



**BIDDING DOCUMENT**

**FOR**

**“SUPPLY, INSTALLATION, TESTING AND  
COMMISSIONING OF 500KVA DIESEL  
GENERATOR SET”**

**(DOMESTIC COMPETITIVE BIDDING)**

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## NOTICE INVITING TENDER

Druk Green Power Corporation Limited  
Chhukha Hydropower Plant  
Chhukha, Bhutan

Domestic Competitive Bidder  
For

**“Supply, Installation, Testing and Commissioning of 500KVA Diesel Generator Sets”**

NIT No: CHP0012/2025

Date: 06/03/2025

1. Chhukha Hydropower Plant, DGPC, invites sealed Bids from eligible Bidders for **“Supply, Installation, Testing and Commissioning of 500KVA Diesel Generator Sets”** as per the scope of supply mentioned hereinafter.
2. Detailed specifications, scope of supply and terms and conditions are given in the Bidding Documents, which are available as per the schedule below:

Tender No. and date	CHP0012 dated 06/03/2025
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Document available period (date & time)	From 08/03/2025 to 27/03/2025
Bid submission (date & time)	Up to 28/03/2025 by 15:00 Hrs. (BST)
Pre-bid meeting (if any)	Not Applicable
Bid opening date, time & place	28/03/2025 at 15:30pm at Old Conference Hall, Chhukha Hydropower Plant, Chhukha.
Bidding Documents shall be available	DGPC website ( <a href="http://www.drukgreen.bt">www.drukgreen.bt</a> )

3. Issuance of Bidding Documents shall not automatically construe that the Bidder fulfils the Qualifying Requirements which shall be determined during Bid evaluation based on data/documents submitted by the Bidder.
4. Bids shall be submitted at the address given below and shall be opened in the presence of Bidder's representatives who choose to attend.
5. All Bids must be accompanied by Bid Security for an amount of **BTN/INR 278,000.00 (Ngultrum/Rupee Two Hundred Seventy-Eight Thousand)** only in the form of Demand Draft /Cash Warrant /Banker's Cheque/ Bank Guarantee/Cash deposit enforceable by any financial institutions in Bhutan, and shall remain valid till **26/06/2025**.
6. Qualification Requirement for Bidders shall be as specified in the BDS.
7. Bid Documents are not transferrable. The Purchaser reserves the right to accept or reject any Bid partly or fully or cancel the bidding process without assigning any reasons thereof and in such case no Bidder/ intending Bidder shall have any claim arising out of such action of the Purchaser.
8. DGPC reserves the right to accept or reject any Bid partly or fully or cancel the bidding process without assigning any reasons thereof and in such case no Bidder shall have any claim arising out of such action of DGPC.
9. The Bidders shall **supply, installation, testing and commissioning of 500kva diesel generator set** within **Six (6) months** from the date of Notification of Award.
10. Address for bid submission:

Designation: Head, Technical Support Unit  
Address: Chhukha Hydropower Plant, Chhukha  
Telephone No: +975-05-290009  
Email: [b.rai105@drukgreen.bt](mailto:b.rai105@drukgreen.bt)



## BIDDING PROCEDURE

### SECTION I. INSTRUCTIONS TO BIDDERS

#### A. General

##### 1. Scope of Supply

- 1.1. The Purchaser, as indicated in the Bid Data Sheet (BDS), issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section VII, Schedule of Supply. The name, identification number, and number of lots within this procurement are provided in the BDS.
- 1.2. Throughout this Bidding Document:
  - a) the term “in writing” means communicated in written form (e.g. by mail electronic mail) with proof of receipt;
  - b) if the context so requires, “singular” means plural” and vice versa; and
  - c) “day” means calendar day.

##### 2. Fraud and Corruption



- 2.1. As per the RGoB policy, Purchasers requires that the Bidders and Suppliers observe the highest standards of ethics during the procurement and execution of contracts. The terms "Corrupt Practice", "Fraudulent practice": "Collusive practice", "Coercive practice" "Obstructive practice" shall be as per the definition in GCC 4.2. In pursuance of this policy, the Purchaser:
- a) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;
  - b) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing for the contract;
  - c) will have the right to require that a provision be included in Bidding Documents and in contracts, requiring Bidders, Suppliers and their Subcontractors to permit the Purchaser, any organization or person appointed by the Purchaser to inspect their accounts and records and other documents relating to their Bid submission and contract performance and to have them audited by auditors appointed by the Purchaser;
  - d) requires that Bidders, as a condition of admission to eligibility, execute and attach to their bids an Integrity Pact Statement in the form provided in Section III, Bidding Forms. Failure to provide a duly executed Integrity Pact Statement may result in disqualification of the Bid; and
  - e) will report any case of corrupt, fraudulent, collusive, coercive or obstructive practice to the relevant RGoB agencies, including but not limited to the Anti- corruption Commission (ACC) of Bhutan, for necessary action in accordance with the statutes and provisions of the relevant agency.
- 2.2. Furthermore, Bidders shall be aware of the provision stated in GCC 37.1i.a.iii.

### **3. Eligible Bidders**

- 3.1. A Bidder, and all parties constituting the Bidder, may have the nationality of any country, subject to the restrictions specified in ITB. 4.1 a & b. 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.



- 3.2. 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 Purchaser to provide consulting services for the preparation of the design, specifications and/or other documents to be used for the procurement of the Goods and related Service to be purchased pursuant to these Bidding Documents, or
  - b) submit more than one Bid in this bidding process, except for alternative offers permitted under ITB Clause 15. However, this does not limit the participation of subcontractors in more than one Bid.
  - c) employ or otherwise engage, either directly or through any of their affiliates, dependent or close relative of the Purchaser employee 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.
- 3.3. Government-owned enterprises in Bhutan shall be eligible only if they can establish that they:
- a) are legally and financially autonomous;
  - b) operate under commercial law; and
  - c) are not a dependent agency (directly or indirectly) of the Purchaser.
- 3.4. A Bidder that is under a declaration of ineligibility pursuant to ITB Sub-Clause 2.1c) shall not be eligible to participate in this bidding process in any capacity.
- 3.5. Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser as the Purchaser shall reasonably request.

#### **4. Exclusion of Bidders**

- 4.1. A Bidder shall be excluded from participating in this bidding process under the following circumstances:
- a) as a matter of law or official regulation, RGoB prohibits commercial relations with the country in which the Bidder is constituted, incorporated or registered; or



- b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. RGoB prohibits any import of Goods or contracting of Services from the Country in which the Bidder is constituted, incorporated or registered or any payments to persons or entities in that country; or
- c) Bidder is insolvent or is in receivership or is a bankrupt or is in the process of being wound up; or has entered into an arrangement with creditors; or
- d) Bidder's affairs are being administered by a court, judicial officer or appointed liquidator; or
- e) Bidder has suspended business or is in any analogous situation arising from similar procedures under the laws and regulations of his country of establishment; or
- f) Bidder has been found guilty of professional misconduct by a recognized tribunal or professional body; or
- g) Bidder has not fulfilled his obligations with regard to the payment of taxes, or other payments due in accordance with the laws of the country in which he is established or of the Kingdom of Bhutan; or
- h) Bidder is guilty of serious misrepresentation in supplying information in this tender; or
- i) Bidder has been convicted for fraud and/or corruption by a competent authority; or
- j) Bidder has not fulfilled any of his contractual obligations with the Purchaser in the past based on the Vendor Performance Management System (VPMS).
- k) Bidder has been debarred from participation in public procurement by any competent authority as per law.

## **5. Eligible Goods and Related Services**

- 5.1. All the Goods and Related Services to be supplied under the Contract may have their origin in any country, in accordance to ITB. 4.1c).1 (a & b).
- 5.2. 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, supervision, installation, training, and initial maintenance.



- 5.3. 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 Document**

### **6. Parts of Bidding Document**

- 6.1. The Bidding Document consist of Bidding Procedure and Contracts which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB Clause 9.

Section I	Instructions to Bidders (ITB)
Section II	Bid Data Sheet (BDS)
Section III	Bidding Forms
Section IV	General Conditions of Contract (GCC)
Section V	Special Conditions of Contract (SCC)
Section VI	Contract Forms

### **7. General Information**

- 7.1. The Invitation for Bids issued by the Purchaser is not part of the Bidding Document.
- 7.2. The Purchaser is not responsible for the completeness of the Bidding Document and their addenda, if any, if these were not obtained directly from the Purchaser.
- 7.3. The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the Bid.

### **8. Clarification of Bidding Document**

- 8.1. Bidders shall not be allowed to seek any clarification of the Bidding Documents in person or by telephone or other verbal means.



- 8.2. A prospective Bidder requiring any clarification of the Bidding Documents shall notify the same to the Purchaser in writing at the Purchaser's address specified in the BDS.
- 8.3. The Purchaser shall respond in writing to any such request for clarification, provided that it is received no later than the date and time specified in the BDS.
- 8.4. Copies of the Purchaser's response shall be uploaded in the Purchaser's or relevant website including a description of the enquiry without disclosing the name of the Bidder(s) seeking clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 9 and ITB Sub-Clause 26.2.
- 8.5. A pre-bid meeting shall be conducted only, if necessary, to clarify doubts and concerns of the Bidders prior to submission of Bids. The Bidders shall be invited to attend pre-bid meeting to be held on the date, time and location specified in BDS.
- 8.6. Non-attendance at the pre-bid meeting will not be a cause for disqualification of Bidders but at the same time shall not entitle them to raise any query at a later date.
- 8.7. The Bidders are requested to submit their questions and queries in writing not later than one week before the meeting. Clarifications to the queries raised in the pre-bid meeting, including the text of the questions raised without identifying the source, and the responses given together with any responses prepared after the meeting, shall be circulated to all Bidders and also uploaded on the Purchaser's website.
- 8.8. Any modification to the Bidding Documents that may become necessary as a result of the pre-bid meeting shall be made by the Purchaser through the issue of an addendum and not through the clarifications to the queries of pre-bid meeting.

## **9. Amendment of Bidding Documents**

- 9.1. At any time prior to the deadline for submission of Bids, the Purchaser may amend the Bidding Documents by issuing an addendum. This may be done either on the Purchaser's own initiative or in response to a clarification request from a prospective Bidder.
- 9.2. Any addendum thus issued shall be part of the Bidding Documents and shall be uploaded in the Purchaser's website and or relevant website such addendum shall be binding on the prospective Bidders.



9.3. The Purchaser may, at its discretion, extend the deadline for submission of Bids pursuant to ITB Sub-Clause 26.2 to allow prospective Bidders reasonable time in which to take the addendum into account in preparation of their Bids.

9.4. It will be the responsibility of such Bidders to regularly visit the website for any addendum to the Bidding Documents until the last date of bid submission. The Purchaser shall in no way be responsible for any ignorance of the Bidder about the addendum to the Bidding Documents.

## **C. Preparation of Bid**

### **10. Cost of Bidding**

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

### **11. Language of Bid**

11.1. The Bid, as well as all correspondence and documents related to the Bid exchanged by the Bidder and the Purchaser, shall be in English. Supporting documents and printed literature that are part of the Bid shall be in English and if in any other language, should be translated to English. The English translation shall prevail on the interpretation.

### **12. Documents comprising the Bid**

12.1. The Bid shall comprise the following:

- a) Bid Submission Forms and Price Schedules in accordance with ITB Clauses 13 &14;
- b) Bid Security, in accordance with ITB Clause 23;
- c) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 24;
- d) Documentary evidence in accordance with ITB Clauses 20 that the Goods and Related Services conform to the Bidding Documents;
- e) Documentary evidence in accordance with ITB Clause 21 establishing the qualification of the Bidders;





- f) Alternative Bids, if permissible, in accordance with ITB Clause 15;
- g) Integrity Pact Statement, in accordance with ITB Sub-Clause 2.1;
- h) Deviation sheet in accordance with the Bidding Form: IV; and
- i) Relevant Bidding forms
- j) Any other documents required in the BDS.

### **13. Submission of Bid**

- 13.1. The Bidder shall submit the Bid Submission Form using the form furnished in Section III. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
- 13.2. A bid in which the Bid Submission Form is not duly filled, signed and sealed by the Bidder shall be rejected.

### **14. Price Schedule**

- 14.1. The Bidder shall submit the Price Schedules for Goods and Related Services according to their origin as appropriate, using the forms furnished in Section III, Bidding Forms.

### **15. Alternative Bids**

- 15.1. Unless otherwise indicated in the BDS alternative Bids shall not be considered.

### **16. Bid Prices and Discounts**

- 16.1. The prices and discounts quoted by the Bidder in the Bid Submission Form and in the Price Schedules shall conform to the requirements specified below:
  - a) all lots and items must be listed and priced separately in the Price Schedules;
  - b) the price to be quoted in the Bid Submission Form shall be the total price of the Bid excluding any discounts offered; and



- c) the Bidder shall quote any unconditional discounts and the methodology for their application in the Bid Submission Form.
- 16.2. The terms EXW, CIF, CIP, DDP and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce pursuant to GCC sub-clause 3.3.
- 16.3. Unless otherwise stated in the BDS, Prices shall be quoted inclusive of all applicable taxes and levies, transportation, handling costs and any other associated cost to fulfil the contractual obligations, as specified in the Price Schedule forms for Goods and Related Services included in Section III, Bidding Forms.
- a) For Goods manufactured in Bhutan:
    - (i) the price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all Customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods;
    - (ii) any Bhutan sales and other taxes which will be payable on the Goods if the contract is awarded to the Bidder;
    - (iii) the price for inland transportation, insurance and other local services required to deliver the Goods to their final destination specified in the BDS; and
    - (iv) the total price for the item.
  - b) For Goods manufactured outside Bhutan
    - (i) The price of Goods, quoted CIF/CIP/DDP/any other, place of Entry in Bhutan, as specified in BDS;
    - (ii) Custom Duties and any other taxes which will be payable on the Goods in Bhutan, if specified in BDS;
    - (iii) The Cost of inland transportation, insurance and other local costs incidental to delivery of the Goods from the Port of entry to their final destination, if specified in BDS; and
    - (iv) the total price for the item



- (c) for Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in the *Schedule of Supply*, the price of each item comprising the Related Services (inclusive of any applicable taxes).
- 16.4. Bidders wishing to offer any price reduction (discount) for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB Sub-Clause 16.1, provided the Bids for all lots are submitted and opened at the same time.
- 16.5. If so, indicated in ITB Sub-Clause 16.1, Bids are being invited for individual items, lots or packages as indicated in the BDS, unless otherwise indicated in the BDS, 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. Bidders wishing to offer any price reduction (discount) for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB Sub- Clause 16.1, provided the Bids for all lots are submitted and opened at the same time.

**17. Vendor Performance Management System**

- 17.1. The performance of the vendor shall be assessed as per the Vendor Performance Management System (VPMS) available in the Purchaser's website and relevant website for the purpose of assessing the performance of the supplier.

**18. Price Variation**

- 18.1. Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, unless otherwise specified in the BDS. A Bid submitted with an adjustable price quotation shall be treated as non-responsive and shall be rejected pursuant to ITB Clause 35 unless adjustable price quotations are permitted by the BDS. If, in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a Bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.



## **19. Currencies of Bid**

- 19.1. The unit rates and prices required to be quoted by the Bidder shall be as per the currencies specified in the BDS.
- 19.2. The reference exchange rate (selling rate) prevailing on the day of Bid opening or the immediate preceding date as posted by the Royal Monetary Authority of the Kingdom of Bhutan shall be used for conversion of prices.
- 19.3. Bid prices shall be evaluated in accordance to ITB 38. The payments shall be made in the currency of the bid and any banking charges related to payment shall be borne by the Suppliers.

## **20. Documents Establishing the Conformity of the Goods and Related Services**

- 20.1. To establish the conformity of the Goods and Related Services to the Bidding Document, the Bidder shall furnish as part of its Bid documentary evidence that the Goods conform to the technical specifications and standards.
- 20.2. 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 must be clearly indicated in the deviation schedule under Section III, Bidding Form.
- 20.3. 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 Purchaser.
- 20.4. Standards for workmanship, process, material and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser 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 Purchaser's satisfaction that the substitutions ensure equivalence or are superior to those specified in the Schedule of Supply with exception in certain Bulk items, Strategic Critical and Strategic Security items category.
- 20.5. In order to prove that the Goods offered are of acceptable quality and standard, the Bidders shall furnish the documentary evidence that the Goods offered have been in production and all relevant



catalogues, test certificates, ISO certificates, list of previous clients, list of past performance certificate from the user and Purchaser or manufacturer profile for all new brands are submitted.

