

BIDDING DOCUMENT
(Re-Tender)

For the

Procurement of Goods for

Hybrid Rooftop Solar PV System



**Design, Supply and Installation of 150 kW Rooftop Hybrid Solar
PV System for Education and Training**
at
**Jigme Wangchuck Power Training Institute Dekiling,
Sarpang**

Contract Duration: **6 months**

Tender Submission Date: **16th March, 2026, before 11:00 am**, to Admin/Procurement Office,
JWPTI and will **open on same date at 12:00pm**

For detail contact: Mr. Karma Dorji, karmadorji@moesd.gov.bt or call @
77107863/77353535



Invitation for Bids (IFB)

Design, Supply and Installation of 150 kW Rooftop Hybrid Solar PV System for Education and Training

1. The **Power Department, Jigme Wangchuck Power Training Institute, Dekiling, Sarpang, Bhutan** now invites sealed Bids from eligible and qualified Bidders for **Design, Supply and Installation of 150kW Rooftop Hybrid Solar PV System for Education and Training at Jigme Wangchuck Power Training Institute, MOESD, Dekiling, Sarpang, Bhutan.**
2. The period for execution of the assignment is ***six (6) months from the date of Signing of Contract Agreement.***
3. Bidding will be conducted through the **National Competitive Bidding** procedures specified in the RGoB Procurement Rules and Regulations, and is open to all Bidders from Countries as defined in Section III of the Bidding Documents. However, the Bhutanese firms may hire **international Individual Consultants.**
4. Interested eligible Bidders may obtain further info *Jigme Wangchuck Power Training Institute website-www.jwpti.edu.gov.bt* or contact Karma Dorji, Training Director or Nima Tshering, Head of Power Department from and inspect the Bidding Documents at the address given below [state address at end of this IFB] from **0800 hours to 1630 hours.**
5. The Bidding Documents may be downloaded free of cost from the website; www.jwpti.edu.gov.bt.
6. All Bids shall be accompanied by a Bid Security in the form of Bank Guarantee or demand draft and bid should be valid for minimum of 90days from the date of opening of tender the detail of which is in clause-ITB19.1(Bid Data Sheet).



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Followed by Technical Specification



SECTION I: INSTRUCTION TO BIDDERS

A. General

1. Scope of Bid and Source of Funds

1. The Procuring Agency, as indicated in the Bid Data Sheet (BDS), issues this Bidding Document for the supply of Goods and Related Services specified in the Schedule of Supply. The name, identification number, and number of lots within this procurement are provided in the BDS.
2. Throughout this Bidding Document:
 - (a) the term “in writing” means communicated in written form (e.g.; by mail, electronic mail);
 - (b) if the context so requires, “singular” means plural” and vice versa; and
 - (c) “day” means calendar day.
3. This Instruction to Bidders shall not be part of the Contract and shall cease to have effect once the Contract is signed. The Invitation for Bids issued by the Procuring agency is not part of the Bidding Documents.
4. This Standard Bidding Documents (SBD) shall be used with minimum changes as necessary to address project specific conditions. Reasons for changes, if any, shall be documented and submitted for approval from the Head of the Procuring Agency.

2. Corruption

1. It is the policy of the Royal Government of Bhutan (RGoB) to uphold and promote the highest ethical standards by all Procuring Agencies and Bidders throughout the entire procurement process. All parties involved are expected to conduct themselves with integrity, transparency, and accountability at all times.
2. Compliance with the terms and conditions set forth in the Integrity Pact, as included in the Bidding Documents, is mandatory. Any breach of the Integrity Pact shall be considered a serious violation and may result in disqualification, termination of contract, or other legal consequences.
3. All instances or suspicions of corruption, fraud, collusion, or coercive practices in the procurement process must be promptly reported to the Anti-Corruption Commission (ACC) of Bhutan. Such matters shall be subject to investigation and necessary action in accordance with the Anti-Corruption Act of Bhutan and other applicable laws.

3. Eligible Bidders

1. A Bidder, and all parties constituting the Bidder, may have the nationality of any country, subject to the restrictions specified in BDS and any specific category of trade license if so, specified in the BDS. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and



operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including Related Services.

2. A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. Bidders may be considered to have a conflict of interest with one or more parties in this bidding process if they:
 - (a) are associated, or have been associated in the past, with a firm or any of its affiliates which has been engaged by the Procuring agency to provide consulting services for the preparation of the design, specifications and/or other documents to be used for the procurement of the Goods to be purchased pursuant to these Bidding Documents;
 - (b) employ or otherwise engage, either directly or through any of their affiliates, a spouse, dependent or close relative of a public servant of the RGoB who either is employed by the Procuring Agency or has an authority over it. For the purposes of this Sub-Clause a close relative is defined as immediate family which includes father, mother, brother, sister, spouse and own children;
 - (c) they have at least one controlling partner in common;
 - (d) they receive or have received any direct or indirect subsidy from either party;
 - (e) they have the same authorized legal representative for purposes of this Bid;
 - (f) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Procuring agency regarding this bidding process;
3. Government-owned enterprises in Bhutan shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency (directly or indirectly) of the Procuring agency.

4. Exclusion of Bidders

1. A Bidder shall be excluded from participating in this bidding process under the following circumstances:
 1. has been debarred for general causes prescribed in the Debarment Rules;
 2. has not fulfilled his contractual obligations with the Employer in the past and shall be excluded from participating in the tender for a maximum period of two years; or
 3. Any other predetermined circumstances as deemed necessary by the procuring agency.

5. Eligible Goods and Related Services



1. All the Goods and Related Services to be supplied under the Contract may have their origin in any country in accordance with ITB 3.1- Eligible Countries and if so required shall comply with requirements specified in the BDS.
2. For the purposes of this Clause, the term “Goods” includes commodities, raw material, machinery, equipment and industrial plants; and “Related Services” includes services such as insurance, installation, commissioning, training, and initial maintenance.
3. The term “origin” means the country where the Goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of Bidding Documents

6. Contents of Bidding Document

1. The Bidding Documents consist of all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB Clause 8.
 - Section I. Instructions to Bidders (ITB)
 - Section II. Bid Data Sheet (BDS)
 - Section III. Evaluation & Qualification Criteria
 - Section IV. Schedule of Supply, Technical Specifications and Drawings.
 - Section V. Bidding Forms & Integrity Pack
 - Section VI. General Conditions of Contract (GCC)
 - Section VII. Special Conditions of Contract (SCC)
 - Section VIII. Contract Form.

7. Clarification of Bidding Documents

1. A prospective Bidder requiring any clarification of the Bidding Documents may notify the Procuring Agency in writing or electronic mail at the Procuring Agency’s address indicated in the BDS. The Procuring Agency shall respond to any request for clarification received no later than 7 (seven) days before submission of bids for Open Tendering Method and 2 (two) days before submission of bids for LTM. Copies of the Procuring Agency’s response shall be forwarded to all bidders of the Bidding Documents, including a description of the inquiry, but without identifying its source. Should the clarification result in changes to the essential elements of the Bidding Documents, the Procuring Agency shall amend the Bidding Documents, following the procedure in ITB Clause 8.

2. Pre-bid meetings, if necessary, shall be conducted to clarify doubts and concerns of the bidders prior to submission of bids based on the nature and complexity of the project. The Minutes/ decision of the pre-bid meeting shall be circulated to all participating Bidders without delay. Any modification of the Bidding Documents listed in Sub-Clause 8.1 which may become necessary as a result of the pre-bid meeting shall be made by the Procuring Agency exclusively through the issue of an Addendum pursuant to Clause 8 and not through the minutes of the pre-bid meeting. (Not APPLICABLE)

8. Amendment of Bidding Documents

1. Before the deadline for submission of bids, the Procuring Agency may modify the Bidding Documents by issuing addenda.
2. Any addendum thus issued shall be part of the Bidding Documents, shall be binding on all Bidders and shall be communicated in writing to all bidders.
3. If the addendum issued has a substantial impact to the bidder in submitting the bids, the Procuring Agency shall extend, as necessary, the deadline for submission of Bids, in accordance giving the prospective Bidders reasonable time for preparing their Bids.

C. Qualification Criteria

9. Experience, Financial, and technical capacity

1. The Procuring Agency may where relevant specify the following criteria as part of qualification criteria. However, the Procuring Agency should avoid designing criteria to favour a particular supplier.
 - a. Minimum number of years of experience in the supply of goods and related services if so specified in the BDS;
 - b. Specific experience in the supply of similar goods and related services if so specified in the BDS;
 - c. Minimum production capacity or availability of the equipment if so specified in the BDS; or
 - d. Any other criteria relevant criteria in the BDS.

D. Preparation of Bids

10. Cost of Bidding

1. The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Procuring Agency shall not be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

11. Language of Bid

1. All documents relating to the Bid shall be in the language specified in the BDS.

12. Documents Comprising the Bid

1. The Bid shall comprise the following:
 - (a) Bid Submission Sheet and the applicable Price Schedules;
 - (b) Duly signed Integrity Pack & Form of Bid;
 - (c) Written confirmation authorizing the signatory of the Bid to commit the Bidder;
 - (d) Documentary evidence establishing the Bidder's eligibility to bid;
 - (e) Documentary evidence that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
 - (f) Documentary evidence in accordance with ITB Clauses 15 and 27 that the Goods and Related Services conform to the Bidding Documents;
 - (g) Documentary evidence in accordance with ITB Clause 16 establishing the Bidder's qualifications to perform the contract if its Bid is accepted;
 - (h) Documentary evidence or certified statements that the Bidder is not in any of the exclusion categories stipulated in ITB Sub- Clause 4.1;
 - (i) Any other document required in the BDS.
2. In addition to the requirements under ITB12.1, Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.

13. Bid Prices

1. The prices quoted by the Bidder in the Bid Submission Sheet and in the Price Schedules shall conform to the requirements specified below.
2. All lots and items in the Schedule of Supply must be listed and priced separately in the Price Schedules. ***Bidders are required to price their bids based on the specified items or lots to be supplied, and not on the basis of total installed power capacity (kW) or output.***



3. The terms EXW, CIF, CIP and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce as specified in the BDS.
4. Prices shall be quoted inclusive of all applicable taxes and levies, insurance, transportation, handling costs and any other associated cost to fulfill the contractual obligations, as specified in the Price Schedule forms for Goods and related services included in Section V Bidding Forms.
5. For Related Services, the price inclusive of any applicable taxes to convey the Goods from the named place of destination to their final destination (Project site) specified in BDS.
6. Bids are being invited for individual items, lots or packages as indicated in BDS 30.3 (a). Prices quoted shall correspond to one hundred percent (100%) of the items specified for each lot and to one hundred percent (100%) of the quantities for each item of a lot.

14. Currencies of Bid

1. The unit rates and prices shall be quoted by the Bidder entirely in Ngultrum (Nu). Foreign currency requirements shall be indicated and shall be payable at the option of the Bidder in up to three foreign currencies. In case of international procurement, bidders may express the unit rates and prices in fully convertible currency. If the bidders wish to be paid in a combination of amounts in different currencies, it may quote its price accordingly up to three foreign currencies.
2. The rates of exchange to be used in arriving at the local currency equivalent shall be the selling rates for similar transactions established by RMA on the day of bid opening. These exchange rates shall apply for all payments so that no exchange risk shall be borne by the Bidder.
3. Bids shall be evaluated as quoted in Ngultrum (Nu.) in accordance with ITB Sub-Clause 14.1, unless a Bidder has used different exchange rates than those prescribed in ITB Sub-Clause 14.2, in which case the Bid shall be first converted into the amounts payable in different currencies using the rates quoted in the Bid and then reconverted to Ngultrum (Nu.) using the exchange rates prescribed in ITB Sub-Clause 14.2.

15. Documents Establishing conformity of the Goods and Related Services

1. To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid documentary evidence that the Goods conform to the technical specifications and standards specified in Section VI, Schedule of Supply.
2. The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specifications and, if applicable, a statement of deviations and exceptions to the provisions of the Schedule of Supply.
3. The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period specified in the BDS following commencement of the use of the Goods by the Procuring agency.
4. Standards for workmanship, process, material and equipment, as well as references to brand names or catalogue numbers specified by the Procuring agency in the Schedule of Supply, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names and/or catalogue numbers, provided that it demonstrates to the Procuring agency's satisfaction that the substitutions ensure equivalence or are superior to those specified in the Schedule of Supply.

16. Documents Establishing the Qualifications of the Bidder

1. The documentary evidence of the Bidder's qualifications to perform the contract if its Bid is accepted shall establish to the Procuring agency's satisfaction:
 - (a) that, if required by the BDS, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in Bhutan;
 - (b) that, if required in the BDS, in the case of a Bidder not doing business within Bhutan, the Bidder is or will be (if awarded the Contract) represented by an agent in Bhutan equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications;
 - (c) that Bids submitted by a Joint Venture, Consortium or Association (JV/C/A) of two or more firms as partners comply with the following requirements:
 - (i) the Bid is signed to be legally binding on all partners;
 - (ii) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;



- (iii) one of the partners is nominated as being in charge, authorized to incur liabilities, and to receive instructions for and on behalf of any partners of the JV/C/A;
 - (iv) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge; and
 - (v) a copy of the JV/C/A Agreement entered into by the partners is submitted with the Bid; or a Letter of Intent to execute a JV/C/A Agreement in the event of a successful Bid is signed by all partners and submitted with the Bid, together with a copy of the proposed Agreement.
- (d) that the Bidder meets each of the qualification criteria specified in Section III, Evaluation and Qualification Criteria.

17. Margin of Preference

1. A margin of preference may apply to domestic goods manufactured in Bhutan as provided for in the BDS. To avail a margin of preference, the bidder shall provide a value addition certificate from the Ministry of Industry, Commerce and Employment. The evaluation shall be carried out as per Section III- Evaluation and Qualification Criteria.

18. Bid Validity

1. Bids shall remain valid for the period specified in the BDS.
2. In exceptional circumstances, the Procuring Agency may request that the Bidders extend the period of validity for a specified additional period. The request and the Bidders responses shall be made in writing or by electronic mail. A Bidder may refuse the request without forfeiting the Bid Security. The refusal to extend the bid by the Bidder will make the bid invalid and shall not be further considered for evaluation and award.

19. Bid Security

1. The Bidder shall furnish, as part of its bid, a Bid Security in original form, denominated in the currency and amount specified in BDS.
2. The Bid Security shall be at Bidder's option, be in the forms stipulated in BDS:
 - a) Unconditional and irrevocable Bank Guarantee as per the form; or
 - b) The Banker's Cheque/ Cash Warrant; or
 - c) A demand Draft
3. Bid Security shall be issued by a reputational financial institution enforceable in any banks in Bhutan;
4. The Bid Security shall be in its original form and copies shall not be accepted. The Bid security shall remain valid till date specified in the BDS.

5. Return of Bid:

- a) Any bid not accompanied by adequate Bid Security shall be rejected by the employer as non-responsive.
- b) The Bid Security of non-responsive & unsuccessful Bidder shall be returned as promptly as possible upon the Successful Bidder furnishing Performance Security and signing the contract.

6. The Bid Security Shall be forfeit:

- (a) If the bidder withdraws or modifies its bid during the period of bid validity; or
 - (b) (b) If the Bidder has been found practicing corrupt or fraudulent or collusive coercive practices during bidding process; or
 - (c) If successful Bidder fails to:
 - a) Accept the correction of its bid price;
 - b) Sign the Contract;
 - c) Furnish a Performance Security
 - d) the bidder fails to accept the arithmetical corrections of its bid price; or
- (c) the bidder, having been awarded the contract, fails to sign the Contract Agreement or submit the required Performance Security within the time specified in the bidding documents.

