tests;
- Earthing Tests;
- Protection Tests.

B.7 Escalation Requirements

Where the Consultant identifies:

- Critical NCRs;
- Repetitive Defects;
- Systemic Quality Issues;
- Safety Risks;

the Consultant shall increase inspection coverage as necessary and notify the Employer within forty-eight (48) hours.

B.8 Minimum Verification Resources

The Consultant shall maintain sufficient resources to achieve the inspection coverage requirements.

Minimum resources shall include:

- Digital Inspection Platform;
- GIS Database;
- Electrical Testing Equipment;
- Earth Resistance Testers;
- Insulation Resistance Testers;
- Portable Data Acquisition Equipment.

B.9 Certification of Inspection Coverage

The Consultant shall certify in each Validation Report that the minimum inspection coverage requirements specified in this Annexure have been achieved.

Failure to achieve the prescribed inspection coverage shall constitute non-performance and may result in withholding of payments by the Employer.

ANNEXURE – C

VALIDATION REPORT FORMAT

C.1 Purpose

This Annexure prescribes the minimum structure and content of the Validation Report required under Section 3.11.4. The Consultant may expand the format provided that all elements set out below are addressed.

C.2 Report Structure

1. Cover Page – Project name, reporting month, report number, date of issue, Consultant's name and Team Leader's signature.
2. Executive Summary – Overall progress, key findings, and matters requiring the Employer's attention.
3. Inspection Activities Undertaken – Sites/facilities inspected during the month, by component (rooftop, utility-scale, BESS), with reference to inspection coverage required under Annexure-B.
4. Cumulative Inspection Coverage – Cumulative percentage coverage achieved against the minimum coverage requirements of Annexure-B, with a statement of compliance or shortfall.
5. Compliance Status – Summary status of the Project Compliance Matrix, by category, with a count of Compliant, Partially Compliant, Non-Compliant and Not Verified items.
6. NCR Status – Summary table of NCRs opened, closed and outstanding, by classification (Critical/Major/Minor), with ageing of outstanding NCRs.
7. Testing and Commissioning Verification – Status of testing/commissioning verification activities undertaken during the month, where applicable.
8. Digital Systems Update – Status of the Digital Inspection Management System and GIS-Based Asset Register, including the number of records added/updated during the month.
9. Risks and Issues – Risks, delays or issues identified during the month and their status.
10. Photographic Record – Representative geo-tagged photographs of inspection activities undertaken during the month.
11. Recommendations – Recommendations for action by the Employer or the relevant Contractor.
12. Annexes – Detailed inspection checklists, NCR register extract, and Compliance Matrix extract for the reporting month.

C.3 Submission

The Validation Report shall be submitted in accordance with the timelines and format requirements specified in Section 3.11.1 and Section 3.11.4 of the RFP.

ANNEXURE – D

NON-CONFORMANCE REPORT (NCR) FORMAT

D.1 Purpose

This Annexure prescribes the minimum content of each Non-Conformance Report issued by the Consultant in accordance with Section 3.10.6. Each NCR shall, at a minimum, contain the following fields:

Field	Description / Instructions
NCR No.	Sequential, site/component-coded reference (e.g., NCR-RT-GLT-0001)
Date Raised	Date of identification of the deficiency
Site / Asset Reference	Site code, GPS coordinates, building/array/string identification
Component/Equipment	Module, inverter, BESS, structure, electrical, civil, etc.
Description of Deficiency	Clear, factual description of the observed non-conformance
Reference Requirement	EPC Contract clause, drawing, specification or standard not complied with
Classification	Critical / Major / Minor (per Section 3.10.6)
Supporting Evidence	Photographs, test records, geo-tags, and inspection checklist reference
Responsible Party	EPC Contractor / Supplier / Other, as applicable
Root Cause (where identified)	Design, workmanship, material, or other
Recommended Corrective Action	Action required to close the NCR
Target Closure Date	Date by which closure is required, per Section 3.10.6 timelines
Verification of Closure	Date, evidence reviewed, and verifying the Expert's name and signature
Status	Open / Closed / Escalated

D.2 Closure Verification

An NCR shall be marked as closed only after the Consultant has independently verified, through site inspection, testing or documentary evidence as appropriate, that the corrective action has been satisfactorily implemented. Closure shall be recorded in the Digital Inspection Management System with the date, supporting evidence and the name and signature of the verifying Expert.

ANNEXURE – E

VERIFICATION CERTIFICATE FORMAT

E.1 Purpose

This Annexure prescribes the minimum content of each Verification Certificate issued by the Consultant in accordance with Section 3.11.5. Separate Verification Certificates shall be issued for Rooftop Facilities, Utility-Scale Facilities and Battery Energy Storage Systems, each containing, at a minimum, the following:

Field	Content
Verification Certificate No.	-
Project	100 MW Solarization of Gilgit-Baltistan Project
Component Certified	Rooftop Solar PV / Utility-Scale Solar PV / BESS (as applicable), with Lot, site or facility identification
Basis of Certification	Reference to approved designs, technical specifications, EPC Contract, Compliance Matrix and applicable standards
Summary of Verification Activities	Document review, site inspections, testing/commissioning verification, and performance verification undertaken
Outstanding NCRs (if any)	Reference to any Minor NCRs accepted by the Employer as not precluding certification, with justification
Certification Statement	Statement that the facility/component has been independently verified and is found to comply with the Project requirements, or is recommended for acceptance subject to stated conditions
Validity / Conditions	Any conditions attached to the certification

E.2 Authentication

Each Verification Certificate shall be signed by the Team Leader and countersigned by the Consultant's authorized representative, and shall be submitted to the Employer together with the supporting Compliance Matrix extract and evidentiary records referenced therein.