## **21. Documents Establishing the Qualification of Bidders**

- 21.1. The Bidder shall have the minimum level of financial capacity if so, specified in the BDS to qualify for supply of Goods and Related Services under the Contract.
- 21.2. The Bidder shall have following technical capacity and minimum level of experience to qualify for supply of Goods and Related Services under the Contract:
- a) the 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 service if so, specified in the BDS; and
  - c) minimum production capacity or availability of equipment if so, specified in the BDS.
- 21.3. The documentary evidence of the Bidder's qualifications to perform the contract if its Bid is accepted shall establish to the Purchaser'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 III, 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/dealer 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, if permitted in the BDS, Bids submitted by a Joint Venture/Consortium (JV/C) of two or more firms as partners comply with the following requirements:
    - (i) the Bid is signed so as 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 the lead partner of the JV/C, authorized to incur liabilities, and to receive instructions for and on behalf of any and all partners of the JV/C;
- (iv) the execution of the entire Contract, including payment, shall be done exclusively with the lead partner; and
- (v) a copy of the JV/C Agreement entered into by the partners is submitted with the Bid; or a Letter of Intent to execute a JV/C 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.

## **22. Period of Validity of Bids**

- 22.1. Bids shall remain valid for the period specified in the BDS from the Bid submission deadline prescribed by the Purchaser. A Bid valid for a shorter period and inadequate value shall be rejected by the Purchaser as non-responsive.
- 22.2. In exceptional circumstances, prior to expiry of the Bid validity period, the Purchaser may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. The Bid Security shall also be extended for a corresponding period. A Bidder may refuse the request to extend the validity of its Bid without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid, except as provided in ITB Sub-Clause 22.3.
- 22.3. The provisions of the ITB 23 regarding the forfeiture and discharge of Bid Security shall continue to apply during the extended period of Bid Validity.

## **23. Bid Security**

- 23.1. The Bidder shall furnish, as part of its Bid, a Bid Security in original form, denominated in currency and in the amount specified in the BDS.
- 23.2. The Bid Security shall at the Bidder's option, be in any of the following forms:
  - (i) an Unconditional Bank Guarantee (in accordance with the form included in Section IV, Bidding Forms); or
  - (ii) a Banker's Certified Cheque/Cash Warrant or
  - (iii) a Demand Draft;
  - (iv) Cash deposit through Bank Transfer, in case of exceptional circumstance where the submission of bid security by the above form are not possible.



- 23.3. The Bid security shall be issued by a reputable financial institution enforceable in any Banks in Bhutan.
- 23.4. Bid Security shall be submitted in its original form and copies shall not be accepted.
- 23.5. Bid Security shall remain valid for a period of thirty (30) days beyond the end of the validity period of the Bid, as extended, if applicable. Accordingly, the Bid Security shall remain valid till the date specified in the BDS.
- 23.6. Any Bid not accompanied by a valid Bid Security shall be rejected by the Purchaser as non-responsive.
- 23.7. The Bid Securities of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder furnishing the Performance Security pursuant to ITB Clause 46. In case of single stage-two envelope and two stage mode of tendering, Bid Security of non-responsive Bidders shall be returned immediately after technical evaluation.
- 23.8. The Bid Security shall be forfeited:
- a) if a Bidder withdraws its Bid during the period of Bid validity except as provided in ITB Sub-Clause 22.2; or
  - b) if the successful Bidder fails to:
    - (i) sign the Contract in accordance with ITB Clause 44;
    - (ii) furnish a Performance Security in accordance with ITB Clause 45; or
    - (iii) accept the correction of its Bid Price pursuant to ITB Sub-Clause 35.4.
- 22.9. The Bid Security of a JV/C must be in the name of the JV/C that submits the Bid.

#### **24. Format and Signing of Bid**

- 24.1. The Bidder shall prepare ONE Original document comprising the Bid as described in ITB Clause 12 and clearly mark it "ORIGINAL." In addition, the Bidder shall submit copies of the Bid, in the number specified in the BDS and clearly mark them "COPY". In the event of any discrepancy between the Original and the Copies, the Original shall prevail.
- 24.2. The original and all copies 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.
- 24.3. Any interlineations, erasures or overwriting shall be valid only if they are signed or initialled by the authorized person signing the Bid.



**D. Submission and Opening of Bids**

**25. Submission, Sealing and Marking of Bids**

25.1. Bids shall be delivered by hand, courier, registered post or electronic means. The Bidder shall seal the original of the Bid and the number of copies stipulated in the BDS, in separate inner envelopes contained within one outer envelope. All envelopes shall be sealed with adhesive or other sealant to prevent reopening.

25.2. The outer Envelope shall:

- a) be marked "CONFIDENTIAL";
- b) be addressed to the Purchaser provided in the BDS;
- c) bear the Tender name and number; and
- d) provide a warning not to open before the time and date for Bid Opening.

25.3. Single-Stage Two Envelope Process:

a) The inner Envelope - I shall contain:

- (i) technical bids and be signed across their seals by the person authorized to sign the Bid on behalf of the Bidder; and
- (ii) be marked "ORIGINAL", "ALTERNATIVE" (if permitted) and "COPY".

b) The inner envelope - II shall contain:

- (i) financial bids and be signed across their seals by the person authorized to sign Bid on behalf of the Bidder; and
- (ii) be marked "ORIGINAL", "ALTERNATIVE" (if permitted) and "COPY".

25.4. Where Bids are invited under the single stage single envelope, both technical and financial bid shall be in one envelope.

25.5. In addition to the identification required in ITB Sub-Clause 25.2, 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 pursuant to ITB Clause 27.

25.6. If the outer envelope is not sealed and marked as above, the Purchaser shall assume no responsibility for the misplacement or premature opening of the Bid.





25.7. In the Two-Stage Process, Bidders shall be advised to submit only the technical bids in the first stage. In the second stage, Bidders shall be requested to submit both their technical bids as modified and agreed with the Purchaser and the financial bids based on the modified technical bids simultaneously in two separate sealed envelopes.

25.8. When so specified in the BDS Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids electronically shall follow the procedures specified in the BDS.

## **26. Deadline for Submission of Bids**

26.1. Bids shall be delivered by hand, courier, registered post or electronic means to the Purchaser at the address and no later than the date and time indicated in the BDS.

26.2. The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with ITB Clause 9, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

26.3. In the event of the specified date for submission of Bids being declared a holiday for the Purchaser, the bids will be received up to the specified time on the next working day. Such postponement of the date will not have any impact on the other dates specified bidding document (Bid Validity and validity of Bid Security).

## **27. Late Bids**

27.1. The Purchaser shall not consider any Bid that arrives after the deadline for submission of Bids. Any Bid received by the Purchaser after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

## **28. Withdrawal, Substitution and Modification of Bids**

28.1. A Bidder may withdraw, substitute or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization (the power of attorney). The corresponding substitution or modification of the Bid must accompany the respective written notice and must be:



- a) submitted in accordance with ITB Clauses 24 and 25 in addition, the respective envelopes shall be clearly marked "WITHDRAWAL", "SUBSTITUTION" or "MODIFICATION;" and
- 28.2. received by the Purchaser prior to the deadline prescribed for submission of Bids, in accordance with ITB Clause 26.
- 28.3. Bids requested to be withdrawn shall be returned unopened to the Bidders.
- 28.4. No Bid may be withdrawn, substituted or modified in the interval between the deadline for submission of Bids and the expiry of the period of Bid validity specified by the Bidder on the Bid Submission Form or any extension thereof.
- 28.5. Withdrawal of a bid between the deadline for submission of bids and expiration of the period of bid validity specified as extended pursuant to Clause 22.1, may result in the forfeiture of the Bid Security pursuant to Clause 23.5. If the lowest or the lowest evaluated Bidder withdraws his bid between the periods specified in this clause, the bid security of the Bidder shall be forfeited.

## **29. Bid Opening**

- 29.1. The Purchaser 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.
- 29.2. Bidders, their representatives and other attendees at the Bid Opening shall not be permitted to approach any members of the Bid Opening Committee or any of the Purchaser employees.
- 29.3. First, envelopes marked "WITHDRAWAL" shall be 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.
- 29.4. 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 read out at Bid Opening.
- 29.5. Envelopes marked "MODIFICATION" shall be opened and read out 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.



- 29.6. All other envelopes shall be opened one at a time. The Bidders' names, the Bid prices, the total amount of each Bid and of any alternative Bid (if alternatives have been requested or permitted), any discounts, bid withdrawals, substitutions or modifications, the presence or absence of Bid Security, responses to any Bidding Documents addenda, and such other details as the Purchaser may consider appropriate shall be announced by the Purchaser at the Bid Opening.
- 29.7. No Bid shall be rejected at Bid Opening except for late Bids pursuant to ITB Clause 27, and Bid Security not in accordance with ITB 23.
- 29.8. Substitution Bids and modifications submitted pursuant to ITB Clause 28 that are not opened at Bid Opening shall not be considered for further evaluation.
- 29.9. The Bidders' representatives and attendees who are present shall be requested to sign the record of Bid Opening. The omission of a Bidder's or other attendee's signature on the record shall not invalidate the contents and effect of the record.
- 29.10. In case of Single Stage Two Envelope Bid, technical bid shall only be opened on the bid opening date. The date for opening the financial bid shall be intimated to the Bidders whose Bid is found responsive in the techno-commercial evaluation.

#### **E. Evaluation and Comparison of Bids**

##### **30. Confidentially**

- 30.1. Information relating to the examination, evaluation, comparison of Bids, and recommendation of Contract Award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until publication of the Contract Award.
- 30.2. Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison and post qualification of the Bids or Contract Award decisions may result in the rejection of its Bid.
- 30.3. Notwithstanding ITB Sub-Clause 30.2, from the time of Bid Opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.

##### **31. Clarification of Bids**

- 31.1. To assist in the examination, evaluation, comparison of the Bids, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid such as discrepancies between the offered



Guaranteed Technical Particulars and test value/ drawings/relevant documents, any documentary evidences including type test report, past performance certificates, ISO certificates etc.

- 31.2. Any clarification submitted by a Bidder that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the evaluation of the Bids, in accordance with ITB Clause 35. If a Bidder does not provide clarifications of its Bid by the date and time set by the Purchaser, the bid may be rejected.

## **32. Preliminary Examinations of Bids**

- 32.1. The Purchaser shall examine the Bids to confirm that all documents and information requested in ITB Clause 12 have been provided, and to determine the completeness of each document submitted.
- 32.2. The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.
- a) Bid Submission Form, in accordance with ITB Sub-Clause 12.1(a);
  - b) Price Schedules, in accordance with ITB Sub-Clause 12.1 (a);
  - c) Bid Security, in accordance with ITB Clause 23.
- 32.3. No conditional offer(s) shall be allowed. A bid with conditional offers shall be rejected.

## **33. Examination of Techno-Commercial Bids**

- 33.1. The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the BDS and the SCC have been accepted by the Bidder without any material deviation or reservation.
- 33.2. During the evaluation of bids, the following definitions shall apply:
- a) "Deviation" is a departure from the requirements specified in the Bidding Document. Any comments, remarks, observations and feedbacks will constitute as deviation and shall be indicated in the deviation sheet;
  - b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and



- c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

33.3. The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clause 20, to confirm that all requirements specified in Schedule of Supplies, have been met without any material deviation or reservation.

33.4. If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with ITB Clause 35, the bid shall be rejected.

#### **34. Responsiveness of Bids**

34.1. The Purchaser'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 lowest evaluated Bid.

34.2. A substantially responsive Bid is one that conforms to all the terms, conditions and technical 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; or
- b) limits in any substantial way inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or
- c) if rectified would affect unfairly the competitive position of other Bidders presenting responsive Bids

34.3. If a Bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

#### **35. Nonconformities, Errors and Omissions**

35.1. Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.



- 35.2. Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities 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.
- 35.3. Provided that the Bid is substantially responsive, the Purchaser 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 price shall prevail and the line-item total shall be corrected, unless in the opinion of the Purchaser 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 35.3 (a) and (b) above.
- 35.4. If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited.

### **36. Conversion to Single Currency**

- 36.1. For evaluation and comparison purposes, the Purchaser shall convert all Bid prices expressed in amounts in various currencies into a single currency based on the Telegraphic Transfer (TT) selling rate published by the Royal Monetary Authority of Bhutan on the day of bid opening.

### **37. Margins of Preferences**

- 37.1. 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 Economic Affairs.



### **38. Detail Evaluation and Comparison of Bids**

- 38.1. The Purchaser shall evaluate each Bid that has been determined, up to this stage of the evaluation, to be substantially responsive.
- 38.2. To evaluate a Bid, the Purchaser shall only use the factors, methodologies and criteria defined in this ITB Clause 38. No other criteria or methodology shall be permitted.
- 38.3. To evaluate a Bid, the Purchaser 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 16;
  - c) price adjustment for correction of arithmetic errors in accordance with ITB Clause 35.3;
  - d) price adjustment due to discounts offered in accordance with ITB Clause 16.4;
  - e) adjustments due to the application of the evaluation criteria specified in the BDS; and
  - f) adjustments due to the application of a margin of preference, in accordance with ITB Clause 37, if applicable.
  - g) If required, the Purchaser may carry out the inspections of the Bidder's factories to assess the production and technical capacity of the Bidder to perform the Contract. The Purchaser shall notify in advance of the date in writing on which the inspection will be made.
- 38.4. The Purchaser's evaluation of a Bid shall exclude and not consider:
- a) in the case of Goods manufactured in Bhutan, sales and other similar taxes which will be payable on the Goods if the Contract is awarded to the Bidder;
  - b) in the case of Goods manufactured outside Bhutan, already imported or to be imported, Customs duties and other import taxes levied on the imported Goods, sales and other similar taxes which will be payable on the Goods if the Contract is awarded to the Bidder; and
  - c) any allowance for price adjustment during the period of execution of the Contract, if provided in the Bid.



- 38.5. The Purchaser's evaluation of a Bid may require the consideration of other factors in addition to the Bid Price quoted in accordance with ITB Clause 16. 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, the factors, criteria and the methodology of application shall be as specified in ITB Sub-Clause 38.3 (e).
- 38.6. 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 Purchaser to award one or multiple lots to more than one Bidder. The methodology of evaluation to determine the lowest evaluated lot combinations is specified BDS.
- 38.7. The Purchaser shall compare all substantially responsive Bids to determine the lowest evaluated Bid, in accordance with ITB Sub-Clause 34.

**39. Abnormally High / Low Bids**

- 39.1. An abnormally low bid is one where the bid price, in combination with other elements of the bid appears to be so low that it raises concerns as to the capability of the Bidders to perform the contract for the offered bid price.
- 39.2. When the prices in a particular bid appear abnormally low or seriously unbalanced, the Purchaser shall revisit/ review its own estimated value. Based on the revised value, decision shall be taken to reject/ accept the abnormally low or high bids. The Procuring Agency /TEC shall seek written clarifications from the Bidder including detailed price analysis of its bid price in relation to the subject matter of the contract and any other requirements of the request for Bidding Documents.
- 39.3. If the Purchaser decides to accept the abnormally low bid after considering the above, the Bidder shall be required to provide additional differential security equivalent to the difference between the estimated amount and the quoted price in addition to the performance security, to a maximum of 10% of the quoted amount in the form of BG/DD enforceable in any Bank of Bhutan. The Differential security shall be retained till the completion of the supplies.
- 39.4. If the prices of all the received bids are abnormally high then the Purchaser may negotiate with the lowest evaluated Bidder after approval of the Competent Authority. In case the negotiation fails, all bids may be rejected.





**40. Purchaser's Right to Accept Any Bid, and Reject Any or All Bids**

- 40.1. The Purchaser reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to Contract award, without thereby incurring any liability to Bidders.

**F. Award of Contract**

**41. Award Criteria**

- 41.1. The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated Bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

**42. Purchaser's Right to vary quantities**

- 42.1. At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified Schedule of Supply, provided this does not exceed 25% of the total quantity of the item without any change in the unit prices or other terms and conditions of the Bid and the Bidding Documents.

**43. Notification of Award**

- 43.1. Prior to expiry of the period of Bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted and may publish a Notification of Award on the Purchaser's website or relevant website.
- 43.2. Until a formal Contract is prepared and executed, the Notification of Award shall constitute a binding Contract.
- 43.3. Upon the successful Bidder furnishing the signed Contract Form and the Performance Security pursuant to ITB Clause 45. The Purchaser shall promptly notify each unsuccessful Bidder and discharge its Bid Security, pursuant to ITB Sub-Clause 23.4.
- 43.4. After the issuance of Notification of Award, unsuccessful Bidders within three (3) days may request in writing to the Purchaser for a debriefing seeking explanations of the grounds on which their Bids were not selected. Where a request for debriefing has been received within the deadline, the Purchaser shall provide debriefing within five (5) days in writing to any unsuccessful Bidder.