20. Format and Signing of Bids

1. The bidder shall prepare **one (1) Original** of the bid documents clearly marked "ORIGINAL" and one (1) Copy clearly marked "COPY," along with a separate envelope containing the **Bid Security (EMD)** as specified in the BDS i.e.
 - a) Envelope 1 – Bid Security (EMD)
 - b) Envelope 2- Original
 - c) Envelop 3- Copy
2. The Original and Copy of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the bidder.
3. Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the authorized signatory

E. Submission and Opening of Bids

21. Sealing and Marking of Bids

1. Bidders may always submit their Bids by mail or by hand. The Bidder shall seal the original and all copies of the Bid in separate inner envelopes contained within one outer envelope. All envelopes shall be sealed with adhesive or other sealant to prevent reopening.
2. The inner envelopes shall be signed across their seals by the person authorized to sign the bid on behalf of the Bidder; and be marked "ORIGINAL", "COPIES" and "EMD".
3. The outer envelope shall be sealed with adhesive or other sealant to prevent reopening, be marked "Confidential"; be addressed to the Procuring Agency at the address provided in the BDS; bear the name and identification number of the Contract as defined in the BDS and SCC; and provide a warning not to open before the specified time and date for Bid opening.
4. The inner envelopes shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared late. If the outer envelope is not sealed and marked as above, the Procuring Agency shall assume no responsibility for the misplacement or premature opening of the Bid

22. Withdrawal, Substitution and Modification of Bids

1. Bidders may withdraw, substitute or modify their Bids by giving notice in writing before the deadline of submission of Bids.
2. Each Bidder's withdrawal, substitution or modification notice shall be prepared, sealed, marked and delivered, with the outer and inner envelopes additionally marked "WITHDRAWAL", "SUBSTITUTION" or "MODIFICATION" as appropriate.
3. No Bid may be withdrawn, substituted or modified after the deadline for submission of Bids.
4. Withdrawal of a bid between the deadline for submission of bids and expiration of the period of bid validity specified in the BDS or as extended, may result in the forfeiture of the Bid Security. If the bidder fails to pay the bid security amount within the said date, the bidder shall be debarred by a competent authority as per law.

23. Bid Opening

1. The Procuring agency shall conduct the Bid Opening in public, in the presence of Bidders` designated representatives who choose to attend, and at the address, date and time specified in the BDS. Bid opening shall take place on the same day immediately following the deadline for the submission of bids.
2. First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall not be opened, but shall be returned to the Bidder. No Bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Bid Opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted. The substituted Bid shall not be opened, but shall be returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is readout at Bid Opening. Envelopes marked "MODIFICATION" shall be opened and readout with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid Opening. Only envelopes that are opened and readout at Bid Opening shall be considered further.
3. All other envelopes shall be opened one at a time. The Bidders' names, the Bid prices, the total amount (or lot-wise) of each Bid, bid withdrawals, substitutions or modifications, the presence or absence of Bid Security, responses to any Bidding Documents addenda, and such other details as the Procuring agency may consider appropriate shall be announced by the Procuring agency at the Bid Opening. This information shall be written on a notice board for the public to copy. Any Bid price, discount or alternative Bid price not announced and recorded shall not be taken into account in Bid evaluation.
4. No Bid shall be rejected at Bid Opening except for i) late Bids, ii) Non-signing of Bid form and iii) Bid with insufficient bid amount & its validity.
5. Substitution Bids and modifications submitted pursuant to ITB Clause 23 that are not opened and read out at Bid Opening shall not be considered for further evaluation regardless of the circumstances. Late, withdrawn and substituted Bids shall be returned unopened to Bidders.

6. The Procuring Agency shall prepare Minutes of the Bid opening, including the information disclosed to those present using the Records of Bid Opening form.
7. The Bidders representatives and attendees who are present shall be requested to sign the record. The omission of a Bidder's or other attendee's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

F. Evaluation of Bids

24. Confidentiality

1. Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until publication of the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Procuring Agency's processing of Bids or award decisions may result in the rejection of his Bid.

25. Clarification of Bids

1. To assist in the examination, evaluation and comparison of bids, the Procuring Agency may, at the Procuring Agency's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing, including by electronic mail, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Procuring Agency in the evaluation of the Bids.

26. Responsiveness of Bids

1. The Procuring agency's determination of a Bid's responsiveness shall be based on the contents of the Bid itself, and is to determine which of the Bids received are responsive and thereafter to compare the responsive Bids against each other to select the best evaluated Bid.
2. A substantially responsive Bid conforms to all the terms, conditions and specifications of the Bidding Documents without material deviation, reservation or omission. A material deviation, reservation or omission is one that:
 - (a) Affects in any substantial way the scope, quality or performance of the Goods or Related Services required;
 - (b) limits in any substantial way inconsistent with the Bidding Documents, the Procuring agency's rights or the Bidder's obligations under the Contract; or
 - (c) if rectified would unfairly affect the competitive position of other Bidders presenting responsive Bids.



- (d) If a Bid is not substantially responsive to the Bidding Documents it shall be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

27. Non-conformities, Errors and Omissions

1. Provided that a Bid is substantially responsive, the Procuring Agency may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.
2. Provided that a Bid is substantially responsive, the Procuring agency may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non-conformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
3. Provided that the Bid is substantially responsive, the Procuring Agency shall correct arithmetical errors on the following basis:
 - (a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit prices shall prevail and the line item total shall be corrected, unless in the opinion of the Procuring agency there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
 - (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to ITB Sub-Clauses 28.3 (a) and (b) above.
4. If the Bidder that submitted the best evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited.

28. Conversion to Single Currency

1. For evaluation and comparison purposes, the Procuring Agency shall convert all Bid prices expressed in amounts in various currencies into a single currency using the exchange rates specified in the BDS.

29. Evaluation of Bids

1. The Procuring Agency shall evaluate each Bid that has been determined, up to this stage of the evaluation, to be substantially responsive.



2. To evaluate a Bid, the Procuring agency shall only use all the factors, methodologies, and criteria defined in this bidding document. No other criteria or methodology shall be permitted.
3. To evaluate a Bid, the Procuring Agency shall consider the following:
 - (a) evaluation shall be done for Items or Lots, as specified in the BDS;
 - (b) the Bid Price, as quoted in accordance with ITB Clause 13;
 - (c) adjustments due to the application of a margin of preference, in accordance with ITB Clause 17, if applicable.
 - (d) price adjustment for correction of arithmetic errors in accordance with ITB Clause 28.3;
 - (e) adjustments due to the application of the evaluation criteria specified in the BDS from amongst those set out in Section III, Evaluation and Qualification Criteria.
4. The Procuring agency's evaluation of a Bid may require the consideration of other factors in addition to the Bid Price quoted in accordance with ITB Clause 13. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of Bids, unless otherwise specified in Section III, Evaluation and Qualification Criteria. The factors, criteria and the methodology of application shall be as specified in ITB Sub-Clause 30.3 (e).
5. If so specified in the BDS, these Bidding Documents shall allow Bidders to quote separate prices for one or more lots, and shall allow the Procuring agency to award one or multiple lots to more than one Bidder. *The methodology of evaluation to determine the lowest evaluated lot combinations is specified in **Section III, Evaluation and Qualification Criteria**.*
6. Missing/ Expired/ incomplete submission of documents like trade license, tax clearance certificate along with the bid should not become a rejection criterion, these do not include documents having bearing in the evaluation. The bidder should be given an opportunity to submit such documents during evaluation within a reasonable time specified by the evaluation committee, failing which the bid will be treated non-responsive.
7. The Procuring Agency shall ensure that the Best Evaluated Bid price is consistent and reasonable with the current market prices. If the prices are unreasonable compared to prevailing market prices, the Procuring Agency may reject the bid.

30. Abnormally Low/ high Bid

1. An Abnormally Low/ high Bid is one where the Bid price, in combination with other constituent elements of the Bid, appears unreasonably low or high to the extent that the Bid price raises material concerns as to the capability of the Bidder to perform the Contract for the offered Bid price or before proceeding to further analysis, the Procuring

agency shall revisit their departmental estimate to ensure its realistic comparison to the prevailing market rates.

2. After revisiting the departmental estimate, if the procuring agency determines that the bid offered by the bidder is 20% below or above the agency estimate, the procuring agency shall seek written clarification from the Bidder, including a detailed price analysis of its Bid price in relation to the subject matter of the contract, scope, delivery schedule, allocation of risks and responsibilities and any other requirements of the bidding document.
3. After evaluation of the price analyses, in the event that the Purchaser determines that the Bidder has failed to demonstrate its capability to perform the contract for the offered Bid price, the Purchaser shall reject the Bid.

31. Seriously unbalanced or Frontloaded Bids

1. If the Bid that is evaluated as the best evaluated bid is, in the Procuring agency's opinion, seriously unbalanced, the Procuring agency may require the Bidder to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the Bid prices with the scope of works, proposed methodology, schedule and any other requirements of the bidding document.
2. After the evaluation of the information and detailed price analyses presented by the Bidder, the Procuring agency may as appropriate:
 - (a) accept the Bid and require that the amount of the Performance Security be increased at the expense of the Bidder to a level not exceeding twenty percent (20%) of the initial Contract price in addition to ten percent (10%) of the Performance Security; or
 - (b) reject the Bid.

32. Procuring Agency's Right to Accept any Bid and to Reject any or all Bids

1. The Procuring Agency reserves the right to accept or reject any Bid, reject all Bids, or to cancel the Bidding process, at any time prior to the Award of Contract, without thereby incurring any liability to the affected Bidders, the Bidder(s) shall however be informed with the justified reason(s) for cancellation or rejection.

G. Award of Contract

33. Award Criteria

1. The Procuring agency shall award the Contract to the Bidder whose offer has been determined to be the Best Evaluated Bid and is substantially responsive to the Bidding Documents.



34. Tie- Bids:

1. In the event of a tie in bid prices among two or more bidders, the Procuring Agency may adopt the measures to determine the award as specified in BDS.

35. Letter of Intent to Award and standstill period

1. The Procuring Agency shall notify the concerned Bidder whose Bid has been selected in writing (hereafter called the "Letter of Intent") that the Procuring Agency has intention to accept its Bid and the copy of this information shall be given to all other Bidders who have submitted the Bids. Such notification should be communicated in writing, to all the Bidders on the same day of dispatch.
2. If no Bidder submits complaint pursuant within a period of five (5) days of receipt of the letter of intent for Open Tendering Method and within (2) days for Limited Tendering Method, the Bidder whose Bid has been accepted shall be notified in writing of the award by the Procuring Agency prior to expiration of the Bid validity period. This notification letter (hereinafter called the "Letter of Acceptance") shall state the sum that the Procuring Agency shall pay the Contractor in consideration of the execution, completion and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

36. Performance Security

1. Within seven (7) working days after receipt of the Letter of Acceptance the successful Bidder shall deliver to the Procuring Agency a Performance Security in the amount stipulated in the GCC and in any of the following security form:
 - (a) unconditional bank guarantee in the form provided for in Section IX, Contract Forms, or another form acceptable to the Procuring agency;
 - (b) banker's certified cheque/ cash warrant; or
 - (c) demand draft.
2. If the Performance Security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued, at the Bidder's option, by a financial institution located in Bhutan.
3. The Performance Security shall be valid until thirty (30) days following the date of completion of the Suppliers performance obligations under the contract, including any warranty obligations.
4. Failure of the successful Bidder to comply with the requirements shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

37. Letter of Acceptance and Signing of Contract



1. Upon the furnishing by the successful Bidder of the Performance Security, the Procuring Agency shall notify and shall publish a notification of award on the Procuring Agency's website. The notifications shall include the following information:
 - (a) the Bid and lot numbers;
 - (b) name of the winning Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded; and
 - (c) the date of the award decision.
2. The Letter of Acceptance shall constitute the formation of the Contract, subject to the Bidder furnishing the Performance Security and signing the Contract. It shall be accompanied by two originals of the Contract. The Contract shall incorporate all agreements between the Procuring Agency and the successful Bidder. It shall be signed by the Procuring Agency and sent to the successful Bidder with the Letter of Acceptance.
3. Within seven (7) working days of receipt, the successful Bidder shall furnish performance security and sign the Contract and deliver it to the Procuring Agency.

38. Issuance of Supply Order

1. After the signing of contract, the supply order for one-time purchases shall be sent within five (5) working days after signing of contract. However, for framework contracts supply order can be issued as and when required.

39. Debriefing by the Procuring Agency

1. On receipt of the Procuring Agency's Letter of Intention to Award, an unsuccessful Bidder has five (5) days to make a written request to the Procuring Agency for a debriefing. The Purpose of debriefing is to inform the aggrieved Bidder of the reasons for lack of success, pointing out the specific shortcomings in its Bid without disclosing contents of other Bids.
2. Where a request for debriefing is received within the deadline, the Procuring Agency shall provide a debriefing within five (5) days.
3. The Procuring Agency shall discuss only such Bid and not the Bids of other competitors. The debriefing shall not include point-by-point comparisons with another Bid; and information that is confidential or commercially sensitive to other Bidders.

40. Complaint and Review

1. If the Bidder has or is likely to suffer, loss or injury due to breach of a duty imposed on the Procuring Agency by the provisions of this Bidding Document, the Bidder shall submit the complaint in writing to the Procuring Agency within five (5) days for Open Tendering Method and two (2) days for Limited Tendering Method from the date of Letter of Intent to Award.



2. The Head of Procuring Agency shall, within Five (5) days after the submission of the complaint, issue a written decision.
3. The aggrieved bidder must submit a detailed grievance along with all supporting documents at once. The procuring agency, while reviewing the grievance, must ensure a proper evaluation and issue a timely decision. No further correspondence will be entertained from either party.
4. The Bidder may appeal to the Independent Review Body within three (3) days of the decision of the Head of the Procuring Agency or, where no such decision has been taken, within Eleven (11) days of the original complaint and the copy of the appeal shall be given to Procuring Agency on the same day.
5. Once the appeal copy is received by the Procuring Agency, it shall not proceed further with the procurement process until receipt of notification from the Independent Review Body Secretariat.

SECTION II- BID DATA SHEET

ITB Clause	Amendment of, and Supplements to, Clauses in the Instructions to Bidders
A. INTRODUCTION	
ITB 1.1	The Procuring Agency is: Jigme Wangchuck Power Training Institute, Ministry of Education and Skill Development.
ITB 1.1	<p>The name, identification number and number of lots within this procurement are: <i>Design, Supply and Installation of 150kW Rooftop Hybrid Solar PV System for Education and Training at Jigme Wangchuck Power Training Institute, MOESD, Dekiling, Sarpang: The Site of Installation of Solar PV will be on the Roof Tops of Plumbing and Solar Technology Building or Academic Building.</i></p> <p>The detailed scope of the work is outlined in the Terms of Reference (ToR).</p> <p style="text-align: center;">Design, Supply, and Installation of 150kWp Rooftop Hybrid Solar PV System for Education and Training at the Jigme Wangchuck Power Training Institute Dekiling, Sarpang</p>
ITB 3.1	Category of trade License eligible for this bidding process is: Large Category Contractor registered with the Construction Development Board (CDB) under Electrical installation and related services
ITB 3.1	<i>The following countries are excluded from this bidding [list name of countries prohibited under the law or official regulations of Bhutan and barred under UN Security Council Chapter VII]</i>
ITB 4.1(c)	<p>Any additional predetermined circumstances</p> <p><i>A Bidder shall be excluded from participating in this bidding process under the following circumstances:</i></p> <ol style="list-style-type: none"> <i>1. has been debarred for general causes prescribed in the Debarment Rules;</i> <i>2. has not fulfilled his contractual obligations with the Employer in the past and shall be excluded from participating in the tender for a maximum period of two years; or</i>



	<p>3. Any other predetermined circumstances as deemed necessary by the procuring agency.</p>
ITB 5.1	<p>All goods and related services to be supplied under the contract shall comply with the Royal Government of Bhutan laws All goods must be purchased from Bhutan and India [N/A]</p>
<p>B. BIDDING DOCUMENTS</p>	
ITB 7.1	<p>For clarification of Bid purposes only, the Procuring agency's address is: Attention: Training Director, Address: Jigme Wangchuck Power Training Institute, Ministry of education and skill development (MoESD), Dekiling, Sarpang, Bhutan Or Contact: (+975) 77353535 / 77107863 E-mail: karmadorji@moesd.gov.bt / ntshering@tttrc.bt</p>
ITB 7.1	<p>Pre-Bid Meeting shall be held on- Not Available However, to get familiarized with the site conditions, it is mandatory for the prospective bidders to make a site visit before submitting the bid. The site visit shall be made in consultation with the Power Department, JWPTI Sarpang. The visit shall be conducted not later than 12/03/2026</p> <p>The Procuring Agency's Representative is open for written clarification to: Mr. Karma Dorji (Training Director) Jigme Wangchuck Power Training Institute, Dekiling, Sarpang.</p> <p>Clarifications may be requested not later than Seven (07) days before the submission date.</p> <p>The address for requesting clarifications is: Karma Dorji (Training Director) or Nima Tshering HoD of Power Department JWPTI, Sarpang</p>

Telephone: (+975) 77353535 / 77107863
 E-mail: karmadorji@moesd.gov.bt / ntshering@tttrc.bt

C. QUALIFICATION CRITERIA

ITB 9.1(a)	<p>The minimum number of years of experience in the supply of goods and related services is two (02) years of experience. The bidder is required to submit evidence in the form of following documents;</p> <ol style="list-style-type: none"> 1. Work/supply order issued by the Procuring Authority. 2. Project/completion certificate/letter issued by the Procuring Authority. <p><i>Bidding will be conducted through the National Competitive Bidding procedures specified in the RGoB Procurement Rules and Regulations, and is open to all Bidders as defined in Section V of the Bidding Documents. If deemed necessary, the National Bidder may enter JV with International firms/suppliers while still being the lead firm for bidding.</i></p>
ITB 9.1(b)	<p>The specific experience in the supply of similar goods and related services is:</p> <ol style="list-style-type: none"> 1. Proof of having successfully completed supply, testing & commissioning of at least Two (2) similar scale and type of assignments within the last five (05) years. 2. At least one key personnel should be certified with a minimum of two years of experience in installation, or have more than five years of experience in the installation, testing, and commissioning of rooftop solar PV systems if not certified.
ITB 9.1(c)	<p>Financial Capacity- Applicants may need to provide financial evidence, including:</p> <ol style="list-style-type: none"> a. Audited balance sheets for the past three years. b. Statements of overall turnover for the past five years. c. A valid tax clearance certificate. <p>Based on the PRR 2025.</p>
ITB 9.1(d)	<p>The minimum production capacity or availability of equipment is: <i>The bidder shall have the minimum capacity to provide spare parts at any time and shall provide proof from the manufacturer confirming the availability and willingness to supply spare parts required for any materials related to the Rooftop Solar PV System</i></p>
ITB 9.1(e)	<p>Should have valid CDB license & Tax Clearance</p>

	<i>Refer Prerequisite Qualifications criteria under the EPC document.</i>
D. PREPARATION OF BIDS	
ITB 11.1	The language of the Bid is: <i>English</i>
ITB 12.1 (j)	The Bidder shall submit with its Bid the following additional documents: <ol style="list-style-type: none"> <i>1. Valid Tax License and Tax Clearance Certificate.</i> <i>2. Name of Manufacturers for components of Solar PV System.</i> <i>3. Unique serial number and Model Number for the Solar modules, Inverters and BoS.</i> <i>4. Name of Test Lab which issued certificate for Solar PV System.</i> <i>5. Certificate of the installers who will be engaged in the Installation, Testing and Commissioning of the SPV System.</i> <i>6. Plans and Strategy on how the firm will provide hands on training/skills to the beneficiaries- Both Trainer and Trainees.</i> <i>7. Proof of firm's experience in carrying out similar works (At least 2 similar works which is not less than 50Wp Capacity)</i> <i>8. Warranty certificate from the manufacturer for the solar modules, inverter, transformer and other components.</i> <i>9. Technical data sheet for the proposed materials.</i> <i>10. Material certifications conformity proving compliance with the stated standards.</i> <i>11. Test reports of the key components of the system.</i>
ITB 13.3	The Incoterms edition is: <i>CIP Delivery.</i>
ITB 15.5	The final destination (Project Site) is: <i>As per the Delivery Schedule under this document and the Tender Requirements documents.</i>
ITB 14.5	The Bidder <i>is</i> required to quote in Ngultrum (BTN) the portion of the Bid Price that corresponds to expenditures incurred in Ngultrum (BTN) in Bhutan.
ITB 15.3	The period of time for which the Goods are expected to be functioning (for spare parts, special tools, etc) is <i>Material Warranty for the major parts of the Solar PV system shall remain minimum valid for Five (5) years, and the Performance warranty of ten (10) years of the entire lot.</i> <i>[Warranty period specified by the manufacturer].</i>
ITB 16.1 (a)	Manufacturer's authorization " <i>is</i> " required

ITB 16.1 (b)	After sales maintenance, repair, spare parts stocking and related services “are” required, and the Bidder therefore “is” required to be represented by a suitably equipped and able agent in Bhutan.
ITB 18.1	The Bid validity period shall be minimum of ninety (90) days from the date of opening i.e. should valid from 16th March, 2026 to 13th June, 2026.
ITB 19.1	<p>Bid Security</p> <ol style="list-style-type: none"> 1. A bid security of an amount equivalent to Nu. 0.36 million against work shall be submitted in the form of unconditional and irrevocable Bank Guarantee or through Cash Warrant or Demand Draft and validity of the bid security shall be ninety (90) days after the opening of the bid, i.e., bid should valid until 13th June 2026. The bid security should be submitted addressed to the Training Director, Jigme Wangchuck Power Training Institute, Ministry of Education and Skill Development (MoESD), Dekiling, Sarpang, Bhutan. 2. Bid Security shall be issued by a reputational financial institution enforceable in any banks in Bhutan. 3. Any bid not accompanied by adequate Bid Security or insufficient bid validity shall be rejected by the employer as non-responsive. 4. The return of Bid/ Forfeit of Bid will be governed by all the Clauses under ITB clause 19.
E. SUBMISSION AND OPENING OF BIDS	
ITB 22.1	<p>The deadline for the submission of Bids is: Date: 16th March, 2026, 11:00 am. At Bhutan Standard Time. Failure to submit the bid within the stipulated time shall result in rejection of the bid.</p> <p>For Bid submission purposes, the Procuring agency’s address is: Training Director, Jigme Wangchuck Power Training Institute, MoESD, Dekiling, Sarpang, Bhutan.</p>
ITB 24.1	<p>The time and date for Bid Opening are: 12:00 P.M. (Bhutan Standard Time) on 16th March, 2026. If electronic bidding is permitted- NA</p>

E. EVALUATION AND COMPARISON OF BIDS

29.1	<p>Bid prices expressed in different currencies shall be converted into Ngultrum (BTN). The source of exchange rates shall be the Royal Monetary Authority of Bhutan. The date for the exchange rates shall be the date of Bid Opening.</p> <p>The Selection and Evaluation criteria shall be strictly based on SECTION III. EVALUATION & QUALIFICATION CRITERIA</p>
30.3 (a)	<p>Evaluation will be done for <i>Lots</i></p> <ul style="list-style-type: none">- <i>Bids will be evaluated lot by lot. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items.</i>- <i>The total capacity of the system (including PV solar panels, backup batteries, inverters, and other associated components) shall strictly conform to the specified project requirement. The specifications, ratings, and quantities of all items shall be fully consistent with and collectively meet the required system capacity. Any mismatch, under-sizing, over-sizing, or inconsistency between the proposed system capacity and the submitted specifications or quantities shall be treated as a material deviation and may render the bid non-responsive.</i>- <i>An item not listed in the Price Schedule shall be assumed to be not included in the Bid and, provided that the Bid is substantially responsive, the average price of the missing item(s) quoted by substantially responsive Bidders shall be added to the Bid price and the equivalent total cost of the Bid so determined will be used for price comparison.</i> <p><i>The Bids shall be evaluated to determine the best evaluated bid for the entire package.</i></p>

33.3 (e)	<p>The adjustments shall be determined using the following criteria from amongst those set out in Section III, Evaluation and Qualification Criteria: <i>[refer to Schedule III, Evaluation and Qualification Criteria; insert complementary details if necessary]</i></p> <p>(a) The cost of major replacement components, mandatory spare parts, and service: Yes</p> <p><i>Material Warranty for the major parts of Solar PV system shall remain minimum valid for Five (5) years and Performance warranty of ten (10) years of the entire lot.</i></p> <p>(b) The availability in Bhutan of spare parts and after-sales services for the equipment offered in the Bid: Yes</p> <p><i>The bidder must demonstrate its capability to ensure the supply of critical spare parts specific to solar PV systems, including solar modules, inverters, mounting structures, and balance of system (BOS) components, all maintained in stock to fulfill the warranty obligations and provide reliable after-sale services.</i></p> <p>(c) The projected operating and maintenance costs during the life of the equipment: Yes</p> <p>(d) The performance and productivity of the equipment offered: Yes</p>
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	<p><i>The Bidder is required to furnish authentic documents acceptable to the purchaser on the functional performance and efficiency of the equipment offered;</i></p> <ol style="list-style-type: none"> <i>1. Data Sheet/Brochure for Solar Modules, Inverters, Battery, Transformer etc.</i> <i>2. Certified test result for Solar Modules, Inverters, transformer etc.</i> <i>3. Key Personnel with a proof of certified installer(s) and prior experience in the installation, testing and commissioning of SPV System</i> <i>4. Plans & Strategy on how the firm will provide hands-on training/skills to the beneficiaries (both Trainers & trainees)</i> <i>5. The supplier /installer shall carry out basic hands-on O&M training to the Beneficiaries (both Trainers & trainees)</i>
35.1	<p>In the event of a tie in bid prices among two or more bidders, the Procuring Agency will adopt the following measures to determine the award :</p> <p><i>Assessment of Past Performance or Relevant Experience: Preference will be given to the bidder demonstrating superior past performance or relevant experience in similar assignments, as evidenced through prior evaluations or contract records.</i></p>

SECTION III. EVALUATION & QUALIFICATION CRITERIA

A. Evaluation Criteria

The evaluation of bids shall be carried out through a structured **four-stage process**, as outlined below:

1. Preliminary Examination

This stage involves verification of all mandatory documents and compliance with the tender requirements.

- A. Bidders must submit all required documents as per the checklist.
- B. Bids with unrealistic or abnormally high/low quoted prices shall be deemed non-responsive and rejected at this stage.

2. Detailed Technical Assessment

Only bidders who pass the Preliminary Examination will undergo a detailed technical assessment.

- A. The evaluation will be based on predefined technical criteria.
- B. Each criterion will be verified as **Pass(P)** (compliant/fulfilled) or **Fail(F)** (not fulfilled).
- C. The results of this verification will determine the technical compliance of each bidder.

3. Point-Based Evaluation Criteria (100points)

Bidders will be assessed based on:

- A. Technical Proposal – **40points**
- B. Capacity Building & Training Methodology –**25 points**
- C. Workplan, Schedule & Methodology -**10 points**
- D. Similar Work Experience & Staffing structure – **20 points**.
- E. Production Capacity / Manufacturer Support- **5points**

4. Financial Evaluation (Lowest Evaluated Cost) & Final Selection (QCBS method)

The financial proposals will be opened only for bidders who scored equal or above **70 points** in the Point-Based Evaluation.

Financial score will be calculated as:

$$\text{Financial Score (Sf)} = 30 \times \frac{\text{Lowest Bid Price}}{\text{Bid Price}}$$

Note: Lowest evaluated price gets the highest financial score.

Final Selection using QCBS Method

The final ranking of bidders will be completed using the Quality and Cost Based Selection (QCBS) method with a weightage of:

- A. 70% Technical Score
- B. 30% Financial Score

$$\text{Final Score (S)} = 0.70 \times ST + 0.30 \times SF$$

Where: **ST** = Technical score and **SF** = Financial score. Bidder with the **highest final score** will be selected

1. Specific additional criteria

Other specific additional criteria to be considered in the evaluation, and the evaluation method, shall be detailed in BDS Sub-Clause ITB 30.3 (e).



SECTION IV: Schedule of Supply, Technical Specifications and Drawings

1. Price Schedule

Rate shall be quoted on item-wise basis as per the specification & quantity specified by bidder. The lump-sum pricing based on total system capacity will not be accepted.

Goods Manufactured Outside Bhutan

Line Item No. (1)	Description of Item (2)	Unit of Measurement for each item (3)	Quantity of item to be supplied (4)	Point of Delivery (5)	Period of Delivery (No. of Days) (6)	Make/Model and Country of Origin (7)	Currency for CIF or CIP (Group B) (8)	Conversion Rate [In Nu.] (9)	Unit price Including Custom Duties, & all other import taxes [In Nu.] (10)	Amount per line item [In Nu.] (11)
<i>To be filled by Bidder (Item- Wise Price schedule)</i>										<i>Auto</i>
Total										0

Goods Manufactured in Bhutan

Line Item No. (1)	Description of Item (2)	Unit of Measurement for item (3)	Quantity of item to be supplied (4)	Point of Delivery (5)	Period of Delivery (No. of Days) (6)	Unit price (7)	Currency for Unit price (8)	Conversion Rate [In Nu.] (9)	Unit price Including Custom Duties, & all other import taxes [In Nu.] (10)	Amount per line item [In Nu.] (11)
<i>To be filled by Bidder (Item- Wise Price schedule)</i>										<i>Auto</i>

2. Related Services

Service No. (1) PA User	Description on of Services (excludes inland transportation and other services required in Bhutan to convey the Goods to their final	Physical Unit (3) PA User	Quantity (4) PA User	Place where Services shall be performed (5) PA User	Period of Delivery (No. of Days) (6) PA User	Country of Origin (7) Bidder/ Consultant	Unit price of service (8) Bidder/ Consultant	Currency for Unit price (9) Bidder/ Consultant	Conversion Rate [In Nu.] (10) Bidder/ Consultant	Total Price per line item of service (Col. 4 X Col. 8 X Col. 10) [In Nu.] (11) Auto
<i>Total</i>										<i>0</i>

1. Technical Specifications

The purpose of the Technical Specifications (TS) is to define the technical characteristics of the Goods and Related Services required by the Procuring agency. The Procuring agency shall prepare the detailed TS taking into account that:

- The TS constitute the benchmarks against which the Procuring agency will verify the technical responsiveness of Bids and subsequently evaluate the Bids. Therefore, well-defined TS will facilitate preparation of responsive Bids by Bidders, as well as examination, evaluation and comparison of the Bids by the Procuring agency.*
- The TS shall require that all goods and materials to be incorporated in the Goods be new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided for otherwise in the Contract.*
- The TS shall make use of best practices. Samples of specifications from successful similar procurements may provide a sound basis for drafting the TS.*
- Standardizing technical specifications may be advantageous, depending on the complexity of the Goods and the repetitiveness of the type of procurement. Technical Specifications should be broad enough to avoid restrictions on workmanship, materials and equipment commonly used in manufacturing similar kinds of Goods.*
- Standards for equipment, materials and workmanship specified in the Bidding Documents shall not be restrictive. Recognized international standards should be specified as much as possible. Reference to brand names, catalogue numbers or other details that limit any materials or items to a specific manufacturer should be avoided as far as possible.*

Where unavoidable, such item description should always be followed by the words “or equivalent or higher.” When other particular standards or codes of practice are referred to in the TS a statement should follow to the effect that other authoritative standards that ensure at least a substantially equal quality will also be acceptable.

- Technical Specifications shall be fully descriptive of the requirements in respect of, but not limited to, the following:*
 - (a) Standards of materials and workmanship required for the production and manufacturing of the Goods.*
 - (b) Detailed tests required (type and number).*
 - (c) Other additional work and/or Related Services required to achieve full delivery/ completion.*
 - (d) Detailed activities to be performed by the Supplier, and participation of the Procuring agency therein.*



(e) List of detailed functional guarantees covered by the Warranty and the specification of the liquidated damages to be applied in the event that such guarantees are not met.

- *The TS shall specify all essential technical and performance characteristics and requirements, including guaranteed or acceptable maximum or minimum values, as appropriate. Whenever necessary, the Procuring agency shall include an additional ad-hoc bidding form (to be an Attachment to the Bid Submission Sheet), where the*

Bidder shall provide detailed information on such technical performance characteristics in respect of the corresponding acceptable or guaranteed values.