#### **44. Signing of Contract**

- 44.1. At the same time as notifying the successful Bidder in writing through NoA that its Bid has been accepted, the Purchaser shall invite the successful Bidder for signing of Contract Agreement.
- 44.2. Within the time period specified in the BDS, on issuance of the NoA the successful Bidder are required to submit performance security and sign the Contract Agreement.
- 44.3. Where the Contract is not signed by both parties in person:
  - a) The Purchaser shall send to the successful Bidder a duly signed copy comprising of complete Contract documents and the NoA. These documents shall be signed by the successful Bidder or its duly authorized representative, together with the date of signature, in order for the Contract to be effective;
  - b) The NoA shall indicate the deadline within which the successful Bidder shall sign these documents with the date of signature and return a copy to the Purchaser, in accordance with the mode of delivery including electronic mode (e.g., scanned copy with electronic signature, etc.) as may be specified by the Purchaser in the NoA;
  - c) The Contract shall become effective from the date of signing these documents;
  - d) Failure of the successful Bidder to accept the award/ sign the contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- 44.4. Notwithstanding ITB Sub-Clause 45.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to Bhutan, or to the use of the products/Goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those Goods, systems or services, the Bidder shall not be bound by its Bid, always provided, however, that the Bidder can demonstrate to the satisfaction of the Purchaser that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and/or licenses necessary for the export of the Goods, systems or services under the terms of the Contract.

#### **45. Performance Security**

- 45.1. Within the time period specified in the BDS, on receipt of Notification of Award from the Purchaser, the Bidder shall submit the Performance Security in accordance with the GCC 16, using any of the following forms:



- a) Unconditional bank guarantee in the form provided for in Section X, Contract
  - ii. Forms, or another form acceptable to the Purchaser, or
  - iii. Banker's certified cheque/cash warrant, or
  - iv. Demand draft.
  - v. Cash deposit through Bank transfer only in case of exceptional circumstances in the Purchaser's bank account.
- 45.2. If the Performance Security is provided by the successful Bidder in the form of a bank guarantee issued by any Financial Institution enforceable in any Banks in Bhutan.
- 45.3. Failure by the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily. Such a failure shall be considered as "withdrawal" and all relevant clauses shall apply.



## SECTION II. BID DATA SHEET

The Bid Data Sheet (BDS) contains information and provisions that are specific to a particular bidding process. The Purchaser must specify in the BDS only information that the Instructions to Bidders (ITB) request be specified in the BDS. All information shall be provided, and no clause shall be left blank. To facilitate the preparation of the BDS, its clauses are numbered with the same numbers as the corresponding ITB clauses. This guide provides information to the Purchaser on how to enter all required information, and includes a BDS format that summarizes all information to be provided.

ITB	Particulars
1.1	<b>Chhukha Hydropower Plant, DGPC, Chhukha</b>
8.2	For Bid clarification purposes, the Purchaser's address is:  <b>Ms. Pema Zangmo</b> Office Secretary Technical Support Unit, Chhukha Hydropower Plant, DGPC, Chhukha Telephone No: 05-290009 Email: p.zangmo2880@drukgreen.bt
8.3	Bid Clarification request will be received on or before:  <b>Time: 16:30 hrs.</b> <b>Date: 12/03/2025</b>
8.5	A pre-bid meeting <b>"Shall not"</b> take place
11.1	The language of bid is: <b>"English"</b>
12.1(i)	The Bidder shall submit with its Bid the following additional documents:  <b>a) Copies of valid Trade License</b> <b>b) Latest Tax Clearance Certificate</b> <b>c) Site Visit Certificate</b> <b>d) Other required documents as asked in Technical Specification</b>
15.1	Alternative Bids <b>"Shall not"</b> be permitted.
16.3	The Bidder shall quote prices using any of the following <b>CIP Chhukha Hydropower Plant</b>



16.3 (a) (iii) & (b) (i, ii, iii)	The final destination is: <b>Chhukha Hydropower Plant, Chhukha</b>
16.5	Bids are being invited for the <b>“whole package”</b>
18.1	The prices quoted by the Bidder <b>“shall not”</b> be adjustable.
19.1	The Bidder shall quote in <b>BTN /INR</b>
20.3	The period of time for which the Supply and Installation are expected to be functioning (for the purpose of spare parts, special tools, etc.) is: <b>12 (Twelve) months from the date of handing over of site to CHP.</b>
21.1	<p>Financial Capability</p> <p><del>The Bidder shall furnish documentary evidence that it meets the financial requirement(s): [list the requirement(s)]</del></p> <p><del>Average annual turnover..... [insert no. of years 3 to 5] immediately preceding the last date of bid submission shall be equal to..... [insert value i.e., calculated at 1 times of estimated value of Goods]</del></p> <p><del>Note: incase where the Bidders do not have the operations for the no. of financial year as prescribed above the annual turnover of the Bidder for the completed financial years based on audited accounts shall be considered but for the purpose of calculations of turnover, the turnover shall be divided by no of years prescribed above.</del></p> <p><del>Insert any other additional criteria as applicable</del></p>



21.2	<p><b>Eligibility Criteria</b></p> <p>Bidder must meet the following eligibility criteria. Only those bidders who fulfil all the eligibility criteria set forth below will be considered for the technical bid evaluation:</p> <ol style="list-style-type: none"> <li>1. The bidder must be an Original Equipment Manufacturer (OEM) or an OEM authorized partner of Diesel Generator Sets for at least three years. A valid OEM certificate or equivalent documentation issued by a recognized authority must be submitted with the tender as verification</li> <li>2. Firms should provide evidence of at least one successfully completed projects involving DG sets of 300KVA and above capacity in the past 5 years</li> <li>3. Bidder must submit detailed resumes or CVs of the installation and commissioning engineers, highlighting their relevant experience and qualifications.</li> <li>4. A list of projects where the installation and commissioning engineers have successfully completed similar roles, including project names, durations, and client references.</li> <li>5. Proof of employment or contractual agreement with the bidder, confirming the availability of the engineers for the project.</li> <li>6. An authorization letter from the OEM confirming the bidder's association and the engineers' qualifications.</li> <li>7. For other requirement, please refer Technical Specification</li> </ol>
21.3(a)	Manufacturer's authorization <b>"is"</b> required.
21.3(b)	After sales maintenance, repair, spare parts stocking and related services are required, However, the Bidder <b>"is"</b> required to be represented by a suitably equipped and able agent in Bhutan.
21.3 (c)	Joint Venture, Consortium (JV/C) Bids are permitted <b>"NO"</b>
22.1	The Bid validity period shall be <b>60 days</b> from the last date of bid submission i.e., up to <b>27/05/2025</b> and if bid is extended due to some reason, same duration of the bid validity shall be extended by the bidders
23.1	The Bidder shall furnish a bid security in the amount of <b>BTN/INR 278,000.00</b> and shall be valid up to <b>26/06/2025</b> and if bid is extended due to some reason, same duration of the bid security validity shall be extended by the bidders
24.1&25.1	In addition to the original Bid, the number of copies is: <b>"Nil"</b>
25.2(b)	<p>Bids to be addressed to and submitted to:</p> <p><b>Head, Technical Support Unit</b></p>



	<p>Chhukha Hydropower Plant  Druk Green Power Corporation, Chhukha, Bhutan  Email: b.rai105@drukgreen.bt</p>
25.8	Bidders <b>"shall not"</b> have the option of submitting their Bids electronically.
26.1	The deadline for the submission of Bid is: <b>28/03/2025 at 15:00 hrs.</b> Bhutan time.
29.1	<p>The Bid Opening shall take place at:</p> <p><b>Address: Old Conference Hall, Chhukha Hydropower Plant, DGPC, Chhukha</b>  <b>Date: 28/03/2025</b>  <b>Time: 15:30 Hrs. (BST)</b></p>
37.1	<p>A margin of <b>10%</b> of Domestic Preference <b>"shall not"</b> apply.</p> <p><del>{ If domestic preference applies, insert "the application methodology shall be as given below:}</del></p> <p><del>The Purchaser may grant a margin of preference to goods manufactured in the Purchaser's country for the purpose of bid comparison, in accordance with the procedure outlined in subsequent paragraphs:</del></p> <p><del>1. Bids will be classified in one of the two groups, as follows:</del></p> <p><del>(a) Group A: Bids offering goods manufactured in Bhutan;</del>  <del>(b) Group B: Bids offering Goods manufactured outside Bhutan that have been already imported</del></p> <p><del>In the first step, all evaluated bids in each group shall be compared to determine the lowest bid in each group. Such lowest evaluated bids shall be compared with each other and if as a result of this comparison, a bid from Group A is the lowest, it shall be selected for the award.</del></p> <p><del>All evaluated bids in each group shall be compared to determine the lowest evaluated bid. Such lowest evaluated bid from each group shall be compared with each other and if:</del></p> <p><del>a) As a result of this comparison, a bid from Group B is the lowest evaluated bid.</del></p>



	<p><del>b) An amount of 10% domestic preference shall be calculated on Group A's lowest evaluated bid price to be subtracted or deducted on the lowest evaluated bid price (Group A).</del></p> <p><del>c) After deducting 10% from the evaluated bid price from group A, this shall be compared with the lowest evaluated bid from the Group B to determine the lowest evaluated bid for the award.</del></p> <p><del>d) After applying domestic preference if there is a tie in between the lowest evaluated bid price from group A and lowest evaluated bid price from Group B, preference shall be given to lowest evaluated bid from</del></p>
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38.3	Evaluation will be done for: <b>"Package"</b>
38.3(e)	<p>Not Applicable</p> <p><del>The adjustments shall be determined using the following criteria:</del></p> <p><del>(a) Deviation in Delivery schedule: ..... [insert Yes or No.] If Yes insert the adjustment factor]</del></p> <p><del>The Goods are required to be delivered within the Delivery Schedule. No credit will be given to deliveries before the earliest date, and Bids offering delivery after the final date may be treated as non-responsive.</del></p> <p><del>(b) Deviation in payment schedule: ..... [insert Yes or No.] If Yes insert the adjustment factor]</del></p> <p><del>The SCC stipulates the payment schedule specified by the Purchaser. If a Bid deviates from the schedule and if such deviation is considered acceptable to the Purchaser, the Bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the Bid as compared with those stipulated in the SCC, at the rate per annum specified in BDS Sub-Clause 38.3 (e) or</del></p> <p><del>Bidders shall state their Bid price for the payment schedule outlined in the SCC. Bids shall be evaluated on the basis of this base price. Bidders are, however, permitted to state an alternative payment schedule and indicate the reduction in Bid Price they wish to offer for such alternative payment schedule. The Purchaser may consider the</del></p>





~~alternative payment schedule and the reduced Bid Price offered by the Bidder selected on the basis of the base price for the payment schedule outlined in the SCC.~~

~~(c) The cost of major replacement components, mandatory spare parts, and service: ..... [insert Yes or No.] If Yes, insert the methodology and criteria]~~

~~The list of items and quantities of major assemblies, components and selected spare parts likely to be required during the initial period of operation specified in BDS Sub-Clause ITB 20.3 is in the List of Goods. An adjustment equal to the total cost of these items, at the unit prices quoted in each Bid, shall be added to the Bid Price, for evaluation purposes only.~~

OR

~~The Purchaser will draw up a list of high usage and high value items of components and spare parts, along with estimated quantities of usage in the initial period of operation specified in BDS Sub-Clause ITB 20.3. The total cost of these items and quantities will be computed from spare parts unit prices submitted by the Bidder and added to the Bid Price, for evaluation purposes only.~~

~~(d) The availability in Bhutan of spare parts and after-sales services for the equipment offered in the Bid ..... [insert Yes or No.] If Yes, insert the methodology and criteria]~~

~~An adjustment equal to the cost to the Purchaser of establishing the minimum service facilities and parts inventories, as outlined in BDS Sub-Clause ITB 38.3 (e), if quoted separately, shall be added to the Bid Price, for evaluation purposes only.~~

~~(e) The projected operating and maintenance costs during the life of the equipment..... [insert Yes or No.] If Yes, insert the methodology and criteria]~~



	<p><del>Operating and maintenance costs. An adjustment to take into account the operating and maintenance costs of the Goods will be added to the Bid Price, for evaluation purposes only, if specified in BDS Sub Clause ITB 38.3 (e). The adjustment will be evaluated in accordance with the methodology specified in the BDS Sub Clause ITB 38.3 (e).</del></p> <p><del>(f) The performance and productivity of the equipment offered: ..... [Insert Yes or No.] If Yes, insert the methodology and criteria]</del></p> <p><del>Performance and productivity of the equipment. An adjustment representing the capitalized cost of additional operating costs over the life of the plant will be added to the Bid Price, for evaluation purposes, if specified in BDS Sub Clause ITB 38.3(e). The adjustment will be evaluated based on the drop in the guaranteed performance or efficiency offered in the Bid below the norm of 100, using the methodology specified in BDS Sub Clause ITB 38.3 (e).</del></p> <p style="text-align: center;">OR</p> <p><del>An adjustment to consider the productivity of the Goods offered in the Bid will be added to the Bid Price, for evaluation purposes only, if specified in BDS Sub Clause ITB 38.3 (e). The adjustment will be evaluated based on the cost per unit of the actual productivity of the Goods offered in the Bid with respect to minimum required values, using the methodology specified in BDS Sub Clause ITB 38.3 (e).</del></p>
38.6	Bidders <b>shall quote</b> prices as single project.
44.2 & 45.1	The successful Bidder shall submit the performance security and sign the Contract within <b>15 days</b> of issuance of the Notification of Award.



## SECTION III BIDDING FORMS



### Form I: Bidder's Information Form

*The Bidder shall fill in this Form in accordance with the instructions indicated below.*

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

Tender No.: *[insert number of bidding process]*

1. Bidder's Legal Name ..... <i>[insert name]</i>	
2. In case of Joint Venture/ Consortium (JV/C) legal name of each member: ..... <i>[insert JV/C]</i>	
3. Bidder's or each member of JV/C 's Country of Registration: ..... <i>[insert Country of Registration]</i>	
4. Bidder's or each member of JV/C 's Year of Registration: ..... <i>[insert year of registration]</i>	
5. Bidder's or each member of JV/C 's Legal Address in Country of Registration:..... <i>[insert legal address]</i>	
6. Bidder's or each member of JV/C 's Authorized Representative Information (if applicable) Name and identity No.: ..... <i>[insert Authorized Representative's name and identity No.]</i> Detail address: ..... <i>[insert Authorized Representative's address]</i> Telephone/mobile No:..... <i>[insert Authorized Representative's contact No. ]</i> E-mail Address: ..... <i>[insert Authorized Representative's email]</i>	
Attached are copies of the following original documents: <i>[check the box(es) of the attached original documents]</i>	
<input type="checkbox"/>	Articles of Incorporation or Registration of firm or valid Trade license named in 1 above,
<input type="checkbox"/>	In the case of a JV/C letter of intent to form the JV/C or the JV/C agreement
<input type="checkbox"/>	In the case of a government owned entity from Bhutan, documents establishing legal and financial autonomy and compliance with commercial law
<input type="checkbox"/>	Power of attorney authorizing the signatory of the Bid to sign on behalf of the Bidder.
<input type="checkbox"/>	Tax clearance certificates.

### Form II: Bid Submission Form

*[The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.]*



Date: .....[insert date of Bid submission]

Tender No.: insert number .....

Alternative No.: [insert number, if this Bid is for an alternative]

To: [insert complete name of the Purchaser]

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 SCC the following Goods and Related Services: [insert a brief description of the Goods and Related Services];
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is: [insert the Bid Price in words and figures, indicating the various amounts and their respective currencies];
- (d) The discounts offered and the methodologies for their application are:

*Discounts.* If our Bid is accepted, the following discounts shall apply: [Specify in detail each discount offered and the specific item of the Schedule of Supply to which it applies.]

*Methodology of Application of the Discounts.* The discounts shall be applied using the following methodology: [Specify in detail the methodology that shall be used to apply the discounts];

- (e) Our Bid shall be valid for a period of [insert number] from the date fixed for the Bid submission deadline in accordance with ITB Sub-Clause 26.1, and it shall remain binding upon us and may be accepted at any time before expiry of that period;
- (g) If our Bid is accepted, we commit to provide a Performance Security in accordance with ITB Clause 45 and GCC Clause 16 for the due performance of the Contract;
- (h) We are not participating, as Bidders, in more than one Bid in this bidding process, other than any alternative offers submitted in accordance with ITB Clause 15;
- (i) 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, and the nationality each subcontractor and supplier]



- (i) We have no conflict of interest pursuant to ITB Sub-Clause 3.2;
- (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 Purchaser under the laws or official regulations of Bhutan, in accordance with ITB Sub-Clause 3.4;
- (k) We have read the ITB and GCC carefully, understood and agree to comply with all the clauses which are mentioned therein. In case of any breach of any condition on our part, we shall be liable for actions as per terms and conditions of the Contract.
- (l) 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.
- (m) we accept the Vendor Performance Management System.

We understand that you are not bound to accept the lowest evaluated Bid or any other Bid that you may receive.

Signed: \_\_\_\_\_*[insert signature of person whose name and capacity are shown]*

In the capacity of \_\_\_\_\_*[insert legal capacity of person signing the Bid Submission Form]*

Name: \_\_\_\_\_*[insert complete name of person signing the Bid Submission Form]*

Duly authorized to sign the bid for and on behalf of: \_\_\_\_\_*[insert complete name of Bidder]*

Dated on \_\_\_\_\_ day of \_\_\_\_\_*[insert date of signing]*



**Form III: Bid Security (Bank Guarantee)**

*[The Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]*

.....  
*[insert Bank's Name, and Address of Issuing Branch or Office]*

Tender No. ....

Beneficiary: ..... [Name and Address of Purchaser]

Date: \_

BANK GUARANTEE No.: \_\_\_\_\_

At the request of the Bidder, we..... *[insert name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of.....  
..... *[insert amount in figures]* .....

*[insert amount in words]* upon receipt by us

of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the Bid conditions, because the Bidder:

(a) has withdrawn its Bid during the period of Bid validity specified by the Bidder in the Form of Bid;

or

(b) having been notified of the acceptance of its Bid by the Purchaser during the period of Bid validity, (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the Performance Security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder; or (ii) thirty days after the expiration of the Bidder's Bid.



Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date. *[signature(s)]*

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#### Form IV: Manufacturer's Authorization

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so, indicated in the BDS.]*

Date: *[insert date of Bid Submission]*

Tender No.: *[insert tender number]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of the Purchaser]*

#### WHEREAS

We *[insert complete name of the Manufacturer]*, who are official manufacturers of *[insert type of Goods manufactured]*, having factories at *[insert full address(es) of the Manufacturer's factory/ies]*, do hereby authorize *[insert complete name of Bidder]* to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is to provide the following Goods, manufactured by us, namely *[insert name and/or brief description of the Goods]*, and subsequently to negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with GCC Clause 28 with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of the authorized representative(s) of the Manufacturer]*

Title: *[insert title(s) of the authorized representative(s) of the Manufacturer]*

Duly authorized to sign this Authorization for and on behalf of *[insert complete name of the Bidder]*

Dated on the *[insert number]* day of *[insert month]*, *[insert year]*





## Form V: Integrity Pact

### 1: General

Whereas **Mr. Bikash Rai**, representing **Chhukha Hydropower Plant, Chhukha**, Druk Green Power Corporation Limited, hereinafter referred to as the **“Employer”** 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:

### 2. Objectives

Now, therefore, the DGPC and the Bidder agree to enter into this pre-contract agreement, here in after referred to as integrity pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/ unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into, with a view to:

- 2.1. Enable the DGPC to obtain the desired contract at a reasonable and competitive price in conformity to the defined specifications of the works, goods and services; and
- 2.2 Enable Bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors shall also refrain from bribing and other corrupt practices and the DGPC shall commit to prevent corruption, in any form by their officials by following transparent procedures.

### 3. Commitments of the DGPC

The DGPC commits itself to the following:

- 3.1. The DGPC hereby under takes that no official of the DGPC, connected directly or indirectly with the Contract, shall demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward favour 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, bid evaluation, contracting or implementation process related to the Contract.
- 3.2. The DGPC further confirms that its officials have not favored any prospective Bidder in any form that could afford an undue advantage to that particular Bidder during the tendering stage, and shall further treat all Bidders alike.
- 3.3 All the officials of the DGPC shall report to the Chief Executive Officer, DGPC, any attempted/completed violation of clauses 3.1 and 3.2.
- 3.4 Following report on violation of clauses 3.1 and 3.2 by official (s), through any source, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be



initiated by the DGPC and such a person shall be debarred from further dealings related to the Contract process. In such a case while an enquiry is being conducted by the DGPC the proceedings under the Contract would not be stalled.

#### 4. Commitments of Bidders

The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the Contract or in furtherance to secure it and in particular commits himself to the following:

- 4.1 The Bidder shall not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, commission, fees, brokerage, any materials or immaterial benefit to any official of the DGPC, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.
- 4.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, commission, fees, brokerage, any material or immaterial benefit to any official of the DGPC or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other contract with the DGPC for showing or forbearing to show favour or disfavor to any person in relation to the Contract or any other contract with the DGPC.
- 4.3 The Bidder shall not collude with other parties interested in the contract to preclude the competitive bid price, impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 4.4 The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the DGPC of their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 4.5 The Bidder shall not enter into any monetary dealings or transaction, directly, with any tender committee member, and if he does so, the DGPC shall be entitled forthwith to rescind the Contract and all other contracts with the Bidder.

#### 5. Sanctions for Violation

The breach of any aforesaid provisions or providing false information by DGPCs, including manipulation of information by evaluators, shall face administrative charges and penal actions as per the existing relevant rules and laws.



The breach of the Pact or providing false information by the Bidder, or any one employed by him, or acting on his behalf (whether with or without the knowledge of the Bidder), or the commission of any offence by the Bidder, or any one, employed by him, or acting on his behalf, shall be dealt with as per the provisions of the Penal Code of Bhutan, 2004, and the Anti – Corruption Act, 2006.

In the event of a breach, the DGPC shall also take all or any one of the following actions, wherever required:


- 5.1 Immediately call off the pre-contract negotiations without giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.
- 5.2 Immediately cancel the contract, if already awarded/signed, without giving any compensation to the Bidder.
- 5.3 Forfeit the Earnest Money/security deposited with the DGPC.
- 5.4 Recover all sums already paid to the Bidder.
- 5.5 Encash the advance bank guarantee and performance bond /warranty bond, if furnished by the Bidder, in order to recover the payments, already made by the DGPC, along with interest.
- 5.6 Cancel all or any other Contracts with the Bidder.
- 5.7 Debar the Bidder from entering into any bid from the DGPC as per the Debarment Rule.
6. Examination of Books of Accounts
  - 6.1 In case of any allegation of violation of any provisions of this integrity pact or payment of commission, the DGPC/authorized persons or relevant agencies shall be entitled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents and shall extend all possible help for the purpose of such examination.
7. Monitoring and Arbitration
  - 7.1 The DGPC shall be responsible for monitoring and arbitration of IP as per the procurement rules.
8. Legal Actions
  - 8.1 The actions stipulated in this integrity pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceeding as.
9. Validity
  - 9.1 The validity of this integrity pact shall cover the tender process and extend until the completion of the contract to the satisfaction of both the DGPC and the Bidder.



9.2 Should one or any provision of this pact turn out to be invalid, the remainder of this pact remains valid. In this case, the parties shall strive to come to an agreement to their original intentions.

We, hereby declare that we have read and understood the clauses of this agreement and shall abide by it. Further, the information provided in this agreement is true and correct to the best of our knowledge and belief.

The parties hereby sign this Integrity Pact at *(place)* \_\_\_\_\_ on *(date)* \_\_\_\_\_

EMP 

CID : 

1	1	2	1	3	0	0	5	3	7	5
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Affix  
Legal  
Stamp

  
BIDDER/REPRESENTATIVE

CID : 

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Witness:

Name: **Pema Zangmo**

CID : 

1	0	9	0	7	0	0	0	8	7	4
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Witness:

Name:

CID : 

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## Form VI: Deviation Schedule

The Bidder shall specify below, in detail, all deviations from and exceptions to the Bid Document. Any entry shall be referenced to the clause to which they refer.

The Bidder shall be deemed to be compliant with the content and intent of the Bid Document except in respect of deviations and exception listed in this Schedule.

Clause No.	Details of Deviation/ Exception	Reasons for Deviation/ Exception

Note: In continuation sheet to this page may be used and annexed to this form if required.

In case of NO DEVIATION mentioned here and deviation of clauses/specification is mentioned elsewhere, then it will be taken as a deviation.

Signature of Bidder \_\_\_\_\_

Place & Date \_\_\_\_\_



**Form VII: PRICE SCHEDULE FORM**

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated.]*



## PRICE SCHEDULE

SL. NO	DESCRIPTION	UNIT	QTY	RATE	INR/BTN AMOUNT
(A)	<b>DG SETS: -</b>				
	(i) Supply of 500kVA/440KWe, 415/230V, 0.8 PF, 3-phase, 50 Hz, 1500 rpm DG set, CPCB IV+ emission compliant, with a 500 KVA alternator. Includes microprocessor-based control system with SCADA integration via Modbus RTU, inbuilt fuel tank, acoustic enclosure, hospital-grade silencer, batteries, inbuilt charger, AVM pads, anchor bolts, first fill of lube oil, remote monitoring kit, cable termination box, OEM supplied tools etc. as per the technical specification mentioned under clause No. 3.2.6.1 (DG set & Associated components)	Set	2		
(B)	<b>LOW VOLTAGE SWITCHGEAR PANEL: -</b>				
	(i) The integrated panel, rated at 1000V and 630-4000A with a short circuit rating of 25kA-65kA, features automatic/manual synchronizing, LT breakers (Schneider /ABB/Siemens-6 numbers including one bus coupler), busbar (aluminum) /bus sections, battery chargers, protection relays, meters, indicators, hooters, and control supply provisions as per standards and compatible with the Generator controller.	set	1		
(C)	<b>CABLES &amp; Accessories</b>				



	(i) All necessary LT power (300 sq.mm) and control cables, along with accessories, for connecting the DG sets to the power distribution (integrated panel), considering a total route length of 20 meters from each DG set to the panel.	lot	1		
<b>(D)</b>	<b>EXHAUST SYSTEM (EXTENTION OF EXHAUST STACK HEIGHT)</b>				
	(i) All materials (as per standard), support structures, and piping necessary including paintings to elevate the exhaust outlet to the specified height, ensuring adherence to the CPCB standard norms.	lot	1		
<b>(E)</b>	<b>FUEL SYSTEM</b>				
	(i) Buffer fuel tank (1.0 KL capacity) each, well-constructed, airtight storage tanks made of stainless-steel associated accessories. Complete piping, fitting, valves, support structure & along with fuel meters flow meters (4 numbers). Consider route length / distance of 20 meters from DG to Buffer tank.	lot	1		
<b>(F)</b>	<b>ERECTION</b>				
	(i) Dismantling of the existing system (ii) Site preparation, installation of DG sets (including embedment & excluding foundation works), extension of exhaust stack height, earthing connection, installation of the fuel system (tanks and piping), panels, and electrical connections/wiring, making everything ready for testing and commissioning.	lot	1		
<b>(G)</b>	<b>TESTING &amp; COMMISSIONING: -</b>				





	(iii) Pre-Commissioning Checks, Initial Testing, Load Testing, Functional Testing, Emission Testing, Safety and Compliance, Documentation and Handover.	lot	1		
<b>(H)</b>	<b>TRAINING REQUIREMENTS</b>				
	(iv) Comprehensive training for the purchaser's personnel at site on the operation, maintenance, and troubleshooting of the 2 x 500kVA Diesel Generator (DG) Set	lot	1		
<b>(I)</b>	<b>MANDATORY SPARES, TOOLS &amp; TACKLES FOR MAINTENANCE.</b>				
	(v) Mandatory spares, tools, and tackles necessary for the operation, maintenance, and monitoring of the DG sets during the O&M phase. (Mandatory spares List below)	set	2		
<b>Total Amount</b>					



Price Schedule for Mandatory Spares, Tools & Tackles

Sl. No	Description	Qty	Rate	Amount
1	Air filters:	8 nos		
2	Fuel filters:	8 nos		
3	Oil filters:	8 nos		
4	Engine oil:	4 liters		
5	Coolant:	4 liters		
6	Screwdrivers:	2 sets		
7	Pliers:	2 sets		
8	Socket sets:	2 sets		
Total Amount				



Price Schedule for Recommended Spares, Tools & Tackles

Sl. No	Description	Qty	Rate	Amount
1	Spare Injectors:	4 nos		
2	Brushes:	4nos		
3	Bearings:	4nos		
4	Relays:	4nos		
5	Fuses:	4nos		
6	Circuit breakers:	4nos		
7	Torque wrenches:	2 set		
8	Mustimeters:	2 nos		
9	Specialized testing equipment: 1 set	1 set		

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[insert date]*



TECHNICAL SPECIFICATION (TS)  
OF  
2 x 500KVA, 415V, DIESEL GENERATOR SET

## 1 Information for Bidders

### 1.1 Chhukha Hydropower Plant

The Chhukha Hydropower Plant (CHP) is a run-off hydropower station situated on the Wangchhu River in Chhukha Dzongkhag, Western Bhutan. With an installed capacity of 336 MW (4 x 84 MW) and located underground, it was commissioned in the late 1980s and is owned by Druk Green Power Corporation (DGPC). The plant is approximately a 2-hour drive from Paro Airport and about 2.5 hours from the Indo-Bhutan border town of Phuentsholing.

### 1.2 220/66/11kV Switchgear system.

The voltage generated at 11kV is stepped up to 220kV by a single-phase 35MVA transformer located underground. This 220kV voltage is transmitted to an outdoor switchyard via oil-filled cables, where it is received by outdoor terminations (potheads). The switchyard has two 220kV buses (Bus A and Bus B) with a bus coupler and six 220kV feeders for power evacuation to various stations. For local power supply, two 20MVA three-phase transformers step down the voltage from 220kV to 66kV, which is connected to a single 66kV bus. Further distribution to local stations is managed by three 3MVA transformers that step down the voltage from 66kV to 11kV, feeding individual 11kV bus (3 buses) sections at the switchgear system installed inside the switchgear building.

### 1.3 11kV switchgear System.

The 11kV switchgear system consists of three bus sections connected by two bus couplers. These buses receive 11kV power from three sources: 3MVA-1, 3MVA-2, and 3MVA-3, along with two emergency 11kV power sources from DG-1 and DG-2. The received 11kV power is distributed to 13 different locations via overhead lines, which are maintained by their respective stakeholders: BPC (5 feeders), CHP (6 feeders), and THP (2 feeders).

The feeders owned by CHP are critical for power plant operation. Among these feeders, UGPH SST-1 and UGPH SST-2 supply power to the Underground Powerhouse, which is vital for its operation. Another feeder supplies power to butterfly valve chamber (BVC), which is equally important. Additionally, one feeder supplies power to the Damsite, becoming crucial if the back-feed feeder or Dam DG set fails. Two more feeders supply power to the Switchyard Station via the Switchyard Station Service Transformer, which is also essential.

Due to ageing, this 11kV switchgear is proposed to be replaced in a phased manner in 2025.

### 1.4 Low Voltage (415V) Switchgear System.

The 415V switchgear system consists of two bus sections connected by a bus coupler. These buses receive 415V (LT) power from two sources: Switchyard SST-1 (500kVA, 11/0.415kV) and Switchyard SST-2 (250kVA, 11/0.415kV), along with an emergency LT (415V) power source from a diesel generator (DG). The received 415V AC power is distributed to various critical auxiliary equipment necessary for the operation of switchyard equipment, including the 11kV control panel, PLCC panel, 220kV and 66kV breaker and isolator operating panels, battery charger panel, signal and alarm panel, and critical lighting points, including the Diesel Generator Power House lighting.

For the automatic operation of the DG set, the grid power supply availability signal cable is also fed from this panel. When the grid supply fails, the DG panel senses the failure, starts the DG automatically, and

immediately extends the load to the LT AC power distribution panel, ensuring continuous power supply to the auxiliary equipment.

#### 1.5 Emergency Power supply Arrangement (2 x 500kVA DG sets).

During the 220/66/11kV substation black out or supply interruption on Switchyard SST-1 & Switchyard SST-2 sensed by the LTAC panel, DG set Panel receives a black out signal and the signal is further communicated with DG and that DG kept as master starts automatically and extends power supply to two switchgear panels- one direct LT AC (415V supply) to LTAC distribution panel at switchyard and two more 11kV supply to 11kV switchgear system via two step up transformer (1MVA, 0.415/11kV). For extension of emergency power supply to critical substation/location/equipment in power house, BVC, Dam, all other non-essential supplies are to be isolated to avoid a overloading of DG. Once the grid supply is back, the system detects its availability, and both DGs automatically shut down and disconnect from the system.