When the Procuring agency requests that the Bidder provides in its Bid a part or all of the Technical Specifications, technical schedules or other technical information, the Procuring agency shall specify in detail the nature and extent of the required information and the manner in which it has to be presented by the Bidder in its Bid.

[If a summary of the Technical Specifications (TS) has to be provided, the Procuring agency shall insert information in the table below. The Bidder shall prepare a similar table to justify compliance with the requirements]

“Summary of Technical Specifications; the Goods and Related Services shall comply with the following Technical Specifications and Standards:

Item No	Name of goods or related services	Detailed technical specification and standards required	Inspection and/or tests required and test place	Country of Origin	Make, and Model or brand (when applicable)	Full detailed technical specification and standards offered
To be filled by the Procuring Agency				To be filled by the Bidder		

Detailed Technical Specifications and Standards [whenever necessary]

[Insert detailed description of TS]_____



2. Drawings

These Bidding Documents include *[insert “the following” or “no”]* drawings. *[If documents shall be included, insert the following List of Drawings]*

List of Drawings		
Drawing No.	Drawing Name	Purpose

3. Inspections and Tests

The following inspections and tests shall be performed: *[insert list of inspections and tests that bidder will perform to satisfy the permanence of items]*- To be Filled by Bidder



SECTION V: BIDDING FORMS

1. Bidder Information Form

1. Bidder's Legal Name [insert Bidder's legal name]
2. In the case of a Joint Venture, Consortium or Association (JV/C/A) legal name of each [<i>insert legal name of each party in JV/C/A</i>]
3. Bidder's actual or intended Country of Registration: [<i>insert actual or intended Country of Registration</i>]
4. Bidder's Year of Registration: [<i>insert Bidder's year of registration</i>]
5. Bidder's Legal Address in Country of Registration: [<i>insert Bidder's legal address in country of registration</i>]
6. Bidder's Authorized Representative Information Name: [<i>insert Authorized Representative's name</i>] Address:[insert Authorized Representative's Address]
7. Telephone number: [<i>insert Authorized Representative's telephone</i>] E-mail Address: [<i>insert Authorized Representative's e-mail address</i>]
7. Attached are copies of the following original documents: <ul style="list-style-type: none">❖ Articles of Incorporation or Trade license named in 1 above, in accordance with ITB Sub-Clause 3.1.❖ In the case of a government owned entity from Bhutan, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB Sub-Clause 3.3.❖ Power of attorney authorizing the signatory of the Bid to sign on behalf of the Bidder.

Authorized Signature: _____

Name and Title of Signatory: _____



2. Joint Venture, Consortium or Association (JV/C/A) Partner Information

1. Bidder's Legal Name: <i>[insert Bidder's legal name]</i>
2. JV/C/A Party's Legal name: <i>[insert JV/C/A Party's legal name]</i>
3. JV/C/A Party's Country of Registration: <i>[insert JV/C/A Party's country of registration]</i>
4. JV/C/A Party's Year of Registration: <i>[insert JV/C/A Party's year of registration]</i>
5. JV/C/A Party's Legal Address in Country of Registration: <i>[insert JV/C/A Party's legal address in country of registration]</i>
6. JV/C/A Party's Authorized Representative Information
7. Name: <i>[insert name of JV/C/A Party's authorized representative]</i> Address: <i>[insert address of JV/C/A Party's authorized representative]</i> Telephone numbers: <i>[insert telephone of JV/C/A]</i> E-mail Address: <i>[insert e-mail address]</i>
8. Attached are copies of the following original documents: ❖ Letter of intent to form the JV/C/A, or the JV/C/A agreement, in accordance with the ITB Sub-Clause 21.1(c) (v).

Authorized Signature of JVs: _____

Name and Title of Signatory of JVs: _____



3. Bid Submission Sheet/Form of Bid

To: *[insert complete name of the Procuring agency]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No.: *[insert the number and date of issue of each addendum]*;
- (b) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Supply the following Goods and Related Services: *[insert a brief description of the Goods and Related Services]*;
- (c) The total price of our Bid, is: *[insert the Bid Price in words and figures, indicating the various amounts and their respective currencies]*;
- (d) Our Bid shall be valid for a period specified in BDS from the date fixed for the Bid submission and it shall remain binding upon us and may be accepted at any time before expiry of that period;
- (e) If our Bid is accepted, we commit to provide a Performance Security for the due performance of the Contract;
- (f) We are not participating as bidders in more than one Bid in this bidding process;
- (g) We, including any subcontractors or suppliers for any part of the Contract, have nationality from eligible countries, viz: *[insert the nationality of the Bidder, including that of all parties that comprise the Bidder if the Bidder is a JV/C/A, and the nationality each subcontractor and supplier]*;
- (h) We have no conflict of interest;
- (i) We abide by the Integrity Pact terms and conditions;
- (j) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the contract–has not been declared ineligible by the Procuring agency under the laws or official regulations of Bhutan, in accordance with ITB Sub-Clause 3.4;
- (k) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (l) We understand that you are not bound to accept the lowest evaluated Bid or any other Bid that you may receive.

Authorized Signature with Legal Stamp: _____

Name and Title of Signatory: _____



4. Price Schedule

Rate shall be quoted on item-wise basis as per the specification & quantity specified by bidder. The lump-sum pricing based on total system capacity will not be accepted

Goods Manufactured Outside Bhutan

Line Item No. (1)	Description of Item (2)	Unit of Measurement for item(3)	Quantity of items to supplied (4)	Point of Delivery (5)	Period of Delivery (No. of Days) (6)	Make/ Model and Country of Origin (7)	Currency for CIF or CIP (Group B) (8)	Conversion Rate [In Nu.] (9)	Unit price Including Custom Duties, & all other import taxes [In Nu.] (10)	Amount per line item ([In Nu.] (11)
<i>To be filled by Bidder (Item- Wise Price schedule)</i>										<i>Auto</i>
Total										0

Goods Manufactured in Bhutan

Line Item No. (1)	Description of Item (2)	Unit of Measurement for item (3)	Quantity of items to supplied (4)	Point of Delivery (5)	Period of Delivery (No. of Days) (6)	Currency for Unit price (7)	Conversion Rate [In Nu.] (8)	Unit price Including Custom Duties, & all other import taxes [In Nu.] (9)	Amount per line item [In Nu.] (10)
<i>To be filled by Bidder (Item- Wise Price schedule)</i>									<i>Auto</i>
Total									

5. Related Services

Service No. (1) PA User	Description of Services (excludes inland transportation and other services required in Bhutan to convey the Goods to their final destination) (2) PA User	Physical Unit (3) PA User	Quantity (4) PA User	Place where Services shall be performed (5) PA User	Period of Delivery (No. of Days) (6) PA User	Unit price of service (7) Bidder/Consultant	Currency for Unit price (8) Bidder/Consultant	Conversion Rate [In Nu.] (9) Bidder/Consultant	Total Price per line item of service (Col. 4 X Col. 8 X Col. 10) [In Nu.] (10) Auto
<i>Total</i>									<i>0</i>

Authorized Signature: _____

Name and Title of Signatory: _____



6. Integrity Pact

1. General:

Whereas (*Name of head of the Procuring Agency or his/her authorized representative, with power of attorney*) representing the (*Name of Procuring Agency*), Royal Government of Bhutan, hereinafter referred to as the “Procuring Agency” on one part, and (*Name of Bidder or his/her authorized representative, with power of attorney*) representing M/s. (*Name of firm*), hereinafter referred to as the “**Bidder**” on the other part hereby execute this agreement as follows:

This agreement shall be a part of the Standard Bidding Document, which shall be signed by both the parties and submitted along with the tender document.

2. Objectives:

Whereas, the Procuring Agency and the Bidder agree to enter into this agreement, hereinafter referred to as IP, to avoid all forms of corruption or deceptive practice by following a system that is fair, transparent and free from any influence/ unprejudiced dealings in the Bidding process and Contract administration with a view to:

1. Enabling the Procuring Agency to obtain the desired contract at a reasonable and competitive price in conformity to the defined specifications of the works or goods or services; and
2. Enabling Bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices.

3. Scope:

The validity of this IP shall cover the Bidding process and contract administration period.

4. Commitments of the Procuring Agency:

1. The Procuring Agency hereby undertakes that no officials of the Procuring Agency, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the Bidding process and contract administration.
2. The Procuring Agency further confirms that its officials shall not favor any prospective Bidder in any form that could afford an undue advantage to that particular Bidder in the Bidding process and contract administration and will treat all Bidders alike.



3. Officials of the Procuring Agency, who may have observed or noticed or have reasonable suspicion, shall report to the head of the employing agency or an appropriate government office any violation or attempted violation of clauses 4.1 and 4.2.
4. Following report on violation of clauses 4.1 and 4.2 by official(s), through any source, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings shall be initiated by the Procuring Agency and such a person shall be debarred from further dealings related to the Bidding process and contract administration.

5. Commitments of Bidders

The Bidder commits himself/ herself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of the Bidding process and contract administration in order to secure the contract or in furtherance to secure it and in particular commits himself/herself to the following:

1. The Bidder shall not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Procuring Agency, connected directly or indirectly with the Bidding process and contract administration, or to any person, organization or third party related to the contract in exchange for any advantage in the Bidding process and contract administration.
2. The Bidder shall not collude with other parties interested in the contract to manipulate in whatsoever form or manner, the Bidding process and contract administration.
3. If the Bidder(s) have observed or noticed or have reasonable suspicion that the provisions of the IP have been violated by the Procuring Agency or other Bidders, the Bidder shall report such violations to the head of the Procuring Agency.

6. Sanctions for Violation:

The breach of any of the aforesaid provisions shall result in administrative charges or penal actions as per the relevant rules and laws.

1. The breach of the IP or commission of any offence (forgery, providing false information, misrepresentation, providing false/fake documents, Bid rigging, Bid steering or coercion) by the Bidder, or any one employed by him, or acting on his/her behalf (whether with or without the knowledge of the Bidder), shall be dealt with as per the terms and conditions of the contract and other provisions of the relevant laws, including Debarment Rules.
2. The breach of the IP or commission of any offence by the officials of the Procuring Agency shall be dealt with as per the rules and laws of the land in vogue.

7. Monitoring and Administration:

1. The respective Procuring Agency shall be responsible for administration and monitoring of the IP as per the relevant laws.
2. The Bidder shall have the right to appeal/setting aside as per the arbitration mechanism contained in the relevant rules.



We, hereby declare that we have read and understood the clauses of this agreement and shall abide by it.

SECTION V: GENERAL CONDITIONS OF CONTRACT

1. Definitions

1. **Award of Contract** means the decision of the Procuring agency to enter into a Contract with the Supplier for supply and delivery of the specified Goods, including any Related Services.
2. **Bid** means an offer to supply Goods, including any Related Services, made in accordance with the terms and conditions set out in the Bidding Documents that preceded the placement of the Contract of which these GCC form apart. The term “tender” is synonymous with the term “Bid”.
3. **Bidder** means an eligible individual or legal entity that participated in the bidding process governed by the Bidding Documents that preceded the placement of the Contract of which these GCC form apart.
4. **Bidding Documents** means the set of Bidding Documents that preceded the placement of the Contract of which these GCC form apart, which were sold or issued by the Procuring agency to potential Bidders, and in which the specifications, terms and conditions of the proposed procurement were prescribed.
5. **Contract Documents** means the documents listed in the Contract Agreement, including any amendments thereto.
6. **Contract Price** means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from as may be made pursuant to the Contract.
7. **Day** means calendar day.
8. **Delivery** means the transfer of the Goods from the Supplier to the Procuring agency in accordance with the terms and conditions set forth in the Contract Documents.
9. **GCC** means the General Conditions of Contract.
10. **Goods** means all of the commodities, raw materials, machinery and equipment, and/or other materials, including any object in solid, liquid or gaseous form that has an economic utility or value and which can be exchanged or traded, that the Supplier is required to supply to the Procuring agency under the Contract.
11. **The Project Site**, where applicable, means the place named in the SCC.
12. **Procuring Agency** means the entity purchasing the Goods and Related Services, as specified in the SCC.



13. **Related Services** means the services incidental to the supply of the Goods, such as insurance, installation, training and initial maintenance and other obligations of the Supplier under the Contract.

14. **SCC** means the Special Conditions of Contract.

15. **Subcontractor** means any natural person, private or government entity, or a combination thereof, including its legal successors and permitted assigns, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.

16. **Supplier** means the natural person, private or government entity, or a combination of the above, whose Bid to perform the Contract has been accepted by the Procuring agency and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Supplier.

2. **Fraud and Corruption**

1. If the Procuring Agency determines that the Supplier has engaged in corruptive practices in executing the Contract then the Procuring Agency may, after giving 14 days notice to the Supplier, terminate the Supplier's employment under the Contract and expel him from the Site.
2. Should any employee of the Supplier be determined to have engaged in corrupt, fraudulent, collusive, coercive or obstructive practice during the execution of the supplies, then that employee shall be removed and replaced.
3. All instances of corruption in procurement must be reported to the Anti-Corruption Commission (ACC) of Bhutan for investigation and necessary action in accordance with relevant laws.

3. **Interpretation**

1. If the context requires it, singular means plural and vice-versa.
2. Incoterms:
 - (a) Unless inconsistent with any provision of the Contract or otherwise specified in the SCC, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.
 - (b) The terms EXW, CIF, CIP and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the SCC and published by the International Chamber of Commerce in Paris, France.
3. Entire Agreement- The Contract constitutes the entire agreement between the Procuring agency and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.
4. Amendment- No amendment or other variation of the Contract shall be valid unless it is



in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

5. Non-waiver:

(a) Subject to GCC Sub-Clause 3.5 (b) below, no relaxation, forbearance, delay or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

6. Any waiver of a party's rights, powers or remedies under the Contract must be in writing, dated and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

7. Severability: If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

4. **Language**

1. The language of the Contract and the law governing the Contract are stated in the SCC.

5. **Joint Venture, Consortium or Association**

1. If the Supplier is a joint venture, consortium or association, all of the parties shall be jointly and severally liable to the Procuring agency for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium or association. The composition or the constitution of the joint venture, consortium or association shall not be altered without the prior consent of the Procuring agency.

6. **Notices**

1. Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term "in writing" means communicated in written form, including electronic communication, with proof of receipt. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

7. **Governing Law**

1. The Contract shall be governed by and interpreted in accordance with the laws of Bhutan.

8. **Inspections & Audit**

1. The Supplier shall permit the Procuring Agency and/or persons appointed by the Procuring agency to inspect the Supplier's offices and/or the accounts and records of the Supplier and its Subcontractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the Procuring agency if so required by the Procuring Agency.



9. Scope of Supplies

1. The Goods and Related Services to be supplied shall be as specified in the Schedule of Supply.
2. Unless otherwise stipulated in the Contract, the Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery of the Goods and Completion of the Related Services as if such items were expressly mentioned in the Contract.
3. The supply order for one-time purchase shall be sent within five (5) working days after signing of contract.

10. Delivery and Documents

1. The delivery of the Goods and completion of the Related Services shall be in accordance with the delivery and completion requirements specified in the Schedule of Supply. The details of shipping and other documents to be furnished by the Supplier are specified in the SCC.

11. Supplier and Procuring Agency's Responsibilities

1. The Supplier shall supply all the Goods and Related Services included in the Scope of Supplies in accordance with GCC Clause 9, and the delivery and completion requirements as per GCC Clause 10.
2. Whenever the supply of Goods and Related Services requires that the Supplier obtain permits, approvals and/or import and other licenses or similar permissions from Bhutanese public authorities, the Procuring Agency shall, if so required by the Supplier, use its best efforts to assist the Supplier in complying with such requirements in a timely and expeditious manner, but without incurring any costs.

12. Contract Price

1. The Contract Price shall be as specified in the Contract Agreement subject to any additions and adjustments thereto or deductions there from as may be made pursuant to the Contract.
2. Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its Bid.
3. However, price adjustments shall be mandatorily applicable for procurement more than 12 months. To calculate the price adjustment the sample Price Adjustment Formula shall be used.