#### 1.6 Rationale for Replacing Existing Diesel Generators Sets.

The existing diesel generators (DGs) have become less efficient and reliable due to continuous wear and tear over time. They consume more fuel, leading to higher operational costs, and require frequent maintenance and repairs, which are increasingly expensive. Additionally, these older DGs may not comply with current environmental and safety regulations, posing a risk to both compliance and operational continuity. Furthermore, the old DGs/controls may face compatibility issues with modern SCADA systems, hindering effective monitoring and control. Replacing them with newer models will ensure better performance, improved fuel efficiency, seamless integration with SCADA systems, and adherence to modern standards, ultimately enhancing overall reliability and reducing costs.

#### 1.7 Meteorological data: -

Ambient air temperature -7 o C (min), 40 o C (max).

Humidity 100 %.

Earthquake zone -V.

Altitude above M.S.L. EL. 1300.0M.

#### 1.8 Labor Accommodation

The bidder is responsible for setting up labor camps or arranging temporary housing for their workforce during the contract execution. If available, the purchaser (CHP) may provide accommodation facilities, subject to applicable charges.

#### 1.9 Erection Equipment / Tools.

The bidder must arrange all necessary erection tools and tackles along with the DG set for this work. A comprehensive list of these tools must be submitted by bidder along with the bid submission. If any erection tools are used from the purchaser's inventory, charges will be applied as per the prevailing rates.

#### 1.10 Retention of Balance Materials:

All materials supplied for the execution of the contract, shall remain the property of the Purchaser (CHP) upon delivery to the site. The Contractor shall not remove any unused or surplus materials from the site without the prior written consent of the Purchaser. Any balance materials remaining after the completion of the work shall be handed over to the Purchaser or stored at a location designated by the Purchaser. The Contractor shall provide a detailed inventory of all balance materials at the end of the project.

### 2. Eligibility Criteria.

Bidders must meet the following eligibility criteria. Only those bidders who fulfil all the eligibility criteria set forth below will be considered for the technical bid evaluation:

#### 2.1 OEM/OEM Authorization and Certification Requirements:

The bidder must be an Original Equipment Manufacturer (OEM) or an OEM authorized partner of Diesel Generator Sets for at least the past three to five years. A valid OEM certificate or equivalent documentation issued by a recognized authority must be submitted with the tender as verification.

#### 2.2 Bidders' Experience

The bidder must have a proven track record in the supply, installation, testing, and commissioning of Diesel Generator (DG) sets with a capacity of 300 KVA and above. Firms should provide evidence of at least one successfully completed projects involving DG sets of 300kVA and above capacity in the past 5 years.

#### 2.3 Qualification Requirements:

The bidder must demonstrate that they have experienced installation and commissioning engineers to qualify for this work. The following documentation must be submitted with the tender:

##### 2.3.1 Resumes/CVs:

Detailed resumes or CVs of the installation and commissioning engineers, highlighting their relevant experience and qualifications.

##### 2.3.2 Project Experience:

A list of projects where the installation and commissioning engineers have successfully completed similar roles, including project names, durations, and client references.

##### 2.3.3 Employment Verification:

Proof of employment or contractual agreement with the bidder, confirming the availability of the engineers for the project.

##### 2.3.4 OEM Authorization:

An authorization letter from the OEM confirming the bidder's association and the engineers' qualifications.

## 2.4 Commitment to time line

The bidder must submit a comprehensive project plan outlining the timeline for each phase, including order confirmation, project planning, document/drawings preparation, approval, manufacturing, quality checks, factory acceptance tests, packing, shipping, delivery to the project site, site preparation, foundation work, delivery, unloading, installation, testing, commissioning, training, and handing over.

The bidder must commit to completing the project within the 6-month timeframe from the date of the Letter of Award (LoA) to the handing over of the project as per the proposed time schedule.

## 2.5 Certificate of Site visit:

The bidders are required to visit the site before participating in tender bidding to ensure they fully understand but not limited to the following conditions and requirements of the project:

### 2.5.1 Understanding Site Conditions:

Bidders need to assess the physical and environmental conditions of the site, which can significantly impact the cost and feasibility of the project.

### 2.5.2 Identifying Potential Challenges:

A site visit helps bidders identify any potential challenges or obstacles that might not be apparent from the tender documents alone.

### 2.5.3 Accurate Cost Estimation:

By visiting the site, bidders can make more accurate cost estimations, reducing the risk of underbidding or overbidding.

### 2.5.4 Clarifying Requirements:

It provides an opportunity for bidders to ask questions and clarify any uncertainties about the project requirements.

### 2.5.5 Compliance with Regulations:

Many tender processes include a mandatory site visit to ensure all bidders have a fair and equal understanding of the site conditions.

For the above site visit, the bidder shall appoint experienced site engineer to mandatorily visit the site and submit the site visit certificate along with tender document. The site visit certificate shall be provided by the purchaser upon visiting the site. The expenses incurred during site visit shall be borne by bidder.



### 3 Technical Specification.

#### 3.1 Standards / Practices Compliance.

##### 3.1.1 Health and Safety Management

###### *3.1.1.1 Safety Procedures:*

The bidder must ensure that all installation and commissioning activities follow strict safety protocols to prevent accidents. Detailed safety procedures must be outlined and adhered to throughout the project.

###### *3.1.1.2 Training:*

The bidder must provide safety training for all personnel involved in the project.

###### *3.1.1.3 Personal Protective Equipment (PPE):*

The bidder must mandate the use of appropriate PPE for all workers on-site. A list of required PPE and compliance records must be included.

##### 3.1.2 Risk Management

###### *3.1.2.1 Risk Assessment:*

The bidder must identify potential risks associated with the supply, installation, and commissioning of the DG sets.

###### *3.1.2.2 Mitigation Plans:*

The bidder must develop and implement plans to mitigate identified risks.

###### *3.1.2.3 Contingency Plans:*

The bidder must prepare contingency plans to address any unforeseen issues that may arise during the project.

##### 3.1.3 Environmental Management

###### *3.1.3.1 Emission Control:*

The DG sets must meet emission standards to minimize environmental impact. Emission test reports must be provided.

###### *3.1.3.2 National Environment Commission (NEC) Standards of Bhutan:*

The diesel generator (DG) sets supplied under this tender must comply with the National Environment Commission (NEC) Standards of Bhutan for industrial emissions. Ensuring adherence to these standards is crucial for effective dispersion of pollutants. The DG sets must meet the following maximum limits for pollutants (mg/Nm<sup>3</sup>):

- Suspended Particulate Matter (SPM): 150 mg/Nm<sup>3</sup>

- Sulphur Dioxide (SO<sub>2</sub>): 100 mg/Nm<sup>3</sup>
- Nitrogen Oxides (NO<sub>x</sub>): 100 mg/Nm<sup>3</sup>
- Carbon Monoxide (CO): 50 mg/Nm<sup>3</sup>

Additionally, the DG sets must also adhere to the latest Central Pollution Control Board (CPCB) norms for stack height and exhaust height.

#### 3.1.3.3 Waste Management:

The bidder must implement proper waste disposal procedures for materials and equipment used during installation. A waste management plan must be submitted.

#### 3.1.3.4 Noise Control:

The bidder must implement noise reduction measures to minimize the impact on the surrounding environment. Details of these noise control measures must be included in the bid. The noise levels must not exceed the threshold limit as per standard industry regulations.

The supplier must provide certification from a recognized testing authority confirming that the DG sets meet the above standards. Failure to comply with any of these standards will result in the rejection of the supplied DG sets.

### 3.1.4 Quality Management

#### 1.1.1.1 Standard Compliance

The DG sets and all related components must comply with relevant international standards. **Certificates of compliance must be provided.**

#### 1.1.1.2 Inspection and Testing:

The bidder must conduct thorough inspections and testing of the DG sets before and after installation to ensure they meet quality requirements. **Test reports and inspection records must be submitted.**

#### 1.1.1.3 Documentation:

The supplier must maintain detailed records of all quality checks, tests, and inspections. These records must be available for review upon request.

#### 1.1.1.4 Quality Assurance:

**The supplier should submit a valid ISO certification for quality management along with the bid.** The supplier must provide a Quality Assurance Plan (QAP) for approval before manufacturing and also submit a Field Quality Assurance Plan (FQAP) for approval before installation, testing and commissioning.

### 3.1.5 Standards.

The equipment unless otherwise specified shall comply with following national and international standards, latest revision/amendment of the standard shall be referred.

BS 5514	Reciprocating internal combustion engines
IS 10002: 1981	Specification for Performance Requirements for Constant Speed Compression Ignition (Diesel) Engines for General Purposes (Above 20 kW)

IS 10000 (Part1): 1980	Method of tests for internal combustion engines
IS 4722	Rotating electrical machines
IS 13947 (Part 1):1993	Low voltage switchgears and control gears
IS 8623 (Part 1): 1993	Low voltage switchgear and control gear assemblies.
IS 10987: 1992	Code of practice for design, fabrication, testing and installation of underground/above ground horizontal cylindrical storage tanks for petroleum products
IS 803	Code of practice for design, fabrication and erection of vertical mild steel cylindrical welded oil storage tanks.
ISO 8528 (1 to 10)	Reciprocating internal combustion engine driven alternating current generating sets
ISO 8528-12	Reciprocating internal combustion engine driven alternating current generating sets. Part 12: Emergency power supply to safety devices
ISO 3046	Reciprocating Internal combustion engines Performances
ISO 7967	Reciprocating Internal combustion engines. Vocabulary of components and systems.
ISO/DIS 1085	Ductile spheroidal graphite iron
ISO/R 185	Lamellar cast iron
ISO 6826	Internal combustion engine Fire protection
IEC 60034.1	Rotating electrical machinery. Rating and performance
IEC 60034.5	Rotating electrical machines. Classification of degrees of protection, provided by enclosures of rotating electrical machines.
IEC 60050	International Electro technical vocabulary.
IEC 60364	Electrical installations of buildings
IEC 60439	Low-voltage switchgear and control gear assemblies
IEEE-126-	Recommended specification for speed governor of internal combustion engine generating units.
IS: 1460	Light diesel oil/High speed diesel
BS: 159	Busbars & Busbar connections
IS: 7451 (Part I-VI)	Reciprocating Internal Combustion Engines
IS: 1248	Electrical indicating instruments
IS: 1554	PVC- Insulated (heavy duty) electrical cables for voltages up to and including 1100 V
IS: 1651	Stationary cells and batteries lead acid type (with tubular plates)
IS: 2147	Degree of protection provided by enclosures for low voltage switchgear and control gear
IS: 2208	HRC cartridge fuse links up to 650 V
IS: 2511	Poly-crystalline semi-conductor rectifier stacks
IS: 2959	Contactors for voltage not exceeding 1000V AC or 1200V DC.
IS: 3231	Electric relays for power system protection
IS: 4237	General requirement for switchgear & control Gear for Voltages not exceeding 1000 volts
IS: 2705 (Part I to IV) & IEC-185	Current transformers

IS: 2516	Specification for Circuit Breaker
IS: 3156 IS (Part I to IV) & IEC-186)	Voltage Transformer
IS: 13118	High Voltage A.C. Circuit Breaker
IS: 6875	Control Switches
IS: 4794	Push Buttons

### 3.1.6 Guarantee Defect Liability Period and Service

Performance of DG set with in accessories, panels, etc. covered under this scope shall be guaranteed for the period stated below, against any defect or damage due to wrong workmanship, defective material or commission in design.

- 18 months from the date of completion of facilities or
- 12 months from the date of operational acceptance whichever is earlier.

Supplier shall change/replace defective or damage parts of the equipment at his own cost during guarantee period.

Latent defect warranty shall be limited to 5 years from the end of defect liability period.

This warranty shall cover any defects in materials and workmanship under normal use and service. Supplier will, at its discretion, repair or replace any part of the Product that proves to be defective during the warranty period.

Service Support: The supplier must provide comprehensive service support, including availability of spare parts and maintenance services (not less than 10 years or as per the standard practice of OEM).

## 3.2 Technical Requirements.

### 3.2.1 Operational Requirements

#### 3.2.1.1 General

- The DG sets, controllers, Power Distribution Panel, Air Circuit Breakers (ACB) and Synchronizing Panel must meet the specified but not limited to the following operational requirements by standards.
- Bidders must submit a detailed single line diagram (SLD) as part of their proposal.

#### 3.2.1.2 Provision for Future SCADA Integration

- The DG sets shall be designed to be SCADA compatible for future integration. This includes:
- Communication interfaces (e.g., Modbus, DNP3) for future SCADA connectivity.
- Real-time data acquisition capabilities for voltage, current, frequency, power output, and operational status.
- Provisions for remote start/stop and control via SCADA.
- Auto synchronization and load management features controllable through SCADA.
- Alarm and event management capabilities for future SCADA monitoring.

### 3.2.1.3 DG Sets Installation and Configuration

- DG sets should operate individually and in parallel during emergencies or blackouts using a master-follower configuration.
- The follower DG set starts when the master DG set reaches 80% capacity.
- DG sets must support both automatic and manual operation and auto synchronization.
- DG sets should automatically shut down when grid supply is restored.
- Grid Supply Availability Signal: Indicates the presence of grid power to determine DG set operation.
- DG Battery Charging Supply: Ensures DG starter batteries remain fully charged.
- AMF System:
  - Monitors mains power and automatically starts DG sets during a power failure.
  - Auto/Manual Selector Switch: Allows switching between automatic and manual modes.
  - Automatic Operation: Manages start and stop sequences during power outages and grid restoration.
  - Auto Synchronizing: Ensures multiple DG sets synchronize automatically for smooth load sharing and transition between power sources.

### 3.2.1.4 Operation During Blackout Conditions

- The DG panel controls sense grid supply failure and command the master DG to start, extending the load automatically.
- If the master DG reaches 80% capacity, the follower DG starts and synchronizes automatically.
- Upon grid supply return, the follower DG stops first, followed by the master DG.

### 3.2.1.5 DC Supply Compatibility

- During blackouts, the system shall operate on available DC supply of 220V.
- All items in relevant components/breakers, like Trip Coils, Closing Coils, Shunt Coils, Relays, PLCs, Control and Signalling Devices, Communication Modules, Battery Backup Systems shall be of DC supply compatibility.

## 3.2.2 Layout proposal.

### 3.2.2.1 Site Familiarization:

The bidder's engineer shall visit the site to assess the existing conditions and gather necessary information. This visit is mandatory and must be conducted before the submission of the bid.

The bidder shall coordinate with the purchaser to schedule the site visit and ensure all relevant personnel are present.

### 3.2.2.2 Layout Drawing Proposal:

Based on the site visit, the bidder shall propose a detailed layout drawing that includes the placement of two DG sets, cable trenches, Panels (Low Voltage Switchgear Panels-including Synchronizing panels) in the one location.

The layout drawing must consider both scenarios: retaining the old location with the same layout or shifting to a new location which shall be decided during site visit.

The proposed layout drawing shall be submitted along with the bid to assess the bidder's experience/expertise and will be reviewed and approved after the placement of the Purchase Order (PO). The bidder shall submit a general layout arrangement drawing as part of the bid submission. This drawing should provide an overview of the proposed layout, including the placement of equipment and key components.

#### *3.2.2.3 Civil Foundation Design:*

The bidder shall provide a comprehensive civil foundation design, including all necessary embedment details, within one week after the placement of the Purchase Order (PO) for approval. The design must comply with relevant standards and ensure the stability and safety of the installation.

#### *3.2.2.4 Scope of Construction of civil foundation:*

The construction of the civil foundation, including all necessary embedment, shall be in the scope of the supplier.

The bidder shall provide detailed construction drawings and specifications to guide the purchaser in executing the foundation work.

#### *3.2.2.5 Compliance and Approval:*

All proposed designs and drawings must comply with relevant standards and regulations.

The purchaser reserves the right to review and approve the proposed layout and foundation designs before proceeding with the construction.

### **3.2.3 Drawings & Documentation:**

The drawings and documents as required shall be submitted in phase wise:

#### *3.2.3.1 Pre-Manufacturing phase.*

General arrangement drawing: General arrangement drawing indicating total layout (2 DG sets, genset controller, panels, exhaust system, fuel system, etc.);

Preliminary Design Drawings: design concepts and layouts for control panels, integrated panels including synchronizing panels.

Quality Assurance Plan (QAP): Detailed plan outlining quality control measures.