13. Terms of Payment

1. The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the SCC.
2. The Supplier's request for payment shall be made to the Procuring Agency in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed upon fulfillment of all the obligations stipulated in the Contract.
3. Payments shall be made promptly by the Procuring Agency, no later than twenty-five (25) days after the submission of verified invoice or request for payment by the Supplier, and the Procuring agency has accepted it.
4. The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the Bid Price is expressed.
5. In the event that the Procuring Agency fails to pay the Supplier any payment within the period provided in GCC 13.3, the Supplier shall be paid interest only on the late payment amount calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for overdraft facilities availed from respective Financial Institutions.
6. If an amount certified is increased in a later certificate or as a result of an award by an Arbitrator, the Supplier shall not be paid interest upon the delayed payment.

14. Taxes and Duties

1. For Goods manufactured outside Bhutan the Supplier shall bear and pay all applicable taxes, stamp duties, license fees and other similar levies imposed outside Bhutan.
2. For Goods manufactured within Bhutan the Supplier shall bear and promptly pay all applicable taxes, duties, license fees and other similar levies incurred until delivery of the contracted Goods to the Procuring Agency.
3. If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in Bhutan, the Procuring Agency shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

15. Performance Security

1. Prior to signing of contract, the Supplier should have furnished performance security. Following the successful completion of the Contract, the Procuring Agency shall return the Performance Security to the Supplier within fourteen (14) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.
2. The Procuring Agency reserves the right to encash the Performance Security in order to prevent its lapse, in the event the Supplier fails to extend its validity. The Procuring Agency shall issue a formal reminder to the contractor at least thirty (30) days prior to



the expiry date, thereby allowing the Supplier a period of twenty-one (21) days to effect the required extension. Should the Supplier fail to comply within this timeframe, the Procuring Agency shall notify the relevant Financial Institution of the intent to encash the Performance Security no later than seven (7) days prior to its expiration, to ensure the security remains enforceable.

3. The Performance Security (including additional Performance Security under seriously unbalanced and/or frontloaded Bid) shall be payable to the Procuring Agency as compensation for any loss resulting from the Suppliers failure to complete its obligations under the contract. However, the performance security shall not be forfeited outrightly.

16. Copyright

1. The copyright in all drawings, documents and other materials containing data and information furnished to the Procuring Agency by the Supplier shall remain vested in the Supplier, or, if they are furnished to the Procuring Agency directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

17. Confidential Information

1. The Procuring Agency and the Supplier shall keep confidential and shall not, without the written consent of the other party here to, divulge to any third party any documents, data or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor(s) such documents, data and other information as it receives from the Procuring agency to the extent required for the Subcontractor(s) to perform its/their work under the Contract, in which event the Supplier shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 18.
2. The Procuring Agency shall not use such documents, data and other information received from the Supplier for any purposes unrelated to the Contract. Similarly, the Supplier shall not use such documents, data and other information received from the Procuring agency for any purpose other than the design, procurement or other work and services required for the performance of the Contract.
3. The obligation of a party under GCC Sub-Clauses 17.1 and 17.2 above, however, shall not apply to information that:
 - (a) The Procuring agency or Supplier needs to share with the RGoB or other institutions participating in the financing of the Contract;
 - (b) Now or here after enters the public domain through no fault of that party;
 - (c) Can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or

- (d) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
4. The above provisions of GCC Clause 19 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.
 5. The provisions of GCC Clause 18 shall survive completion or termination, for whatever reason, of the Contract.

18. Subcontracting

1. The supplier shall not subcontract, in whole or in part, their obligations under this Contract, except with the prior written consent of the procuring Agency.

19. Technical Specifications, Standards and Drawings

1. The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards stipulated in Evaluation and Qualification criteria and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods country of origin.
2. The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Procuring Agency, by giving a notice of such disclaimer to the Procuring Agency.
3. Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the editions or the revised versions of such codes and standards shall be those specified in the Schedule of Supply. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Procuring agency and shall be treated in accordance with GCC Clause 30.

20. Packing and Documents

1. The Supplier shall provide such packing of the Goods as required to prevent the damage or deterioration during transit to their final destination. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage.
2. The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the SCC, and in any other instructions ordered by the Procuring agency.

21. Insurance

1. The supplier shall be responsible for the Goods supplied under the Contract and shall be fully insured, in a freely convertible currency from an eligible country, against loss or



damage incidental to manufacture or acquisition, transportation, storage and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.

22. Transportation

1. Unless otherwise specified in the SCC, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.

23. Inspections and Tests

1. At its own expense and at no cost to the Procuring agency the Supplier shall carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC.
2. The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/ or at the Goods' final destination, or in another place in Bhutan as specified in the SCC. Subject to GCC Sub-Clause 23.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring Agency.
3. The Procuring agency or its designated representatives shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 23.2, provided that the Procuring agency bears all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all travelling and board and lodging expenses.
4. The Procuring agency may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications, codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
5. The Supplier shall provide the Procuring agency with a report of the results of any such test and/or inspection.
6. The Procuring Agency may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Procuring agency, and shall repeat the test and/or inspection, at no cost to the Procuring Agency, upon giving a notice pursuant to GCC Sub-Clause 23.4.
7. The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by  the Procuring agency or its representative,

nor the issue of any report pursuant to GCC Sub-Clause 23.6, shall release the Supplier from any warranties or other obligations under the Contract.

24. Liquidated Damages

1. Except as provided for under GCC Clause 29, if the Supplier fails to deliver any or all of the Goods by the date(s) of delivery or fails to perform the Related Services within the period specified in the Contract, the Procuring agency may, without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC for each day or part thereof of delay until actual delivery or performance, up to a maximum deduction of 10% of the contract price. Once the maximum is reached, the Procuring agency may terminate the Contract pursuant to GCC Clause 32.

25. Warranty

1. The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
2. Subject to GCC Sub-Clause 19.1 (b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials and workmanship, under normal use in the conditions prevailing in Bhutan.
3. Unless otherwise specified in the SCC, the warranty shall remain valid for minimum twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for minimum eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
4. The Procuring agency shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Procuring agency shall afford all reasonable opportunity for the Supplier to inspect such defects.
5. Upon receipt of such notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Procuring agency.
6. If, having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Procuring agency may proceed to take within a reasonable period such remedial action as maybe necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.

26. Patent Indemnity



1. The Supplier shall, subject to the Procuring agency's compliance with GCC Sub-Clause 26.2, indemnify and hold harmless the Procuring agency and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs and expenses of any nature, including attorney's fees and expenses, which the Procuring agency may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:
 - (a) The installation of the Goods by the Supplier or the use of the Goods in Bhutan; and
 - (b) The sale in any country of the products produced by the Goods. Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or reasonably to be inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant or materials not supplied by the Supplier, pursuant to the Contract.
2. If any proceedings are brought or any claim is made against the Procuring agency arising out of the matters referred to in GCC Sub-Clause 26.1, the Procuring agency shall promptly give the Supplier notice thereof, and the Supplier may at its own expense and in the Procuring agency's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
3. If the Supplier fails to notify the Procuring agency within thirty (30) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Procuring agency shall be free to conduct the same on its own behalf.
4. The Procuring agency shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in doing so.
5. The Procuring Agency shall indemnify and hold harmless the Supplier and its employees, officers and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification or other documents or materials provided or designed by or on behalf of the Procuring agency.

27. Limitation of Liability

Except in cases of gross negligence or willful misconduct:

1. neither party shall be liable to the other party, whether in contract, tort or otherwise, for any indirect or consequential loss or  damage, loss of use, loss of production, or loss

- of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Procuring agency; and
2. the aggregate liability of the Supplier to the Procuring agency, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Supplier to indemnify the Procuring agency with respect to patent infringement.

28. Change in Laws and Regulations

1. Unless otherwise specified in the Contract if, after the date thirty (30) days prior to the date of Bid submission, any law, regulation, ordinance, order or by law having the force of law is enacted, promulgated, abrogated or changed in Bhutan (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery/ Completion Schedule and/or the Contract Price, then such Delivery/ Completion Schedule and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Sub-Clause 12.3.

29. Force Majeure

1. The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages or termination for default if and to the extent that its delays in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
2. For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Procuring agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
3. If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

30. Change Orders and Contract Amendments

1. The Procuring Agency may at any time order the Supplier through notice in accordance with GCC Clause 6 to make changes within the general scope of the Contract in any one or more of the following:



- (a) drawings, designs or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring Agency;
 - (b) the method of shipment or packing;
 - (c) the place of delivery; and
 - (d) the Related Services to be provided by the Supplier.
2. If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Procuring agency's change order.
 3. Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.
 4. Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment by the parties.

31. Extensions of Time

1. If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 9, the Supplier shall promptly notify the Procuring agency in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.
2. Except in case of Force Majeure, as provided under GCC Clause 29, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 24, unless an extension of time is agreed upon, pursuant to GCC Sub- Clause 31.1.

32. Termination

1. Termination for Default:

- (a) The Procuring Agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC Sub-Clause 31.1;
 - (ii) if the Supplier fails to perform any other obligation under the Contract; or



(iii) if the Supplier, in the judgment of the Procuring Agency has engaged in corruption, as defined in GCC Clause 2, in competing for or in executing the Contract.

(b) In the event the Procuring Agency terminates the Contract in whole or in part, pursuant to GCC Clause 32.1 (a), the Procuring Agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Procuring Agency for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

(c) The Procuring Agency shall be entitled to recover liquidated damages for delay, up to the date of termination, as stipulated in the Contract; and recover all actual additional costs reasonably incurred in procuring similar Goods or related Services from alternative sources.

(d) The Performance Security shall be encashed to offset such sums as may be due, including Liquidated Damages and additional completion costs. However, such encashment shall be limited to the actual losses incurred by the Procuring Agency and shall not constitute an outright forfeiture.

(e) For Framework contracts or when multiple items have been awarded to the same Supplier and the performance Security is asked for in Lump-sum, the payment for termination shall be calculated on a pro-rate basis.

2. **Termination for Insolvency:** The Procuring Agency may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination shall be without compensation to the Supplier, provided that such termination shall not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Procuring agency.

3. **Termination for Convenience:**

(a) The Procuring Agency, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring agency's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

(b) The Goods that are complete and ready for shipment within thirty (30) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring Agency at the Contract terms and prices. For the remaining Goods, the Procuring agency may elect:

(i) to have any portion completed and delivered at the Contract terms and prices; and/or



- (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.
- 4. Following the termination of contract, the Procuring Agency may directly award or directly procure from the market.

33. Export Restriction

- 1. Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Procuring Agency, to Bhutan, or to the use of the products/ Goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/ Goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services. This is always provided, however, that the Supplier can demonstrate to the satisfaction of the Procuring agency that it has completed all formalities in a timely manner, including applying for permits, authorizations, and licenses necessary for the export of the products/ Goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Procuring agency’s convenience pursuant to Sub-Clause 32.3.

34. Settlement of Disputes

- 1. The Procuring Agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 2. Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and the Procuring agency shall pay the Supplier any monies due to the Supplier.

35. Continuation of Supplies

- 1. Dispute shall not prohibit continuation of execution of the work unless injunction order or such other orders are issued by the court of law or any other Competent Authority

SECTION VI. SPECIAL CONDITIONS OF CONTRACT

GCC 1.1 (k)	<p>The Project Site(s)/Final Destination(s) is/are; <i>Deployment of 150 kW Rooftop Hybrid Solar PV System at JWPTI for Education and Training at Jigme Wangchuck Power Training Institute (JWPTI), Dekiling, Sarpang:</i></p>
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	<i>The Site of Installation of Solar PV will be on the Roof Tops of Existing Solar & Plumbing building or at Academic Building as per the requirement of Procuring agency.</i>
GCC 1.1 (l)	The Procuring agency is: <i>JWPTI, Power Department, Jigme Wangchuck Power Training Institute, Ministry of education and skilling development.</i>
GCC 4.2 (a)	The meaning of the trade terms shall be as prescribed by Incoterms. If the meaning of any trade term and the rights and obligations of the parties there under shall not be as prescribed by Incoterms, they shall be as prescribed by: <i>[exceptional; refer to other internationally accepted trade terms]</i>
GCC 3.2 (b)	The version of Incoterms shall be: <i>CIP delivery schedule.</i>
GCC 5.1	The language shall be: <i>English</i>
GCC 6.1	For <u>notices</u> , the addresses shall be: For the Procuring agency: Attention: <i>[Training Director]</i> _____ Address: <i>Jigme Wangchuck Power Training Institute, Power Department, MoESD.</i> Telephone: <i>[00975-77107863 or 00975-77353535]</i> E-mail address: <i>[karmadorji@moesd.gov.bt]</i>
GCC 10.1	Details of Shipping and other Documents to be furnished by the Supplier are: <i>1. Copies of the supplier's invoice showing Good's description, quantity, unit price, and the total amount.</i> <i>2. Original and two copies of the negotiable, clean, on-board bill of lading marked "freight prepaid" or two copies of non-negotiable sea way bill of lading or two copies of a railway consignment note or two copies of a road assignment note.</i> <i>3. Copies of the packing list identifying contents of each package.</i> <i>4. Insurance Certificate</i> <i>5. Manufacturers or suppliers warranty certificate</i> <i>6. Unique serial Number/model number of Solar PV System components.</i> <i>7. Inspection certificate, nominated inspection agency, and the supplier's factory inspection report, and</i> <i>8. Certificate of origin</i> <i>9. Proof of BIS grant ISI marked under IS 16503/Equivalent to Bureau of Energy Efficiency (BEE) for Rooftop Solar PV System components.</i>



	<p align="center">10. Proof of providing spare parts from the manufacturing company (agreement or letter from the companies).</p> <p>The above documents shall be received by the Procuring agency before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.</p>
GCC 13.1	<p>GCC13.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows: Payment terms and conditions:</p> <p>Payment of the foreign currency portion shall be made in (_____)</p> <p>(i) Advance Payment: Ten percent (10%) of the Contract Price shall be paid within thirty (30) days of signing of the Contract, and upon submission of a claim and an advance payment guarantee for the equivalent amount valid until the Goods are delivered and, in the form, provided in the Bidding Documents.</p> <p>(ii) On Shipment: Eighty percent (80%) of the Contract Price of the Goods shipped shall be paid through an irrevocable confirmed letter of credit opened in favor of the Supplier in a bank in its country, upon submission of the documents specified in GCC Clause 13.</p> <p>(iii) On Acceptance: Ten percent (10%) of the Contract Price of the Goods received shall be paid within thirty (30) days of receipt of the Goods upon submission of claim supported by the acceptance certificate issued by the Procuring agency.</p> <p>Payment of the local currency portion shall be made in Bhutanese Ngultrum (BTN) within thirty (30) days of presentation of a claim supported by a certificate from the Procuring agency declaring that the Goods have been delivered and that all other contracted Services have been performed.</p>
GCC 15.4	<p>Discharge of Performance Security shall take place: Twelve (12) months from the following the date of completion of contract.</p>
GCC 20.2	<p>The packing, marking and documentation within and outside the packages shall be: The supplier shall pack all the Goods as is required to prevent damage or deterioration in transit to the final destination indicated on the Bidding Documents. The packaging should be sufficient to withstand rough handling and exposure to extreme temperatures, salt and precipitation during transit and/or storage. The materials shall be individually packed with external transducer box, rubber gasket for vibration proof, cardboard, etc. and then packed in strong non-returnable wooden crates.</p>
GCC 21.1	<p>Insurance</p>