ISO Certification: Proof of ISO certification for quality management.

Project Schedule: Detailed timeline for project milestones as per the format provided (time schedule)

#### *3.2.3.2 Manufacturing phase.*

Detailed Design Drawings: Comprehensive design documents including electrical schematics, control drawings, mechanical layouts, and assembly drawings.

Bill of Materials (BOM): Complete list of materials and components.

Factory Acceptance Test (FAT) Procedures: Detailed procedures for testing at the manufacturing

site.

Inspection and Test Plan (ITP): Plan for inspections and tests during manufacturing.

#### *3.2.3.3 Pre-dispatch document.*

The following but not limited to shall be ensured for smooth dispatch and delivery of the consignment:

Logistics Plan: Plan for packing, delivery, and material handling at the site.

Packing List: Detailed list of all items being shipped, including quantities and descriptions.

Delivery Note: Document confirming the dispatch of goods, including delivery address and contact details.

Invoice: Commercial invoice detailing the cost of the goods being shipped.

Inspection and Test Certificates: Certificates confirming that the equipment has passed all required inspections and tests.

Shipping Documents: Bill of lading, airway bill, or other relevant shipping documents.

Insurance Documents: Proof of insurance coverage for the shipment.

Warranty Documents: Details of warranty terms and conditions.

Compliance Certificates: Certificates confirming compliance with regulatory and safety standards.

#### *3.2.3.4 Pre-Installation.*

- Field Quality Assurance Plan (FQAP): Plan for maintaining quality during installation.
- Installation Drawings: Detailed drawings for installation, including site layout and connection diagrams.
- Electrical and Control Logic Drawings: Detailed electrical schematics and control logic diagrams for proper installation and integration.

#### *3.2.3.5 Installation and Commissioning*

- As-Built Drawings: Updated drawings reflecting any changes made during installation.
- Commissioning Procedures: Detailed procedures for testing and commissioning the equipment.
- Standard Operating Procedures (SOPs): Installation, commissioning, operational, maintenance, and emergency SOPs.
- Training Manuals: Documentation for training personnel on operation and maintenance.
- Operation and Maintenance Manuals: Comprehensive guides for operating and maintaining the equipment.
- List of mandatory spares, tools and tackles.

#### *3.2.3.6 Post-Commissioning*

- Final Documentation: Complete set of all drawings and documents, including any revisions.
- Warranty Documents: Details of warranty terms and conditions.
- Compliance Certificates: Certificates confirming compliance with regulatory and safety standards.
- Handover Report: Final report summarizing the project and confirming handover of the equipment.

### 3.2.4 Scope of work

The scope of work under this contract shall include all the tasks and activities that need to be completed to achieve the project objectives. It includes:

#### 3.2.4.1 Installation:

Site preparation, handling, placement of 2 x 500kVA DG sets with enclosure, and installation of all panels on the civil foundation. This includes laying cables, electrical wiring, and connections, as well as extending the exhaust stack height. Ensuring everything is completed and ready for testing and commissioning.

#### 3.2.4.2 Testing and Commissioning:

##### 3.2.4.2.1 Pre-Commissioning Checks:

Visual Inspection: Conduct a thorough visual inspection of the DG sets, control panels, and all associated equipment to ensure there are no visible defects or damages.

Mechanical Checks: Verify the alignment and secure mounting of the DG sets, check for proper installation of exhaust systems, fuel systems, and cooling systems.

Electrical Checks: Inspect all electrical connections, wiring, and cabling for correctness and integrity. Ensure that all control panels and switchgear are properly connected.

Lubrication and Fluids: Check and fill all necessary fluids, including lubricants, coolant, and fuel. Ensure that all fluid levels are within the specified limits.

Battery Checks: Verify the installation and charge status of batteries. Ensure that battery chargers are functioning correctly.

##### 3.2.4.2.2 Load Testing:

Initial Start-Up: Start the DG sets and allow them to run at no load to ensure smooth operation. Monitor for any unusual noises, vibrations, or other issues.

Gradual Load Application: Gradually apply load to the DG sets in increments, monitoring performance parameters such as voltage, frequency, and temperature.



Full Load Testing: Run the DG sets at full load for a specified duration to verify their ability to handle the maximum load. Monitor and record all performance parameters.

Overload Testing: Test the DG sets at a load higher than their rated capacity for a short duration to ensure they can handle overload conditions.

#### 3.2.4.2.3 Functional Testing:

Control Systems: Test the functionality of control panels, switchgear, and Automatic Transfer Switch (ATS) if installed. Ensure that all control systems respond correctly to commands.

Safety Systems: Verify the operation of all safety and emergency shutdown systems. Ensure that the DG sets shut down safely in case of any fault conditions.

Synchronization: Test the synchronization of the DG sets with each other. Ensure smooth transition and load sharing.

Operational Tests: Conduct various operational tests to simulate different scenarios, such as power failure, load changes, and emergency shutdowns. Ensure that the DG sets perform reliably under all conditions.

#### 3.2.4.2.4 Final Commissioning:

Documentation: Record all test results and performance data. Prepare a detailed commissioning report.

Handover: Handover the DG sets to the client, along with all necessary documentation, operation manuals, and maintenance instructions.

Training: Provide training to the client's operating personnel on the proper operation and maintenance of the DG sets.

### 3.2.5 Scope of supply:

#### 3.2.5.1 DG set & Associated components:

Supply of 500kVA/440KWe, 415/230V, 0.8 PF, 3-phase, 50 Hz, 1500 rpm, developing 594 BHP, CPCB IV+ emission compliant, coupled to 500 KVA, 415 V alternator mounted on a common base frame, complete with:

- (a) Microprocessor based generator set monitoring, metering and control system with LCD display designed to meet the demands of today's engine driven generator set. The controller shall support SCADA integration via Modbus RTU, enabling remote monitoring, control, and data acquisition for effective generator management.
- (b) Inbuilt Fuel tank.
- (c) Acoustic enclosure.
- (d) Hospital grade Silencer inside enclosure.

- (e) Batteries & leads.
- (f) Inbuilt Battery charger.
- (g) AVM Pads.
- (h) Embedment (Anchor bolts and accessories)
- (i) First fill of lube oil.
- (j) Remote monitoring kit.
- (k) Adopter Box for Cable Termination.
- (l) OEM-supplied tools and tackles.

### 3.2.5.2 DG set Controller

#### 3.2.5.2.1 General Features

Microprocessor-Based Control: Ensures precise monitoring, metering, and control of the generator set.

LCD Display: High-resolution display for clear visibility of parameters and status.

SCADA Integration: Supports SCADA integration via Modbus RTU for remote monitoring, control, and data acquisition.

#### 3.2.5.2.2 Monitoring and Metering

Voltage Monitoring: Real-time monitoring of generator output voltage.

Current Monitoring: Real-time monitoring of generator output current.

Frequency Monitoring: Real-time monitoring of generator frequency.

Power Monitoring: Measurement of active, reactive, and apparent power.

Energy Monitoring: Cumulative energy measurement (kWh, kVAh, kVARh).

Power Factor Monitoring: Real-time power factor measurement.

#### 3.2.5.2.3 Control Functions

Start/Stop Control: Automatic and manual start/stop control of the generator set.

Load Management: Load shedding and load sharing capabilities.

Synchronization: Automatic synchronization with the grid or other generators.

#### 3.2.5.2.4 Protection Functions:

Provide all necessary protection by standards:

Overcurrent protection.

Short circuit protection.

Earth fault protection.

Over/under voltage protection.

Over/under frequency protection.

Reverse power protection.

#### 3.2.5.2.5 Communication and Integration

Modbus RTU: Communication protocol for integration with SCADA systems.

Remote Monitoring: Capability to monitor and control the generator set remotely.  
Data Logging: Storage of historical data for analysis and troubleshooting.  
Alarm Management: Real-time alarm generation and logging for critical events.

#### 3.2.5.2.6 Display and Interface

LCD Display:  
Size: Typically, 320 x 240 pixels or higher.  
Backlit for visibility in low light conditions.

#### 3.2.5.2.7 Multi-language support

User Interface:  
Keypad or touch screen for user input.  
LED indicators for status and alarms.

#### 3.2.5.2.8 Environmental and Electrical Specifications

Operating Temperature: -20°C to +70°C  
Humidity: 0% to 95% non-condensing.  
Power Supply: 12V or 24V DC, derived from the generator set starting batteries  
Certifications: Compliance with relevant UL, NFPA, ISO, IEC, and CE standards

### 3.2.5.3 Low Voltage Switchgear Panel Specification:

#### 3.2.5.3.1 General Requirements:

The panel shall be designed and manufactured in compliance with IEC 61439 standards/equivalent standards. The design/drawings and technical details shall be approved prior to manufacturing. All components shall be sourced from ISO-certified manufacturers to ensure quality and reliability. The panel shall be rated for 1000V and 630-4000A with a short circuit rating of 25kA-65kA.

During blackouts, the system shall operate on available DC supply of 220V. All items in relevant components/breakers, like Trip Coils, Closing Coils, Shunt Coils, Relays, PLCs, Control and Signaling Devices, Communication Modules, Battery Backup Systems shall be of DC supply compatibility.

Components and Features:

#### 3.2.5.3.2 Incomer LT Breakers:

Two incomer LT breakers (one from DG 1 and one from DG 2). The breaker shall be of Schneider/ABB/Siemens make)

Each breaker shall have auto/manual selection, digital meters, indicators, hooters, and comprehensive protection relays (overcurrent, short circuit, earth fault, etc.). Provision to receive power availability signal cable from the grid.

#### 3.2.5.3.3 Bus Sections:

Two bus sections to facilitate power distribution and redundancy.

Busbars shall be made of high conductivity Aluminum, with proper insulation and support to withstand thermal and mechanical stresses.

#### 3.2.5.3.4 Bus Coupler:

One bus coupler to connect the bus sections, ensuring flexibility and reliability in power distribution. The breaker shall be of Schneider/ABB/Siemens make)

The bus coupler shall have auto/manual selection and synchronizing capabilities.

#### 3.2.5.3.5 Outgoing LT Breakers:

Two outgoing LT breakers to feed two step-up transformers. The breaker shall be of Schneider/ABB/Siemens make)

One outgoing LT breaker for local supplies.

Each breaker shall have auto/manual selection, digital meters, indicators, hooters, and comprehensive protection relays.

#### 3.2.5.3.6 Synchronizing Facilities:

The panel shall have features for auto/manual synchronizing.

Auto switching capability if one breaker fails, with automatic switchover to another healthy breaker for both incoming and outgoing breakers.

Synchronizing relays and controllers to ensure seamless operation and load sharing.

#### 3.2.5.3.7 Control and Monitoring:

The panel shall include digital meters (voltage, current, frequency, power factor, etc.), indicators (LEDs for status indication), and hooters for alarms.

All breakers shall be equipped with advanced protection relays to ensure safety and reliability.

The control system shall support SCADA integration via Modbus RTU for remote monitoring and control.

#### 3.2.5.3.8 Testing and Documentation:

The panel shall undergo rigorous inspection and testing as per IEC 61439 standards, including:

Verification of temperature rise.

Short circuit performance.

Dielectric properties.

Mechanical operation.

Test certificates and compliance documents shall be provided with each panel.

Detailed technical documentation, including design specifications, test reports, and compliance certificates, shall be provided.

### 3.2.5.4 Power /Control cables

#### 3.2.5.4.1 Power Cables

Required power cables/accessories to connect from DG to Power distribution Panel:

Cable Type: XLPE (Cross-Linked Polyethylene) insulated, PVC sheathed, armoured power cable.  
Voltage Rating: 1.1 kV grade.  
Conductor Material: Copper.  
Conductor Size:  
For Copper: Approximately 300 sq.mm (based on current carrying capacity and derating factors).  
Number of Cores: single core.  
Current Rating: The cable should be rated to carry at least 695.6A continuously.  
Temperature Rating: Suitable for operation at 90°C continuous operating temperature.  
Installation Method: Suitable for underground or tray installation, considering the site conditions.  
Estimate cable route length from DG to Panel= 20 meters per DG set.

#### 3.2.5.4.2 Control Cables

Required sizes by standards for control cables, signal cables, communication cables from DG to Panels.  
Type: PVC insulated, PVC sheathed, armoured control cables.  
Voltage Rating: 1.1kV.  
Conductor Material: High conductivity stranded copper.  
Conductor Size: Typically, 1.5 sq.mm to 6 sq.mm, depending on the control circuit requirements.  
Insulation: PVC insulation for electrical isolation.  
Sheath: PVC outer sheath for mechanical protection.  
Armouring: Galvanized steel wire or strip armouring for mechanical protection.  
Cable route length from DG to Panel= 20 meters per DG set.

#### 3.2.5.4.3 Cable Accessories for Laying and Terminations:

All required sizes of cables accessories for cable laying and terminations:

- Cable Glands: Brass cable glands for secure cable termination, protecting against dirt, moisture, and mechanical damage.
- Cable Lugs: Copper lugs for proper connection to terminals, ensuring secure and reliable connections.
- Cable Trays: Perforated or ladder type cable trays for supporting and routing the cables.
- Cable Ties: Nylon or stainless-steel cable ties for bundling and securing cables.
- Heat Shrink Tubes: For insulation and protection of cable joints and terminations.
- Earthing Materials: Copper earthing strips or wires for proper grounding.
- Proper Stripping Techniques: Use sharp, high-quality tools to strip cables correctly, avoiding damage to conductors.
- Lug Connectors: Ensure lugs are crimped properly for secure connections.

- Screw-Terminal Connections: Tighten screws to the recommended torque to avoid loose connections.
- Ferrules for Multi-Strand Wires: Use ferrules to terminate multi-strand wires, providing secure connections.

#### 3.2.5.4.4 Installation and Testing

Installation: Proper laying of cables in trenches or on cable trays, ensuring minimum bending radius and avoiding mechanical stress.

Testing:

Insulation resistance testing.

High voltage testing.

Continuity testing.

Earth resistance testing.

#### 3.2.5.4.5 Exhaust Stack Materials

Stainless Steel (SS304 or SS316):

SS304: Suitable for general applications with good corrosion resistance.

SS316: Offers superior corrosion resistance, especially in harsh environments.

Thickness: Typically, 3mm to 5mm, depending on the height and design requirements.

#### 3.2.6.5.1 Stack Sections

Modular Sections:

Designed for ease of assembly, transportation, and installation.

Flanged Connections: Each section is connected using flanges with gaskets to ensure airtight sealing.

Support Structures.

Support Frames.

Material:

Galvanized Steel: Provides good corrosion resistance and is cost-effective.

Stainless Steel: Offers excellent corrosion resistance and durability.

Design: Engineered to withstand wind loads, seismic loads, and the weight of the stack.

Guy Wires.

High-Tensile Strength Steel Wires:

Provide lateral support to the stack.

Turnbuckles and Anchors: Used for tension adjustment and secure anchoring.

Base Plates.

Heavy-Duty Steel Base Plates:

Serve as the foundation for the exhaust stack.

Anchored to concrete pads or the building structure for stability.

Piping and Accessories.

Exhaust Piping.

Material: Stainless steel piping matching the diameter of the existing exhaust pipe.

Insulation: To prevent heat loss and protect surrounding structures.

Expansion Joints: Flexible joints to accommodate thermal expansion and contraction.

Rain Caps: Stainless steel rain caps to prevent water ingress.

Drainage System: Condensate drain system to remove moisture buildup.

Painting and Coating.

Surface Preparation: Sandblasting or chemical cleaning to remove rust and contaminants.

Primer: Zinc-rich primer for corrosion protection.

Top Coat: High-temperature resistant paint, typically silicone-based, with a minimum thickness of 60 microns.

#### 3.2.6.5.2 Compliance and Testing

Regulations: Adherence to NEC regulations of Bhutan for environmental compliance.

Testing:

- Structural integrity testing.
- Leak testing for airtightness.
- Wind load and seismic load testing.

### 3.2.6.6 Fuel System

#### 3.2.6.6.1 Buffer Fuel Tank Specifications

Tank Material

Stainless Steel (SS304 or SS316):

SS304: Suitable for general applications with good corrosion resistance.

SS316: Offers superior corrosion resistance, especially in harsh environments.

Capacity: 1.0 KL (1000 liters)

Construction: Airtight, welded construction to prevent leaks and contamination.

Thickness: Typically, 3mm to 5mm, depending on design requirements.

Piping and Accessories.

Fuel Piping

Material: Stainless steel (SS304 or SS316) for corrosion resistance and durability.

Diameter: Matching the existing fuel line diameter, typically 1.5 inches to 2 inches.

Route Length: 20 meters per DG set.

Insulation: Optional, depending on environmental conditions.

Fittings and Valves.

Fittings: Stainless steel elbows, tees, reducers, and couplings.

Valves:

Ball Valves: Stainless steel ball valves for on/off control.

Check Valves: To prevent backflow.

Pressure Relief Valves: To ensure safety by releasing excess pressure.

Flanges: Stainless steel flanges with gaskets for secure connections.

Support Structures.

Material: Galvanized steel or stainless steel for corrosion resistance.

Design: Engineered to support the weight of the piping and tanks, considering wind and seismic loads.

Mounting: Anchored to concrete pads or the building structure for stability.

Meters and Gauges.

#### Fuel Meters

Type: Gravity flow type fuel meters.

Quantity: Four meters (two for each DG set).

Material: Stainless steel or brass for durability.

Accuracy: High accuracy for precise fuel measurement.

#### Flow Meters.

Type: Digital or mechanical flow meters.

Material: Stainless steel or brass.

Display: LCD or analog display for easy reading.

Integration: Capable of integrating with the DG set control system for monitoring.

#### 3.2.6.7 Installation and Testing

Installation: Proper alignment and secure mounting of tanks, piping, and meters.

Testing:

- Leak testing for tanks and piping.
- Calibration of meters for accurate measurement.
- Pressure testing of the entire system to ensure safety and reliability.

#### 3.2.6.8 Spares, tools and tackles.

##### 3.2.6.8.1 OEM-Supplied Spares, Tools & Tackles

The supplier must provide all standard spares, tools & tackles that are typically supplied by the Original Equipment Manufacturer (OEM) free of cost with the 2 x 500kVA Diesel Generator (DG) sets.

##### 3.2.6.8.2 Mandatory Spares, Tools, and Tackles

The supplier shall, if required by purchaser, all mandatory spares which are critical parts that need to be readily available for immediate replacement in case of failure or wear and tear. This ensures that the diesel generator sets can continue operating without significant downtime. The tentative list is provided below.

**A detailed list of these items must be submitted with the tender along prices.**

Mandatory Spares, Tools & Tackles

Sl. No	Description	Qty
1	Air filters:	8 nos
2	Fuel filters:	8 nos
3	Oil filters:	8 nos
4	Engine oil:	4 liters
5	Coolant:	4 liters
6	Screwdrivers:	2 sets
7	Pliers:	2 sets
8	Socket sets:	2 sets

##### 3.2.6.8.3 Recommended spares, tools and tackles

The supplier, if required by purchaser shall provide recommended spares, tools & tackles to enable comprehensive preventive maintenance, helping to identify and address potential issues before they lead



to major failures. Note, recommended spares, tools, and tackles will not be considered for bid ranking evaluation. However, a detailed list of these items, along with their prices, must be submitted with the tender.

Recommended Spares, Tools & Tackles.

Sl. No	Description	Qty
1	Spare Injectors:	4 nos
2	Brushes:	4nos
3	Bearings:	4nos
4	Relays:	4nos
5	Fuses:	4nos
6	Circuit breakers:	4nos
7	Torque wrenches:	2 set
8	Mustimeters:	2 nos
9	Specialized testing equipment: 1 set	1 set

### 3.2.6.9 Associated Components of Genset.

#### 3.2.6.9.1 Microprocessor-Based Generator Set Controller.

Controller: Microprocessor-based with LCD display.

Features:

- Real-time monitoring of voltage, current, frequency, power, and energy
- Protection functions: overcurrent, short circuit, earth fault, over/under voltage, over/under frequency, and reverse power.
- Auto/manual start/stop control.
- Load management and synchronization capabilities.
- SCADA integration via Modbus RTU for remote monitoring, control, and data acquisition.
- Standards: IEC 61131, IEC 61850.

#### 3.2.6.9.2 Inbuilt Fuel Tank

- Material: Stainless steel (SS304 or SS316) for corrosion resistance.
- Capacity: Sized to provide sufficient runtime based on fuel consumption rates.
- Construction: Airtight, welded construction with proper venting and overflow protection.
- Standards: ISO 9001, ISO 14001.

#### 3.2.6.9.3 Acoustic Enclosure

- Material: Sheet steel with powder-coated finish for corrosion resistance.
- Thickness: Typically, 2mm to 3mm.....
- Sound Attenuation: Designed to meet CPCB noise level requirements (75 dB(A) at 1 meter).
- Ventilation: Adequate ventilation to prevent overheating.
- Access: Lockable doors for maintenance access.
- Standards: ISO 3744, ISO 8528-10.

#### 3.2.6.9.4 Hospital Grade Silencer Inside Enclosure

- Type: Hospital grade for superior noise reduction.
- Material: Stainless steel for durability and corrosion resistance.
- Installation: Mounted inside the acoustic enclosure.
- Standards: ISO 8528-10, ISO 6798.

#### 3.2.6.9.5 Inbuilt Battery Charger

- Type: Automatic battery charger.
- Features: Float and boost charging modes, overcharge protection, and status indicators.
- Standards: IEC 60335-2-29, IEC 62040.

#### 3.2.6.9.6 AVM Pads

- Type: Anti-vibration mounts (AVM) pads
- Material: Rubber or neoprene for effective vibration isolation
- Installation: Placed under the DG set base frame to reduce vibration transmission
- Standards: ISO 10816, ISO 1940.

#### 3.2.6.9.7 Embedment (Anchor Bolts and Accessories)

- Material: High-strength steel, galvanized for corrosion resistance.
- Size: As per the DG set manufacturer's recommendations.
- Accessories: Nuts, washers, and templates for proper alignment and installation.
- Standards: ISO 898, ISO 3506.

#### 3.2.6.9.8 First Fill of Lube Oil

- Type: High-quality engine oil as recommended by the engine manufacturer.
- Quantity: Sufficient for initial operation and commissioning.
- Standards: API CJ-4, ACEA E9.

#### 3.2.6.9.9 Remote Monitoring Kit

- Components: Communication module, sensors, and software for remote monitoring.
- Integration: Compatible with the generator control system and SCADA.
- Standards: IEC 61850, IEC 61131.

#### 3.2.6.9.10 Adopter Box for Cable Termination

- Material: Sheet steel or aluminium, powder-coated for corrosion resistance
- Features: Cable glands, terminal blocks, and mounting provisions for secure cable termination.
- Standards: IEC 61439, IEC 60529.

#### 3.2.6.9.11 2x12V Battery (2 set)

Automatic battery charger, a maintenance-free lead-acid battery with the following specification:

- Type: Maintenance-free lead-acid battery.

- Voltage: 2 x 12V DC (commonly used for larger generator sets).
- Capacity: 200 Ah, suitable for 500kVA generator set Cold Cranking Amps (CCA):
- High CCA rating (1000-1500 amps) to ensure reliable starting performance, even in cold conditions.
- Construction: Sealed Design, Shock and Vibration Resistant, Heavy-Duty Terminals.

Features:

- Over charge protection.
- Maintenance-Free, Long Service Life, High Temperature Resistance, Low Self-Discharge Rate.
- Compliance: Must meet relevant industry standards for safety and performance, such as ISO and IEC standards.
- Complete accessories required for battery connection.

### 3.3 Earthing Requirements.

#### 3.3.1 Scope of earthing works

The earthing works including supply of earthing materials and providing necessary earth riser as required for the 2 x 500kVA DG sets and the power distribution panel, ensuring compliance with relevant international standards such as ISO 8528-Part-1, BS EN 50522, and IEEE Std 80 shall be provided by purchaser as per the following, However, earth studs as required shall be provisioned on respective equipment by the supplier.

#### 3.3.2 Neutral Earthing

Each DG set shall have a separate neutral earthing system. Copper plate earthing shall be used for neutral grounding, with each copper plate measuring 600mm x 600mm x 3.15mm. The copper plates shall be buried vertically in a pit filled with a mixture of salt and charcoal to enhance conductivity. The pit depth shall be at least 2.5 meters. A copper conductor of adequate size (minimum 25mm<sup>2</sup>) shall be used to connect the neutral point of each DG set to its respective earthing electrode.

#### 3.3.3 Body Earthing

Each DG set and the power distribution panel shall have separate body earthing systems. Galvanized Iron (G.I.) plate earthing shall be used for body grounding, with each G.I. plate measuring 600mm x 600mm x 6mm. The G.I. plates shall be buried vertically in a pit filled with a mixture of salt and charcoal. The pit depth shall be at least 2.5 meters. A G.I. conductor of adequate size (minimum 25mm<sup>2</sup>) shall be used to connect the body of each DG set and the power distribution panel to their respective earthing electrodes.

#### 3.3.4 Separation and Safety

The neutral and body earthing electrodes shall be placed at a sufficient distance from each other to prevent interference, typically around 3 meters. The earthing system shall provide a low-resistance path to the ground, with the earthing resistance not exceeding 0.5 ohms.

### 3.3.5 Compliance and Documentation

The contractor shall ensure that all earthing installations comply with the relevant international standards and local regulations. Detailed documentation of the earthing system, including layout drawings, test results, and maintenance records, shall be provided to the client upon completion of the installation.

#### 3.3.5.1 Earth Leakage Relays (ELRs):

Installation: Earth leakage relays shall be installed in the distribution panels to detect and isolate earth faults.

Function: ELRs shall sense earth leakages and open a circuit breaker when the leakage current exceeds the preset value, protecting against electrocution and fire hazards.

Components: ELRs shall be used in combination with Core Balance Current Transformers (CBCT) or Zero Phase Current Transformers (ZCT) to detect current imbalances.

Compliance: ELRs shall comply with IEC 947 standards, ensuring reliable operation and protection.

### 3.4 Particular Technical Specification:

The Generator sets shall have the following comprehensive features and benefits:

#### 3.4.1 Latest Technology and Performance of Genset.

The generator set is powered by a robust engine and a high-quality alternator, ensuring reliable performance and durability.

Proven technology with common rail electronic fuel system.

Exhaust after-treatment and in-cylinder solution to meet stringent emission norms.

Superior finish and aesthetics.

Compact in size with optimum power to weight ratio.

#### 3.4.2 Lowest Operating Cost and Comprehensive Warranty.

Highly reliable and durable product.

Maximum efficiency even at part loads, offering the advantage of lowest operating costs.

500 Hours/ 1 year service interval.

Industry acknowledged best-in-class comprehensive.

warranty on the entire package including rubber components.

#### 3.4.3 Environment Friendly Power

Class defining and technologically advanced engine to meet stringent exhaust emission norms as per the latest notification from recognized agency.

The diesel generator sets shall meet the lowest noise levels in its range.

#### 3.4.4 Single Source Power Assurance

All the major components - the engine, alternator, aftertreatment system, control system and canopy are designed, manufactured, and tested by certified by OEM.

Additionally, comprehensive aftersales support is provided to ensure reliable operation of the DG set.

### 3.5 Key features of Genset.

#### 3.5.1 Engine

- The generator set features a 6-cylinder, in-line, 4-stroke, radiator-cooled engine, designed for reliable and efficient performance.
- Robust and efficient air handling system with:
  - Dry type and replaceable paper element air cleaner with restriction indicator
  - Optimized turbocharger for increased altitude capabilities
- Optimized fuel consumption with common rail electronic injection
- Spin on single fuel filter with water separator
- Cooling system is designed and tested for 50°C ambient conditions
- Full flow spin on lube oil filter
- First fill of lube oil and coolant
- Electrical starter motor with soft start engagement feature
- Battery charging alternator
- 2 x 12 V DC battery
- Heated Architecture & HD Air cleaner

#### 3.5.2 Alternator

The generator set includes a high-quality, brushless alternator designed for reliable and efficient power generation.

- The generator set features a screen-protected, self-excited alternator with a revolving field, conforming to IS/IEC 60034-1 standards for enhanced performance and reliability.
- Starting capability
- Best in class efficiency
- Compact design with sealed bearings for longer life and lesser maintenance
- Impregnation on all wound components for better mechanical strength
- PMG and Space Heater

#### 3.5.3 Electronic Actuator Throttle Systems (EATS)

- Switch Back architecture for Emission Solutions
- Compact design enabling optimized genset size
- Integrated control module for engine and EATS
- Best in class proven technology for meeting stringent emission norms

### 3.6 Microprocessor-based generator set control system

- The control system is a microprocessor-based solution for monitoring, metering, and controlling generator sets. It features an LCD display and is designed to meet the requirements of modern engine-driven generator sets, including compatibility with suitable synchronizing relays.

- AMF Functionality
- Electronic Governing
- Auto Transfer Switch
- The control system is compatible with the Controller Area Network (CAN) protocol, specifically designed for real-time data exchange and communication between electronic control units.
- Sync Compatible (Capable to accept external speed signal from 3rd party sync controller).
- Intuitive operator interface which includes LED backlit 128X64 pixel graphic display with tactile feel soft-switches & generator set status LED lamps.
- Remote start-stop.
- Audible & Visual warning for Inducement.
- Suitable for FAE based engine architecture.
- Engine Metering: Oil pressure, Engine temperature, starting battery voltage, Engine running hours.
- AC Alternator Metering: L-L Voltage and L-N Voltage, Current (phase and total), kVA (phase and total) and Frequency. kwh, Total & per phase (kw & kVA), PF, Utility Voltage and Freq.
- Engine Protection: Low lube oil pressure, High/Low coolant temperature, Battery High/Low/Weak Volts, Fail to Crank/Start, Sensor failure, Cranking lockout, Low fuel level.
- AC Alternator Protection: Over/Under Voltage, Over/Under Frequency, Loss of AC sensing. Overspeed, Over Current, kW Overload.
- Data Logging: Engine hours, Control hours and up to 5 recent fault codes.
- Configurable glow plug control.
- 12/24 Volt DC operation.
- Sleep mode.
- Modbus interface (RS485 RTU).
- In Power compatible (PC based service tool).
- Certifications - meets the requirement of relevant ISO, EN, Mil Std. and CE standards.
- Maintenance due alarm based on Engine Run Time and due date.
- Fuel and DEF level visual display.
- Exerciser scheduler.

### 3.7 Acoustic Enclosure

- Material: CRCA sheet steel, powder-coated for corrosion resistance.
- Noise Level:  $\leq 75$  dB at 1 meter distance.
- Ventilation: Adequate ventilation for cooling and combustion air.
- Specially designed to meet stringent MoEF/ CPCB norms of 75 dBA@1mtr at 75% load under free field conditions.
- The acoustic enclosure is made CRCA sheets in Munsell green shade and a structural/sheet metal base frame painted in black 11 tank pretreatment process and UV resistant powder coating of all parts to withstand extreme environment.
- High quality noise absorbent and fire-retardant grade acoustic Insulation material (Rockwool) complying to IS 8183.
- Top lifting for easy handling at customer site.
- External fuel & DEF filling provision.

### 3.8 Silencer

- The generator set includes a hospital-grade silencer inside the canopy with a rain cap, optimized to meet stringent noise limits and specifically tuned to the Electronic Actuator Throttle System (EATS).
- Material: CRCA sheet steel, powder-coated for corrosion resistance
- Noise Level: ≤75 dB at 1 meter distance.
- Ventilation: Adequate ventilation for cooling and combustion air.

### 3.9 Mounting Arrangement

Engine and alternator are mounted on a common MS fabricated base frame with AVM pads  
Skid mounted radiator.

Base frame with integral fuel tank and DEF tank is provided with drain plug, air vent, inlet and outlet connection and provision for cleaning.

### 3.10 Remote monitoring system

- Compact & robust device.
- Real time DG status & monitoring.
- 4G compatible.
- Compatible for 12/24 V DC.
- Reports & Notification – Alerts & Warning.
- Isolated RS 485 interface.
- Device location using triangulation.

### 3.11 Cooling System

Type: Radiator-cooled with a pusher fan.

Ambient Temperature: Designed to operate efficiently at ambient temperatures up to 50°C.

Coolant: Ethylene glycol-based coolant with corrosion inhibitors.

### 3.12 Extension of Exhaust Stack Height

#### 3.12.1 General Requirements

Project: Installation of Extended Exhaust Stack for Diesel Generator Set.

Location: 220kV Switchyard Area.

Note: The inbuilt exhaust system of the diesel generator set is considered as per CPCB IV+ emission norms. This specification focuses on the extension of the stack height to ensure proper dispersion of exhaust gases.

#### 3.12.2 Materials

Exhaust Pipe: Stainless steel, 150 mm (6 inches) diameter, 3 mm wall thickness.

Extension Length: 2.2 meters (or as required to meet the specified stack height).

Flanges and Gaskets: High-temperature resistant materials.