	<i>The Supplier shall be <u>solely responsible for providing insurance coverage for the shipment</u> of all Rooftop Solar PV system components, labor, and related activities during the entire contract period after the signing of the Contract Agreement. The Purchaser and the Beneficiaries shall bear no liability for any loss, damage, or defect occurring thereafter till handing over and taking over is completed.</i>
GCC 19.1	<p>Responsibility for transportation of the Goods shall be <u>as specified in the Incoterms</u>.</p> <p>If not in accordance with Incoterms, responsibility for transportation shall be as follows: <i>The Supplier is required under the Contract to transport the Goods to a specified place of final destination as specified in the EPC document, defined as the Project Site. Transport to such places of destination, including insurance and storage as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.</i></p>
GCC 23.1	<p>Inspections and tests shall be conducted at: <i>At the Bureau of Indian Standards (BIS) or Bureau of Energy Efficiency (BEE) centers or Bhutan Standards Bureau (BSB) or at Jigme Wangchuck Power Training Institute.</i></p> <p><u>The inspections and tests shall be: [insert nature, frequency, procedures for carrying out the inspections and tests]</u></p>
GCC 24.1	The liquidated damages shall be: <i>0.1% per day shall be imposed after the completion date for the Supply, Installation, Testing, and Commissioning of the project sites as specified in the Bidding Documents.</i>
GCC 25.3	<p>The period of validity of the Warranty shall be: <i>365 days.</i></p> <p><i>The period of validity of the Warranty of Goods shall be twelve (12) months from the date of acceptance of all the SPV system by the Purchaser.</i></p> <p>For the purposes of the Warranty the place(s) of final destination(s) shall be: <i>As per the information in the delivery schedule/ Tender Requirements Document.</i></p>
GCC 25.5 and 25.6	The period for repair or replacement shall be: <i>30 days after the notice by Purchaser and the clause under SCC (GCC 25.6) shall apply.</i>
GCC 34.2	<p>The rules of procedure for arbitration proceedings pursuant to GCC Sub-Clause 34.2 shall be as follows:</p> <p><i>(a) Contract with a Bhutanese Supplier:</i></p> <p>In the case of a dispute between the Procuring Agency and a Bhutanese Supplier, the dispute shall be referred to Bhutan Alternative Dispute Resolution Center (BADRC) for arbitration.</p>



Price Adjustment Formula

If, in accordance with GCC 15.2, prices shall be adjustable, the following method shall be used to calculate the price adjustment:

Prices payable to the Supplier, as stated in the Contract, shall be subject to adjustment during performance of the Contract to reflect changes in the cost of labor and material components in accordance with the formula:

$$P1 = P0 [a + b \frac{L1}{L0} + c \frac{M1}{M0}] - P0$$
$$a+b+c = 1$$

in which:

- P1 = adjustment amount payable to the Supplier.
P0 = Contract Price (base price).
a = fixed element representing profits and overheads included in the Contract Price and generally, in the range of five (5) to fifteen percent (15%).
b = estimated percentage of labor component in the Contract Price.
c = estimated percentage of material component in the Contract Price.
L0,L1 = labor indices applicable to the appropriate industry in the country of origin on the base date and date for adjustment, respectively
M0,M1 = material indices for the major raw material on the base date and date for adjustment, respectively, in the country of origin.

The coefficients a, b, and c as specified by the Procuring agency is as follows:

$a = [insert\ value\ of\ coefficient]$

$b = [insert\ value\ of\ coefficient]$

$c = [insert\ value\ of\ coefficient]$

The Bidder shall indicate the source of the indices and the base date indices in its bid. Base date = thirty (30) days prior to the deadline for submission of the bids.

Date of adjustment= $[insert\ number\ of\ weeks]$ weeks prior to date of shipment (representing the mid-point of the period of manufacture).

The above price adjustment formula shall be invoked by either party subject to the following further conditions:



- (a) price adjustment shall be allowed beyond the original delivery dates unless specifically stated in the extension letter. As a rule, no price adjustment shall be allowed for periods of delay for which the Supplier is entirely responsible. The Procuring agency will, however, be entitled to any decrease in the prices of the Goods and Services subject to adjustment.

- (b) If the currency in which the Contract Price P0 is expressed is different from the currency of origin of the labor and material indices, a correction factor will be applied to avoid incorrect adjustments of the Contract Price. The correction factor shall correspond to the ratio of exchange rates between the two currencies on the base date and the date for adjustment as defined above.

- (c) No price adjustment shall be payable on the portion of the Contract Price paid to the Supplier as advance payment.



SECTION VII. CONTRACT FORMS

1. Letter of Intent

(Insert date)

To: _____ *[Name and address of the Supplier]*

This is to notify you that, it is our intention to award the contract for your Bid dated _____ *[Insert date]* for execution of the *[Insert name of the contract and identification number, as given in the BDS/SCC]* for the Contract Price of _____ *[Insert amount in figure and words and name of currency]* as corrected and modified *[if any corrections]* in accordance with the Instructions to Bidders or (for item-wise contract insert list of items price schedule as an attachment)

Authorized Signature: _____

Name and Title of Signatory _____

Name of the Firm: _____

CC:

[Insert name and address of all other suppliers who submitted the bid]



2. Letter of Acceptance

Letter of Acceptance (LOA) of Tender/Proposal ID:

Contract No:

To

Name: _____

Address: _____

This is to notify you that your Bid dated _____ for the supply of _____ for the Contract Price of the equivalent of Nu. _____ (in words) in BTN, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are hereby instructed to complete the following process within 7 working days.

- (a) confirm your acceptance of this Letter of Acceptance;
- (b) furnish the Performance Security; and
- (c) execute the signing of the contract.

Authorized Signature:

[Name and Designation]

Attachment: Contract Agreement



3. Performance Security form

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid submission]*

IFB No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

Beneficiary: *[insert complete name of Procuring agency]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract"). Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s) in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or you needing to prove or to show grounds or reasons for your demand or the sums specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*²⁴ and any demand for payment under it must be received by us at this office on or before that date. We agree to a one-time extension of this Guarantee for a period not to exceed as required by the Procuring agency, in response to the Procuring agency's written request for such extension, such request to be presented to us before the expiry of the Guarantee.

[Signatures of authorized representatives of the bank and the Supplier]



4. Contract Agreement

THIS CONTRACT AGREEMENT made the [insert number] day of [insert month], [insert year],
BETWEEN

[insert complete name of Procuring Agency], a [insert description of type of legal entity, for example, an agency of the Ministry of the Government of Bhutan, or corporation in corporate under the laws of Bhutan] and having its principal place of business at [insert address of Procuring agency] (hereinafter called “the Procuring agency”), AND [insert name of Supplier], a corporation incorporated under the laws of [insert: country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called “the Supplier”).

WHEREAS the Procuring Agency invited Bids for certain Goods and ancillary services, viz., [insert brief description of Goods and Services] and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of [insert Contract Price in words and figures, expressed in the Contract currency/ies] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as respectively assigned to the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Procuring agency and the Supplier, and each shall be read and construed as an integral part of the Contract, viz.:
 - (a) This Contract Agreement;
 - (b) The Special Conditions of Contract;
 - (c) The General Conditions of Contract;
 - (d) Schedule of Supply and Technical Specifications;
 - (e) The Supplier’s Bid and original Price Schedules;
 - (f) The Procuring agency’s Notification of Award of Contract;
 - (g) The form of Performance Security;
 - (h) The form of Bank Guarantee for Advance Payment;
 - (i) [insert here any other document(s) forming part of the Contract]
3. This contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Procuring agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring agency to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Procuring agency hereby covenants to pay the Supplier in consideration of the provision of the Goods and Related Services and the remedying of defects therein, the

Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Bhutan on the day, month and year indicated above.

For the Procuring Agency

For the Supplier

Signature

Name

In the presence of (Name and address)



5. Bank Guarantee form for Advance Payment

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated.]

Date: *[insert date (as day, month, and year) of Bid submission]*

IFB No. and title: *[insert number and title of bidding process]*

[Bank's letterhead]

Beneficiary: *[insert legal name and address of Procuring agency]*

ADVANCE PAYMENT GUARANTEE No.: *[insert Advance Payment Guarantee no.]*

We, *[insert legal name and address of bank]*, have been informed that *[insert complete name and address of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert date of Contract]* with you, for the supply of *[insert types of Goods to be delivered]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment is to be made against an advance payment guarantee.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount(s) in figures and words]* upon receipt by us of your first demand in writing declaring that the Supplier is in breach of its obligation under the Contract because the Supplier used the advance payment for purposes other than toward delivery of the Goods.

It is a condition for any claim and payment under this Guarantee to be made that the advance payment referred to above must have been received by the Supplier in its account *[insert number and domicile of the account]*

This Guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until *[insert date]*. We agree to a one-time extension of this Guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Procuring agency's written request for such extension, such request to be presented to us before the expiry of the Guarantee.

[signature(s) of authorized representative(s) of the bank]



6. Bank Guarantee for Bid Security

[this is the format for the Bid Security to be issued by a financial institution in Bhutan in accordance with ITB Clause 19]

Invitation for Bid No:

Date:

Bid Package No:

To:

[Name and address of Employer]

TENDER GUARANTEE No:

We have been informed that *[name of Bidder]* (hereinafter called “the Bidder”) intends to submit to you its Bid dated *[date of bid]* (hereinafter called “the Tender”) for the execution of the Works of *[description of works]* under the above Invitation for Bids (hereinafter called “the IFB”).

Furthermore, we understand that, according to your conditions Bids must be supported by a Bid Guarantee.

At the request of the Bidder, we *[name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Nu *[insert amount in figures and words]* upon receipt by us of your first written demand accompanied by a written statement that the Bidder is in breach of its obligation(s) under the Bid conditions, because the Bidder:

- (a) has withdrawn its Bids during the period of Bid validity specified by the Bidder in the Form of Bid; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders ITB; or
- (c) having been notified of the acceptance of the Bid by the Employer during the period of Bid validity,
 - (i) fails or refuses to furnish the performance security in accordance with the ITT, or
 - (ii) fails or refuses to execute the Contract Form,

This guarantee will expire

- (a) if the Bidder is the successful Bidder, upon our receipt of a copy of the Performance Security and a copy of the Contract signed by the Bidder as issued by you; or
- (b) if the Bidder is not the successful Bidder, thirty days after the expiration of the Bidder’s Tender validity period, being *[date of expiration of the Tender]*.

Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Signature



Design, Supply and Installation of Rooftop Solar Hybrid PV System at Jigme Wangchuck Power Training Institute, Dekiling, Sarpang

Technical Specification

1. Background

Jigme Wangchuck Power Training Institute, Sarpang incurs significant electricity costs for office, workshops, hostels, street lights, and guest house use, relying fully on the BPC power grid. To reduce costs and dependence on conventional power, the Department of Energy, Ministry of Energy and Natural Resources (MoENR), Royal Government of Bhutan, with funding from the Government of India under Project Tied Assistance (GoI-PTA), is implementing a grid-connected Rooftop Solar Photovoltaic (SPV) system at the Institute. This project aims to lower operational expenses, enhance energy sustainability, and demonstrate renewable energy adoption within TVET Institutions.

2. Site Location

The rooftop Hybrid SPV system is to be installed on building rooftops within the Institute Campus. The following two buildings are identified as a suitable site:

- **Site 1(Plumbing and Solar Technology Building) – Hybrid-grid PV generator of 150 KWp. With AC inverter 30KVA**

OR

- **Site 2(Academic Building) – Hybrid-grid PV generator of 150 KWp. With AC inverter 30KVA**

3. Scope of Work

The scope of work shall include the design, planning, engineering, procurement (manufacturing/supply), roof integrity testing, installation, testing, and commissioning of a minimum 150 kWp hybrid SPV system. The hybrid SPV system shall comprise the following:

- Main electrical system including solar PV modules, inverters, battery bank, cables, and protection equipment.
- Solar PV module mounting structures suitable for rooftop installation.
- Energy Storage system
- Lightning protection system.
- Earthing system.
- Data Acquisition system.

All components and works shall comply with applicable standards and ensure the integrity and safety



of the rooftop and electrical systems.

4. Solar PV System Overview

Figure 1 shows a schematic diagram of a typical Rooftop Hybrid SPV System. The SPV modules generate DC power, which is fed into at least **three parallel hybrid string inverters**, each with 4–6 MPPTs. The inverters are connected to a battery bank and synchronized with the three-phase grid, then routed through the AC distribution board. A bi-directional meter manages power exchange with the utility grid. Essential safety components, including disconnect switches and earthing points, are installed throughout, while a monitoring unit tracks overall system performance.

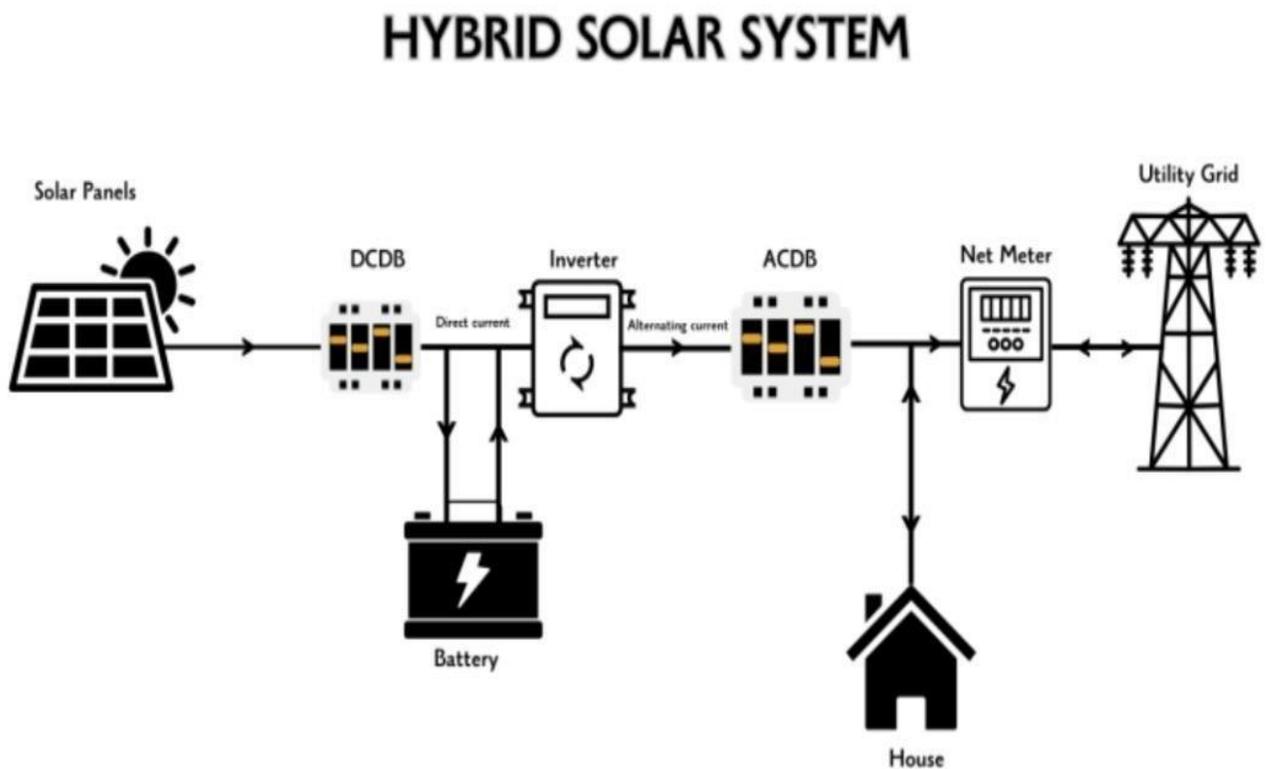


Figure 1: Schematic diagram of a typical Hybrid SPV system.

5. Evaluation of Bids

The evaluation criteria listed below are critical and prerequisite to fulfilling this contract. Therefore, non-fulfillment of any of these requirements may lead to rejection of the bids.

- i. *Bidding for Re-tender will be conducted through the National Competitive Bidding procedures specified in the RGoB Procurement Rules and Regulations, and is open to all Bidders as defined in Section V of the Bidding Documents. If deemed necessary, the International/National Bidder may enter JV with National/International firms/suppliers while still being the lead firm for bidding.*
- ii. *The bidder shall demonstrate compliance with all the technical requirements for the items listed under Clause No. 7 and confirm the required capacities at the time of bid submission.*
- iii. *At the time of bid submission, the Bidder shall submit a complete Technical Proposal demonstrating compliance with the project requirements, including:*
 - a) *System Design – SLD, layout drawings, and structural design details.*
 - b) *PV Modules and Inverters – Technical datasheets, efficiency, certifications, and warranty details.*
 - c) *Battery & ESS – Safety features, cycle life, DoD, warranty, and EMS details.*
 - d) **Standards Compliance** – *Confirmation of compliance with applicable IEC/NEC and safety standards.*
 - e) **Simulation Report** – *Expected annual energy output with assumptions and methodology.*
- iv. *Capacity Building and Training Methodology- Hand on Training plans for **both trainers & Trainees** and Curriculum, tools & Materials provided.*
- v. *Workplan, Schedule & Methodology- Realistic project schedule with milestones and Resource allocation & staffing plan*
- vi. *Production capacity/ Manufacturer Support- Manufacturer spare parts commitment letter*
- vii. *The Bidder should have **3-5 years’ experience** in the design, procurement, supply, installation, testing and commissioning of the Rooftop SPV System.*
- viii. *At least **one key personnel** should be certified with a **minimum of two years of experience** in installation, or have more than five years of experience in the installation, testing, and commissioning of rooftop solar PV systems if not certified.*



The bidders are recommended to propose the methodology in maximum of two pages, which must include capacity building methodologies in the following areas:

1. Installation of SPV System,
2. Testing and commissioning of SPV System,
3. Operation and Maintenance of SPV System.

Other required documents:

1. Valid Trade License and Tax Clearance Certificate.
2. Certification of installers engaged in the installation, testing, and commissioning of the SPV system.
3. Detailed plans and strategy for providing hands-on training and skills development to the beneficiaries both to trainer & trainees.
4. Proof of the firm's experience in executing similar SPV projects.
5. Duly signed Bid forms and integrity pack
6. Bid security only in the form of unconditional & irrevocable **Bank Guarantee or Cash Warrant** with minimum validity of 90 days.

The successful bidder shall provide a **warranty period** for each piece of equipment listed in the Bill of Quantity (BoQ) and conduct hands-on training for the basic O&M training for the beneficiaries during the project execution.

6. Instruction to the Bidder

- The bidder shall be responsible for the design, supply, installation, testing, and commissioning of the complete rooftop SPV system, including all necessary civil, mechanical and electrical works for proper functioning.
- The bidder must conduct a site inspection prior to bid submission and present their technical and financial proposal, including system design and equipment selection, to the client on a notified date with at least five days' advance notice.
- All technical documentation, such as design calculations, drawings (including overall dimensions and sectional views), and technical literature necessary for installation, operation, and maintenance of the system and accessories, must be provided. Operation and maintenance manuals, including repair instructions and any other relevant technical data for efficient system operation, shall be submitted before project completion.
- The bidder shall perform system simulation using recognized software (e.g., PVSyst or SAM) to estimate annual energy generation.
- The bidder must submit an experience certificate (or work completion Certificate) demonstrating



successful execution of a similar rooftop grid-tied SPV project, either as a joint venture or single entity. Failure to provide this will render the bid non-responsive.

- Civil, mechanical and electrical works include all installations associated with the SPV system, ensuring alignment with existing structures without compromising structural integrity.
- The bidder is solely responsible for any material shortages during contract execution.
- Upon completion, the site must be cleared of all temporary works and debris, maintaining cleanliness and aesthetics during all phases.
- Warranties shall include a minimum one (2) year defect liability period covering manufacturing, design, and installation defects from the date of system handover. The main components, such as modules and inverters, shall carry warranties as specified in the technical requirements.
- During the one-year defect liability period, the bidder must ensure satisfactory performance, operation, and regular maintenance, including prompt rectification of defects within fourteen (14) days of notification.
- The bidder shall submit quarterly performance reports during the defect liability period, detailing functionality, efficiency, operations, maintenance or repairs needed, status of key components, and recommendations for system optimization. These reports shall continue for three (3) years post-commissioning as part of performance compliance monitoring.
- All components and spare parts must comply with applicable BIS, IEC, BEE, or other recognized national/international standards and certifications.

7. Technical Specification of the Rooftop SPV System

The Rooftop SPV Project shall be executed on a turnkey basis, which includes design, construction, installation, testing and commission. All the materials and equipment supplied under this tender shall conform to the latest editions of the International Electrotechnical Commission (IEC) Specifications or any other international standards. If equipment is not covered by IEC, then other national standards are accepted if it confers equal or superior quality and performance than IEC or other international standards.

7.1. PV Modules

7.1.1. General Requirement

Monocrystalline PV modules shall be used, complying with the latest editions of relevant IEC qualification and safety standards for crystalline silicon solar cell modules. Modules shall be manufactured to ensure reliable performance, durability, and safety throughout their service life. The entire rooftop area shall be optimally utilized.



7.1.2. Standard Compliance

The PV modules shall conform to the following IEC standards:

- IEC 61215: Design Qualification and Type Approval for Crystalline Silicon Terrestrial PV Modules
- IEC 61721: Photovoltaic Module Safety Qualification - Requirements for Construction (Part 1)
- IEC 61730-1 and IEC 61730-2: PV Module Safety Qualification - Requirements for Construction and Testing
- IEC 61853-1: PV Module Performance Testing and Energy Rating
- IEC 62804: Test Methods for Detection of Potential - Induced Degradation

7.1.3. Electrical and Performance Parameter

PV modules of **minimum 600 Watts power rating** and **minimum 20% module efficiency** should be used.

The rated output power of each supplied module shall have a tolerance of +3%.

The peak-power point voltage and current of any module or series-connected module string shall not vary by more than $\pm 2\%$ from their respective arithmetic means.

7.1.4. Module Construction and Accessories

- Module frames shall be constructed from corrosion-resistant anodized aluminum with a minimum anodization thickness of 15 micrometers (μm) and shall include provisions for earthing grid connection.
- Each module shall be supplied with factory-installed, stranded, UV-resistant output cables terminated with DC plug-in connectors compatible with MC4-type connectors. The positive terminal shall have a male connector and the negative terminal a female connector. Cable lengths shall be determined by the Contractor per installation requirements and any variations must be approved during detailed engineering.
- Modules shall include a junction box with either external screw terminal connections or be sealed, equipped with bypass diodes to reduce voltage drop. The junction box shall have a hinged, weatherproof lid with captive screws and cable gland entry points or be IP-65 rated sealed type.
- High-quality surge protection devices shall be integrated at module level. Low voltage drop bypass diodes must be provided.
- Interconnections between modules must use high-quality, industry-standard male-female connectors (MC4 or TC4).



7.1.5. Warranty

- **Material Warranty:** The manufacturer shall warrant the modules against defects and failures attributed to manufacturing or material quality for a minimum period of five (5) years from the date of sale to the bidder. Any malfunctioning modules shall be replaced by the manufacturer with identical or improved designs.
- **Performance Warranty:** The modules shall have a power output warranty guaranteeing at least 90% of rated power for 10 years, with a maximum degradation of 2.5% in the first year, and thereafter degradation between 0.5% and 0.7% per year.
- Both material and performance warranties shall be transferable to the end-owner assuming legal title of the system or modules.

7.2. Junction Box

The module's junction box must be constructed from UV-resistant material and possess a minimum IP 67 rating. It shall house a minimum of three bypass diodes and include two IS 16781/IEC 62852 certified MC4-compatible connectors factory-attached to IS 17293/IEC 62930 certified copper cables (2.5 mm² or 4 mm² minimum), with the final cable length being determined by the Bidder based on project requirements.

7.3. String Combiner Box (SCB)

The SCB is essential for multi-string PV systems, serving to electrically combine strings and connect them to inverters. It must include surge protection devices for module safety. All components must be rated for the 1000 V DC system requirement. The specific number of inputs will be determined during detailed engineering based on the approved SLD. The offered SCB model is required to be type-tested and have a track record of satisfactory operation in an existing 1000 V DC Solar PV plant.

7.4. String Fuses

String fuses are mandatory for protecting cables and modules from overcurrent, requiring the PV category suitable for solar applications and adherence to IEC 60269-6 or UL-2579 standards (with fuse bases complying with IEC 60269). They must be designed to protect modules from reverse current overload and must be mounted in pull-out type holders suitable for DIN rail mounting; PCB-mounted fuses are not permitted. For 1000 V crystalline modules, the fuse rating must be suitable for 1000 V and be a minimum of 1.56 times the I_{sc} , with an additional 10% gain accounted for bi-facial modules. Negative grounded systems will require string and inverter input fuses on the negative side, as per the Inverter manufacturer's recommendation.



7.5. DC/AC Disconnect

Both AC and DC lines require Miniature Circuit Breakers (MCB), Molded Case Circuit Breakers (MCCB), a DC/AC Surge Protection Device (SPD), and High Rupturing Capacity (HRC) Fuses to ensure a safe start-up and shut-down of the system. For maintenance and safety, the PV system must include at least one fused DC disconnect and one fused AC disconnect, with the AC disconnection switch installed next to the inverter. Additionally, the Switchgears are necessary to guarantee trouble-free isolation of equipment and to enhance system availability by allowing the load to be fed from more than one source. Finally, the complete operation process and safety instructions must be clearly printed on a sticker and visibly affixed near the inverters.

7.6. DC Distribution Board (DCDB)

- DC Distribution panel to receive the DC output from the array PV rooftop field.
- DCDBs shall have a sheet from enclosure of dust & vermin proof conform to IP 65 protection.
- The bus bars are made of copper of desired size.
- Suitable capacity Miniature circuit breakers (MCB) and Molded Case Circuit Breaker (MCCB), shall be provided for controlling the DC power output to the inverter along with necessary surge arrestors.

7.7. 3-phase Hybrid String Inverter

7.7.1. General Description

The plant shall be equipped with at least three **3-phase string inverters (3x50kVA)**, with following technical specifications. They must operate automatically, including wake-up synchronization and shutdown, to minimize losses during nighttime and ensure grid resynchronization upon restoration after failure.

- Technical Specifications – 50 kVA Solar String Hybrid Inverter
- Parameter Requirement
- Rated Power 50 kVA (\approx 40 kW), Three-phase
- Inverter Type String Hybrid (PV + Battery + Grid)
- PV Input Voltage Max 1100 V DC, MPPT 600–1000 V, 3–6 MPPTs
- Max PV Current 16–18 A per MPPT
- Battery Lithium-ion, 600–800 V DC, AC & DC coupling
- AC Output 220/380/400/415 V, 50/60 Hz, PF >0.99, THD <3%
- Efficiency Max \geq 98%, European \geq 97.5%
- Protections Anti-islanding, over/under voltage, overcurrent, reverse polarity, surge
- Monitoring RS485/Wi-Fi, remote monitoring
- Cooling Fan/natural, -10°C to 60°C, IP65



- Standards IEC 62109, IEC 61727, CE/UL or equivalent
- Warranty minimum 5 years, transferable to the end-owner of the PV system.
 - Control: Microprocessor or Digital Signal Processor (DSP)
 - Built-in meter and data logger for system performance monitoring via external computers
 - LCD display for instantaneous measurement of power, voltage, current, and energy parameters
 - Capability to reduce or increase generation based on pre-set voltage thresholds (e.g., generation reduction at +10% voltage)
 - Communication: Support for SCADA via Modbus protocol, Wi-Fi connectivity, and interfacing with monitoring software/hardware
 - Protection Features: AC/DC overcurrent, loss of synchronism, over-temperature, AC/DC overvoltage and undervoltage, underfrequency and over-frequency, cooling system failure, PV array ground fault, anti-islanding protection, internal protections against feeder faults and lightning surges.
 - Automatic isolation provisions on DC and AC sides by DC isolators and AC circuit breakers (integrated or externally connected)
 - Earthing shall comply with manufacturer recommendations

Protection degree: minimum IP-20 for indoor installation, minimum IP-65 for outdoor installation.

7.8. Bi-directional meter

The grid bi-directional meter for the rooftop solar PV system shall comply with the following requirements:

- The meter shall be an approved bidirectional energy meter, capable of accurately measuring energy flow in both import (from grid) and export (to grid) directions.
- It shall conform to relevant international standards such as IEC 62053-21 or equivalent.
- The meter shall be compatible with the plant's low voltage grid and capable of handling the rated voltage and current of the rooftop solar system.
- Communication capability shall be provided to enable interface with the plant's SCADA or energy management system, supporting protocols such as Modbus or DLMS/COSEM.
- The meter shall ensure reliable, tamper-proof energy measurement with an accuracy class of Class 1 or better.
- Installation shall comply with all applicable safety and wiring standards, including proper earthing and protection measures.
- The Contractor shall be responsible for the supply, installation, testing, and commissioning of the meter, including provision of all necessary documentation and calibration certificates.
- The meter shall support remote reading and data logging functionalities to facilitate



operational monitoring and billing.

- The meter shall be installed in an accessible location that allows for regular inspection and maintenance.
- The bidder should ensure precise measurement of energy exchange between the rooftop solar PV system and the grid, enabling accurate billing and efficient energy management

7.9. PV Module Mounting Structure

7.9.1. Design and Material

The module mounting structure shall be a fixed-axis, prefabricated system designed specifically for rooftop installation, with no on-site fabrication allowed. All structural members must be factory-fabricated and assembled exclusively on-site using standard or module manufacturer-recommended accessories such as clips, rails, and racks. The structure shall be fabricated from corrosion-resistant aluminum of minimum alloy grade AA6063 or better, with surface protection by anodization or coating. Fasteners shall be stainless steel and electrolytically compatible with the module frame materials to prevent galvanic corrosion. The design must ensure adequate mechanical strength to support the PV modules and withstand wind speeds up to 120 km/h and applicable seismic loads, with a safety factor of 1.5. The Contractor shall provide detailed structural calculations and design drawings.

7.9.2. Installation and Structural Requirements

Foundations may be ballasted or mechanically anchored based on the roof's structural capacity, wind, seismic loads, and building code requirements. For metal sheet roofs, mounting may be directly on the sheet metal ensuring stability and wind resistance or by penetrating the sheet metal to a sub-structure, maintaining waterproofing and mechanical stability. The structure shall optimize rail span lengths, orientation, and attachment methods based on building characteristics, roof type, environmental conditions, and required capacity, minimizing shading and maximizing performance. It shall allow easy module replacement and minimize rooftop space usage. Adequate clearance for panel cleaning and maintenance shall be provided, with a minimum of 30 mm and maximum of 120 mm space between the structure and roof when parallel and facing south. Adjustable tilt mounting shall be used if oriented differently to reduce wind exposure and optimize positioning.

7.9.3. Orientation Access and Safety

The PV array orientation shall be based on site measurements or drawings, with azimuth facing south (0°), southeast ($\sim 45^\circ$ east of south), or southwest ($\sim 45^\circ$ west of south). The panel must be tilted to the angle of the roof (or parallel to the roof). Installation must ensure the



roof remains waterproof, provide sufficient ventilation, and protect the structure from excessive wind forces. Panels must be accessible from above for cleaning and from below for maintenance of modules and junction boxes. Compliance with all safety and installation requirements is mandatory as part of the technical tender and contract documents.

7.10. AC Distribution Board (ACDB)

- The AC distribution board shall control the AC power from the inverter and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III.
- The ACDB shall be designed for minimum expected ambient extreme temperatures (-20°C and 75°C) a height percent humidity.
- All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
- All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions:
 - Variation in supply voltage: $\pm 6\%$.
 - Variation in supply frequency: -2% and $+1\%$

7.11. Earthing

- The entire rooftop solar photovoltaic (SPV) system, including modules, mounting structures, inverters, control systems, and associated electrical equipment, shall be properly earthed to ensure safety and equipment protection in accordance with relevant standards. The earthing system must comprise a complete network of copper conductors, electrodes, and bonding connections to all non-current carrying metallic parts, eliminating potential differences and electrical hazards.
- Each array structure must be grounded with copper conductors, ensuring every module within the array is interconnected using copper wires and lugged with toothed washers. Lightning arrestors or masts shall be installed within the array field for additional protection. The cross-sectional area of earthing conductors for PV equipment shall be no less than 6 mm^2 (copper), while the earth conductor for lightning arrestors shall have a minimum cross-section of 16 mm^2 (copper). The earthing system shall provide a mechanically and electrically continuous independent return to earth.
- A dedicated earth electrode shall be installed, either rooftop-mounted or ground-installed near the building foundation. The earth electrode shall consist of a copper plate or rod at least 2.5 meters in length, securely connected using corrosion-resistant



fittings. Ground-level electrodes must be housed in masonry enclosures measuring no less than 300 mm x 300 mm, constructed with cemented brickwork at least 150 mm thick and plastered with cement mortar internally. Hinged, lockable inspection covers of at least 300 mm x 300 mm with a welded handle shall be provided for maintenance access. All earth conductors must be adequately protected from mechanical damage, corrosion, and environmental exposure.

- All metal casings and shielding of the rooftop SPV system shall be thoroughly earthed. The complete earthing system must comply with IEC 60364 standards and be interconnected to provide a continuous electrical path. AC electrical lines must include proper earth connections, and all DC grounding from array junction boxes should be grounded separately to an independent earth.
- The earthing system shall be tested to ensure the ground resistance does not exceed 5 ohms. Where applicable, the system must integrate with the building's lightning protection system. The Contactor shall be responsible for the design, installation, testing, and documentation of the earthing system in full compliance with these specifications.

7.12. Lightning Protection

- The entire rooftop SPV installation shall be protected against lightning strikes using a comprehensive lightning protection system. This system shall employ early streamer emission (ESE) lightning conductor air terminals capable of providing an effective protection radius of up to 60 meters, thereby creating a protective coverage umbrella over the rooftop area. The lightning protection system must be designed, installed, and tested in accordance with applicable standards, including IEC 62305-3, IEC 61173, IEC 60099, and IEC 60255. The air terminals shall be robust enough to withstand multiple lightning strikes and require no maintenance after installation.
- Earthing stations for lightning discharge shall include phosphorus bronze test links installed at least 150 mm above ground or rooftop level in accessible locations to facilitate periodic testing.
- The rooftop SPV system must also be equipped with lightning surge arresters and overvoltage protection devices. The primary objective of these measures is to reduce overvoltage to a safe level before it reaches the PV modules or other subsystem components.
- If the building is already fitted with a lightning protection system (LPS), the SPV array frame shall be connected to the existing LPS. In such cases, PV system components



should be mounted away from lightning rods and associated conductors to prevent risk—for example, inverters should not be installed on interior walls that have LPS down conductors running immediately adjacent on the outer side.

- Where the PV installation increases the risk of direct lightning strikes, consultation with specialists in lightning protection is required to consider installing a dedicated lightning protection system compliant with relevant standards, including IEC 62305-4, IEC 60364-5-53, IEC 61643-11-2011, IEC 62561-1, IEC 62561-2, and IEC 62561-7, covering design, equipment selection, surge protection, connection components, conductors, earth electrodes, and earthing enhancing compounds.

7.13. Cables

For the rooftop solar PV system, the following wiring requirements and cable specifications shall be strictly adhered to to ensure safe, reliable, and maintainable electrical installations:

- All external control cables and wires shall enter the panel from the bottom and be routed through suitable cable glands designed to prevent contact with sharp metal edges; these gland-plate assemblies must be vermin-proof.
- Single-core wiring shall not pass through grommets. AC and DC wiring shall be bundled separately even if running in the same raceway.
- Shielded signaling cables shall run in separate raceways and, if spaced less than 300 mm from low-voltage power cables, be routed at right angles and physically separated as far as practical.
- All wires shall be adequately rated and sized to withstand thermal stresses due to short-circuit currents, taking into account backup tripping times.
- Wiring for lighting and convenience outlets may share a raceway within individual panels and can be routed using rigid or PVC-jacketed flexible conduits between panels.
- Wiring for meters and relays mounted on panel doors shall be mechanically protected.
- Panels and circuits must be clearly labeled, with color coding used to differentiate AC and DC wiring.
- Internal wiring terminations shall use solderless crimped tinned copper lugs or equivalent reliable methods at both ends of inter-component wiring, with insulating sleeves covering exposed lug parts as much as possible.
- All cables shall be copper and comply with international standards such as IEC 60227, IEC 60502 (Part 1 & 2), IEC 69947, BS EN 50618 (for DC cables), IEC 60228, IEC 60332-1 (fire tests), IEC 61034-2 (smoke density), IEC 60754 (halogen-free tests), IEC 60216 (thermal endurance), IEC 60811-2-1 (elastomeric compounds), and IEC 60502-



1 (power cables rated 1-30 kV).

- All connections must be properly made through suitable lugs or terminals crimped with appropriate cable glands.
- Cable and wire sizes shall be designed considering line losses, maximum load, and permissible voltage drop, with cables sized to maintain overall voltage drop between the array and inverter within 2% at standard test conditions.
- Minimum suggested cable sizes for a typical configuration are:
 - Module to module/SJB/AJB: 4 sq mm (single-core)
 - AJBs to MJBs/DCCB: 10/16 sq mm (two-core) per current-design requirements
 - MJBs to DCCB: minimum 25 sq mm (single-core) or as per design
 - DCCB to Inverter: minimum 25 sq mm (single-core) or as per design
 - Inverter to ACCB: as per design and rating
- PV DC cable runs should be kept as short as practicable, with cables selected to withstand environmental, voltage, and current stresses including solar heating and current flow.
- Cables shall be selected and installed to minimize risk of earth faults and short circuits by reinforcing wiring protection. Cables behind the PV array must be rated for -15°C to 80°C temperature range.
- External cables must be UV stable and water resistant. Flexible (multi-stranded) cables are recommended where movement due to thermal or wind effects may occur, especially behind arrays.
- PV cables rely on double or reinforced insulation for shock protection and should not be buried in walls or hidden inside building structures to prevent undetectable damage.
- Conductors must be suitably protected from mechanical damage, for example, by using cable trays and trunking complying with IEC 61537.
- Exterior cable color coding is generally not required for PV systems; black cables are common to enhance UV resistance.
- Cable junctions shall generally be by approved plug/socket connectors or housed within DC junction boxes. In-line cable junctions should be avoided but, if unavoidable, must maintain double/reinforced insulation with appropriate strain relief using rated heat shrink sleeving and fittings, preferably completed off-site.

These requirements ensure the wiring and cables for the rooftop solar PV system meet international quality, safety, and reliability standards.



7.14. **Grid Islanding**

- The Rooftop SPV system must be equipped with islanding protection to ensure disconnection from the grid, a safety feature that must be complemented by automatic disconnection for both under- and over-voltage conditions.
- In addition to this automatic grid disconnection, a manual disconnect isolation switch must be provided at the utility end, allowing utility personnel to isolate the grid connection for any maintenance; this manual switch shall be locked by the utility personnel.

7.15. **Battery Bank (Energy Storage System)**

The battery bank shall be lithium-ion (LiFePO₄/LFP) stackable modules compatible with a 150-kW hybrid solar PV system, designed **for 2–4 hours of backup**. Each module shall have a nominal voltage of 48–100 V DC and be stackable in series/parallel to achieve a total bank voltage of 600–750 V DC and total capacity of 375–820 kWh depending on backup duration. Batteries shall support AC/DC coupling, have a minimum depth of discharge of 80%, cycle life ≥ 4000 cycles, and round-trip efficiency $\geq 95\%$. Protection features shall include overcharge, over-discharge, overcurrent, short-circuit, and temperature monitoring. The stackable modules shall be IP65 rated for indoor/outdoor installation, integrated with the inverter for state-of-charge and health monitoring, and backed by a minimum 5-year warranty with local service support.

• Battery Bank Specifications – Lithium-ion (Stackable)

Parameter Requirement

- Battery Type Lithium-ion (LiFePO₄/LFP), stackable modules
- Nominal Module Voltage 48–100 V DC per module
- Total System Voltage 600–750 V DC
- Total Capacity **375–820 kWh** (depending on **2–4 hr** backup)
- Configuration Series/parallel stacking to meet voltage and capacity
- Depth of Discharge (DoD) $\geq 80\%$
- Round-Trip Efficiency $\geq 95\%$
- Cycle Life ≥ 4000 cycles at 80% DoD
- Operating Temperature -10°C to 50°C
- Protection Overcharge, over-discharge, overcurrent, short-circuit, temperature monitoring
- Enclosure IP65 rated, suitable for indoor/outdoor installation
- Monitoring Integrated with inverter for SOC and health tracking
- Warranty Minimum 5 years, with local service support

7.16. **Data Acquisition System**

- The required PV rooftop system must incorporate data monitoring, remote diagnosis, data storage and visualization.
- The Contractor is responsible for providing a web-based monitoring software



capable of collecting data directly from the inverter at all times. The data collected must include, but is not limited to:

- Site information
 - Generation metrics, specifically DC (before inverter) and AC (after inverter) generation in kWh, along with voltage and current.
- The program must be able to display both instantaneous and historical data.
 - Furthermore, this system is required to provide information for each installation and offer the capability to add different installations.
 - The monitoring information must be accessible on a single computer at RBE premises.
 - The Contractor is responsible for providing data connection for each site. Communication methods must be the most effective way in each location.
 - The system must display data in real time and record and log performance data at regular intervals for a minimum of two years. This data must be downloadable at any moment in a format compatible with MS EXCEL.
 - Finally, the contract requires the Contractor to specify the system and demonstrate the features of the software as a DEMO to Purchaser for approval during the design stage.

8. General Responsibility

8.1. Site Accessibility

- The Contractor shall be fully responsible for the transportation of all materials, equipment, and personnel to and from the site. This includes the establishment of temporary storage and the payment of any associated rents, handling fees, or incidental charges necessary for the proper execution of the contract.
- Wherever applicable, the Contractor shall ensure that all materials are properly packed in new containers to protect them from deterioration and damage during transportation. Groups of containers or cartons may be further packed into boxes with appropriate weight and size to ensure safe handling and transport.
- All containers, cartons, and boxes shall be constructed to be strong and sturdy enough to withstand multiple loadings and unloading during urban transport, handling on-site rooftops, and storage for the duration of the project. Additionally, the boxes must be reinforced with suitable protective measures, such as lagging or galvanized steel strips, to prevent damage.
- A layer of waterproof material shall be placed inside all containers, cartons, and boxes to protect the equipment from water seepage.



- Each case must be clearly labeled with the manufacturer's name and the type of equipment. All identification marks on the exterior shall be permanent and waterproof. Electrical equipment should be adequately sealed, and desiccating agents should be used as necessary to prevent moisture damage.
- The Contractor shall bear full responsibility for any damage resulting from improper packing or handling during transportation and onsite storage.

8.2. Mobilization and Demobilization

- All costs related to mobilization and demobilization, including the transportation of equipment, materials, workforce, and the clearing of the site upon completion of works, shall be deemed included in the Contractor's financial offer. No separate payment shall be entertained under any circumstances.
- The Contractor shall make all arrangements for any temporary electricity supply and adequate supply of water for construction and drinking purposes that he may require for the execution of the works.

8.3. The Contractor shall ensure that a competent and authorized representative is always present at the site during e Site Cleanliness and Safety

- Upon completion of the works, the Contractor shall ensure the site is left clean, orderly, and safe to the satisfaction of the Purchaser. Failure to do so will result in withholding of the final payment.
- During contract execution, the Contractor shall have a responsible person with decision-making authority available on site. This person must report to the Purchaser to ensure smooth execution and timely completion of the works.

9. Operational and maintenance Training

- The Contractor shall be responsible for providing on-site training to the beneficiary on the basic operation and maintenance (O&M) of the SPV system and all associated equipment.
- The Contractor shall ensure that the training is thorough and practical, enabling end users to independently perform routine O&M activities to maintain the system's long-term performance and sustainability.
- Execution to ensure smooth execution and timely completion of all activities.



10. Occupational Health and Safety

- In accordance with the Labour and Employment Act of Bhutan and related regulations, the Contractor shall provide all employees with appropriate Personal Protective Equipment (PPE), including helmets, footwear, protective clothing, and other necessary items to be used at the workplace. The Contractor must ensure that employees wear the PPE at all times while performing work on site. All PPE shall be regularly inspected to verify proper use and condition, and any damaged equipment shall be replaced without delay.
- The Contractor shall ensure the availability of trained first-aiders and adequately stocked first-aid boxes at the project work site. The names of designated first-aiders shall be displayed prominently. First-aid boxes must clearly indicate their contents along with the quantities of medical and medicinal supplies, which shall be maintained at all times. The Contractor is responsible for the prompt replenishment of any depleted items to ensure continuous readiness.
- The Contractor shall designate an emergency response team at the work site tasked with coordinating all emergency actions in liaison with the Purchaser and local health authorities. The emergency telephone and mobile numbers of key contact persons, including police, ambulance, and other relevant services, shall be clearly displayed and accessible at all times.

11. Labor Work Permits, Accommodation and Insurance

If immigrant laborers are employed, the Contractor shall be fully responsible for ensuring that all categories of expatriate labor possess valid work permits and/or visas, and that all immigration and emigration regulations are strictly complied with. The Contractor shall further ensure compliance with all applicable labor laws of the country, including but not limited to provisions relating to leave, accommodation, and insurance for all employees, including those of any sub-contractors. In all dealings with labor under his employment, the Contractor shall also give due regard to recognized festival days, rest days, and religious or customary observances.



12. Environmental Protection

The Contractor shall take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation, and shall preserve and protect all existing vegetation and trees on or adjacent to the Site which do not unreasonably interfere with the execution of the project. The Contractor shall be held responsible for all unauthorized cutting off and damage to trees, by careless operation of his plant, equipment or materials and stockpiling of materials etc. and Purchaser shall have no responsibility on this account.

13. Marking & Levelling

The following information shall be clearly marked on all containers, cartons, and boxes:

- Supplier's name
- Identification number
- Net and gross weight
- Purchaser's name along with other dispatch details such as destination

All equipment shall be provided with labels or nameplates that include a description of the equipment, as well as information regarding components such as the solar module, inverter, mounting structure, combiner box, and other relevant operational details. These labels shall be approved by the Purchaser before packaging. Nameplates or labels must be made of non-corrodible, non-hygroscopic materials with lettering in a contrasting color to ensure durability and legibility.

14. Installation and Commissioning of Rooftop SPV System

- The solar photovoltaic (SPV) panels shall be fixed parallel to the angle of the roof, following its slope. The orientation of the panels shall be between South-South-East (SSE) and South-South-West (SSW) on the magnetic compass, with true south being the preferred direction for optimal solar energy capture.
- No shading shall occur on the panels between 09:00 and 17:00 hours.
- All exposed metallic parts of the rooftop SPV system, including panel frames, mounting structures, junction boxes, and any auxiliary electrical components, shall be properly earthed to ensure safety and prevent electrical shock hazards.
- Electrical safety must be rigorously maintained throughout the installation, following all applicable safety rules and regulations.



15. Completion Period

The completion period for the rooftop Solar Photovoltaic (SPV) system installation shall be **Six (6) months** from the date of signing the Contract Agreement. If the Contractor fails to complete the work or fulfill related obligations within the stipulated time, the Purchaser reserves the right to contract the work from the open market at the Contractor's risk and cost, without calling for a tender, and after providing notice to the Contractor. Any additional costs incurred by the Purchaser will be recovered from the Contractor.

If the cost of completing the work exceeds the balance payments due to the Contractor and the Contractor does not cover the additional cost, the Purchaser may recover the amount from the Contractor's pending claims for any other works. The Purchaser's calculation of additional costs shall be final and binding. The Contractor shall have no right to dispute the amount or method of calculation in any forum, and the Purchaser's decision shall be conclusive.

16. Documents to be submitted as Annexure

The bidders shall submit the following documents:

- Annexure A: Employer's Requirements & Technical Specifications
- Annexure B: Drawings and Standards
- Annexure C: Contract Price Breakdown on the basis of items to be supplied (BOQ, milestones)
- Annexure D: Project Schedule (Bar Chart/CPM)
- Annexure E: Performance Guarantee & Warranty Schedule
- Annexure F: Insurance Policies
- Annexure G: Safety & Environmental Management Plan
- Annexure H: O&M Manuals and Training Required