Support Brackets: Galvanized steel.

Insulation: High-temperature insulation material for the exhaust pipe.

### 3.12.3 Fabrication and Installation

Welding: All welding shall be done by certified welders using appropriate welding techniques for stainless steel.

Flange Connections: Flanges shall be bolted with high-temperature resistant gaskets to ensure a leak-proof connection.

Support Structure: The exhaust stack shall be supported by galvanized steel brackets at regular intervals to ensure stability and minimize vibrations.

Insulation: The exhaust pipe shall be insulated with high-temperature insulation material to prevent heat loss and protect personnel.

Exhaust Pipe Diameter: Choose the diameter of the stack pipe to ensure smooth release of exhaust gases.

Wind Load Support: The support structure shall be designed to withstand front wind pressure, including the use of guy wires or additional lateral supports if necessary.

### 3.12.4 Testing/Inspection

Visual Inspection: All materials and welds shall be visually inspected for defects.

Leak Test: The exhaust system shall be subjected to a leak test to ensure there are no leaks in the system.

Vibration Test: The exhaust stack shall be tested for vibrations to ensure stability during operation.

Noise Level Test: If an additional silencer is installed, a noise level test shall be conducted to ensure compliance with noise regulations.

### 3.12.5 Compliance and Standards

Emission Standards: CPCB IV+ Emission Compliant.

Environmental Standards: NEC Bhutan.

Engineering Standards: Good Engineering Practice (GEP) for stack height.

### 3.12.6 Documentation

As-Built Drawings: Detailed as-built drawings of the extended exhaust stack installation.

Test Reports: Reports of all tests conducted, including visual inspection, leak test, vibration test, and noise level test.

Compliance Certificates: Certificates of compliance with CPCB and NEC Bhutan standards.

## 3.13 Electrical System

Battery: 24V DC, maintenance-free battery with charging alternator.

Circuit Breaker: MCCB with overload and short-circuit protection.

Earthing: Proper earthing arrangements as per IEC standards.

Safety and Protection.

Safety Features:

Emergency stop button.

Over-speed protection.

Low oil pressure shutdown.

High coolant temperature shutdown.

Battery charging alternator failure



Protective Devices: Circuit breakers, fuses, and relays to protect against electrical faults.

### 3.14 Testing Requirements

DG set shall be inspected & tested in presence of CHP engineer at supplier's works as per relevant standard and approved QA plan and at site as per approved Field QA plan. Supplier shall submit QA plan & field QA plan within 2 weeks after placement of order for approval.

In case the Supplier is not able to submit a report of type test(s) conducted in last five years from the date of bid opening or in case type test report(s) are not found to be meeting the specification/ relevant standard requirements, then all such tests shall be conducted under this Contract by the Supplier free of cost to CHP. Reports corresponding to the new tests shall be submitted to the CHP/Customer for approval. The tests shall be carried out at the manufacturer's plant before shipments at site during testing and commissioning as per the list but not limited to the following test:

#### 3.14.1 Factory Testing Requirements

##### 3.14.1.1 Load Test:

Gradual loading up to 100% of the rated capacity.

Sustained operation at 100% load for a minimum of 4 hours.

Monitoring of key parameters such as voltage, frequency, current, and temperature.

##### 3.14.1.2 Prime Power Test:

Operation at 75% of the rated capacity for a minimum of 8 hours.

Monitoring of fuel consumption, exhaust emissions, and overall efficiency.

##### 3.14.1.3 Functional Tests:

Verification of the proper operation of all components and systems, including:

Starting system.

Cooling system.

Lubrication system.

Electrical system.

Control and monitoring systems.

##### 3.14.1.4 Emissions Test:

Testing to ensure compliance with CPCB IV+ emission norms.

##### 3.14.1.5 Noise Level Test:

Verification that the generator set meets the specified noise level requirements.

#### **3.14.1.6 Safety and Protection Tests:**

Testing of safety features such as low lube oil pressure, high/low coolant temperature, over/under voltage protection, and more.

#### **3.14.2 Site Testing Requirements**

##### **3.14.2.1 Installation Verification:**

Ensure proper installation of the generator set, including alignment, connections, and mounting.

Load Test:

Gradual loading up to 100% of the rated capacity.

Sustained operation at 100% load for a minimum of 2 hours.

Monitoring of key parameters such as voltage, frequency, current, and temperature.

##### **3.14.2.2 Prime Power Test:**

Operation at 75% of the rated capacity for a minimum of 4 hours.

Monitoring of fuel consumption, exhaust emissions, and overall efficiency.

##### **3.14.2.3 Functional Tests:**

Verification of the proper operation of all components and systems, including:

Starting system.

Cooling system.

Lubrication system.

Electrical system.

Control and monitoring systems.

##### **3.14.2.4 Emissions Test:**

Testing to ensure compliance with CPCB IV+ emission norms.

##### **3.14.2.5 Noise Level Test:**

Verification that the generator set meets the specified noise level requirements.

##### **3.14.2.6 Safety and Protection Tests:**

Testing of safety features such as low lube oil pressure, high/low coolant temperature, over/under voltage protection, and more.

## **4 500kVA Genset -Technical Data Sheet.**

### **4.1 Generator set specification**

Model	To be specified by Bidder
Duty	Prime
Power Rating kVA/KWe	500/440
No. of Phases	3 Phase

Output Voltage and Frequency (V and Hz)	415 V, 50 Hz
Power Factor	0.8
Current (A)	695.6
RPM	1500

#### 4.2 Engine Specifications

Make	To be filled by bidder
Model	To be filled by bidder
Required Power for Rated kVA (hp)	594
Cooling	Liquid Cooled (EG Complete 50:50)
DEF	AUS 32 (Premix) as per ISO 22241
Aspiration	Turbocharged, Charge Air Cooled
No. of cylinders	6, In-line
Bore (mm) x Stroke (mm)	135 x 169
Compression ratio	23:1
Displacement (liter)	14.5
Fuel	High Speed Diesel
Performance class of generator set	ISO 8528-5 G2
Starting system	24 V DC Electrical
Lube oil specification	CK4
Lube oil sump capacity, High-Low level (litre)	50-35
Total lubrication system capacity (litre)	52
Total coolant capacity (litre)	67
Exhaust pipe size (inch)	6
Total wet weight (Engine + Radiator) * (kg)	1460
Length X Width X Height (Coolpac) (mm)	2400 X 1540 X 1716
Mean Piston speed (m/s)	8.45
Combustion air intake @100% load (±5%) (cfm)	556
Exhaust Temperature (OC)	980

#### 4.3 Alternator Specifications

Make	To be specified by bidder
Alternator Frame	To be specified by bidder
Enclosure	IP 23
Voltage regulation (Max.)	±1%
Class of Insulation	H Class
Winding Pitch	2/3
Stator Winding	Double layer concentric
Rotor	Dynamically Balanced
Waveform distortion/ Total Harmonic Distortion	No load < 1.5%, Non distorting balanced linear load < 5 %
Maximum Unbalanced	less than or equal to 25%

Load across phases	
Telephonic Harmonic	< 2%

#### 4.4 Technical Compliance Form.

##### 4.4.1 Generator set specification

Parameters	Specification	Bidder's compliance (Yes/No)	Remarks (if any)
Model	To be specified by Bidder		
Duty	Prime		
Power Rating kVA/KWe	500/440		
No. of Phases	3 Phase		
Output Voltage and Frequency (V and Hz)	415 V, 50 Hz		
Power Factor	0.8		
Current (A)	695.6		
RPM	1500		

##### 4.4.2 Engine Specifications

Make	To be filled by bidder		
Model	To be filled by bidder		
Required Power for Rated kVA (hp)	594		
Cooling	Liquid Cooled (EG Complete 50:50)		
DEF	AUS 32 (Premix) as per ISO 22241		
Aspiration	Turbocharged, Charge Air Cooled		
No. of cylinders	6, In-line		
Bore (mm) x Stroke (mm)	135 x 169		
Compression ratio	23:1		
Displacement (liter)	14.5		
Fuel	High Speed Diesel		
Performance class of generator set	ISO 8528-5 G2		
Starting system	24 V DC Electrical		
Lube oil specification	CK4		
Lube oil sump capacity, High-Low level (litre)	50-35		
Total lubrication system capacity (litre)	52		

Total coolant capacity (litre)	67		
Exhaust pipe size (inch)	6		
Total wet weight (Engine + Radiator) * (kg)	1460		
Length X Width X Height (Coolpac) (mm)	2400 X 1540 X 1716		
Mean Piston speed (m/s)	8.45		
Combustion air intake @100% load (±5%) (cfm)	556		
Exhaust Temperature (OC)	980		

#### 4.4.3 Alternator Specifications

Make	To be specified by bidder		
Alternator Frame	To be specified by bidder		
Enclosure	IP 23		
Voltage regulation (Max.)	±1%		
Class of Insulation	H-Class		
Winding Pitch	2/3		
Stator Winding	Double layer concentric		
Rotor	Dynamically Balanced		
Waveform distortion/ Total Harmonic Distortion	No load < 1.5%, Non distorting balanced linear load < 5 %		
Maximum Unbalanced Load across phases	less than or equal to 25%		
Telephonic Harmonic	< 2%		

#### Drawings (if applicable)

These Bidding Documents include **“no”** drawings

## SECTION V. SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract (SCC) shall supplement and/or amend the General Conditions of Contract (GCC).	
1.1 (xviii)	Final Destination(s) is: <b>CIF Central Store, Chhukha Hydropower Plant, Chhukha, Bhutan</b>
1.1 (xvix)	The Purchaser is: <b>CHP, DGPC, Chhukha</b>
3.5 (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: <b><i>Not Applicable</i></b>
3.5 (b)	The term <b>CIF</b> and other similar terms shall be as per the version of Incoterms <b>2020</b>
5.1	The language shall be: <b>“English”</b>
7.1	For notices, the addresses shall be:  Head, Technical Support Unit Chhukha Hydropower Plant Druk Green Power Corporation, Chhukha, Bhutan Email: b.rai105@drukgreen.bt
9	The rules of procedure for arbitration proceedings pursuant to GCC Sub-Clause 10.2 shall be as follows  <i>In the case of a dispute between the Purchaser and a Bhutanese Supplier, the dispute shall be referred to adjudication or arbitration in accordance with Alternative Dispute Resolution Act of Bhutan 2013</i>
13.2	The prices charged for the Goods supplied and the related Services performed <b>“shall not”</b> be adjustable.
16.1	The amount of the Performance Security shall be 10% on the awarded Contract value.
16.3	The types of acceptable Performance Securities are:  <i>(i) Unconditional bank guarantee issued by a reputable financial institution acceptable to any banks in Bhutan, in the form provided for in the Contract or in any other form acceptable</i> <i>(ii) Cash warrant, or</i> <i>(iii) Demand Draft</i>

20.1	Details of Shipping and other Documents to be furnished by the Supplier are:  For Bhutanese Bidders: <i>Invoice and Packing list</i>																				
22.2	Subcontracting shall be <b>“Not allowed”</b>																				
25.1.1	The inspections and tests shall be done at site after delivery of the consignments																				
25.2	Inspections and tests shall be conducted at: <b>Chhukha Hydropower Plant, Chhukha.</b>																				
26.2	The packing, marking and documentation within and outside the packages shall be: clear and strong to withstand rough handling.																				
27.1	Responsibility for transportation of the Goods shall be as specified in the Incoterms.																				
28.3	The period of validity of the Warranty shall be: <b>“One years from handing over of site to CHP”</b>																				
28.4 & 28.5	The period for repair or replacement shall be: <b>Fifteen (15) days.</b>																				
29.1	The applicable rate for liquidated damages for delay shall be: <b>0.30%.</b>  The maximum number of liquidated damages shall be: <b>10% of the total Executed value</b>																				
31.1	<p>The insurance coverage shall be as specified in the Incoterms. If not in accordance with Incoterms, insurance shall be as follows:</p> <table><tr><th>SN</th><th>Insurance</th><th>Amount Insured</th><th>Deductible</th></tr><tr><td>1</td><td>Loss of or damage to the Works including Employer issued materials, if any</td><td>110% of the cost of Works</td><td>Minimum as per insurance policy</td></tr><tr><td>2</td><td>Loss of or damage to the Contractor’s tools and plant</td><td>110% of the cost of tools and plant</td><td>Minimum as per insurance policy</td></tr><tr><td>3</td><td>Loss of or damage to the property other than Works including those of third parties</td><td>As permissible under the policy</td><td>Not applicable</td></tr><tr><td>4</td><td>Injury or death of personnel belonging to the Contractor, Employer or any other party</td><td>As permissible under the policy</td><td>Not applicable</td></tr></table>	SN	Insurance	Amount Insured	Deductible	1	Loss of or damage to the Works including Employer issued materials, if any	110% of the cost of Works	Minimum as per insurance policy	2	Loss of or damage to the Contractor’s tools and plant	110% of the cost of tools and plant	Minimum as per insurance policy	3	Loss of or damage to the property other than Works including those of third parties	As permissible under the policy	Not applicable	4	Injury or death of personnel belonging to the Contractor, Employer or any other party	As permissible under the policy	Not applicable
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3	Loss of or damage to the property other than Works including those of third parties	As permissible under the policy	Not applicable																		
4	Injury or death of personnel belonging to the Contractor, Employer or any other party	As permissible under the policy	Not applicable																		





#### SECTION IV: GENERAL CONDITIONS OF CONTRACT

## 1. Definitions

1.1. The following words and expressions shall have the meanings hereby assigned to them:

- (i) **Affiliate** means business concerns, organizations, or individuals that control each other or that are controlled by a common third party. Control may include shared management or ownership; common use of facilities, equipment and resources; or family interests.
- (ii) **Award of Contract** means the decision of the Purchaser to enter into a contract with a supplier for delivery of specified goods which has been conveyed to the contractor through a purchase order and/or signing of a contract.
- (iii) **Bid** an offer to execute works in accordance with the terms and conditions set out in the bid documents inviting such offers. The term “tender” is synonymous with the term “bid”;
- (iv) **BDS** means Bid Data Sheet
- (v) **Bidder** means an eligible individual or legal entity that participates in a competitive procurement process defined by this Manual.
- (vi) **Bidding Documents** means the set of documents issued by the Purchaser to potential Bidders in which the specifications, terms and conditions of the proposed procurement are prescribed. The terms “bidding documents”, “tender documents” and “bid documents” are synonymous.
- (vii) **Contract Documents** means the documents listed in the Contract Agreement, including any amendments thereto.
- (viii) **Contract Price** means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom as may be made pursuant to the Contract till the completion of the Contract, the price so adjusted shall be termed as Executed Price.
- (ix) **Purchaser** means the purchaser including its successors and permitted assigns. The term “Purchaser” and “Purchaser” are synonymous.
- (x) **Day** means calendar day.
- (xi) **Delivery** means the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract Documents.
- (xii) **GCC** means the General Conditions of Contract.

- (xiii) **Goods** means any object in solid, liquid or gaseous form, tangible and intangible that has an economic utility or value, which can be exchanged or traded along with related service.
- (xiv) **ITB** means Instructions to Bidders
- (xv) **Notification of Award** means the letter issued by The Purchaser conveying the acceptance of the Bid of the successful Bidder subject to such terms and conditions as may have been stated therein.
- (xvi) **Party** means the Purchaser or the Supplier, as the context requires, and “parties” means both of them.
- (xvii) **Price schedule:** summary of the quantities, measurement unit and unit prices of the items to be procured under the contract. The term “Bill of Quantities” is synonymous.
- (xviii) **Final Destination** means the place named in the SCC.
- (xix) **Purchaser** means The Purchaser (specified in SCC.)
- (xx) **Related Services** means Includes services such as installations, supervision, training, initial maintenance, insurance, testing and commissioning related to the Goods.
- (xxi) **SCC** means the Special Conditions of Contract.
- (xxii) **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.
- (xxiii) **Supplier** a legal entity entering into a contract with the Purchaser for the supply of Goods.
- (xxiv) **Technical Specifications** means specifications of the Goods incorporated in the bidding documents and forming part of the contract and includes any modification or amendment thereto or any addition thereto or any deduction there from, as may be made with the mutual agreement of the Purchaser and Supplier.

## 2. Contract Documents

- 2.1. Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract Agreement shall be read as a whole.

### 3. Interpretation

- 3.1. If the context so requires it, singular means plural and vice versa.
- 3.2. A “law” shall be construed as a reference to such law including its amendments or re-enactments from time to time.
- 3.3. A “person” shall be construed as a reference to any person, firm, Purchaser, corporation, society, trust, government, or agency of a government or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests.
- 3.4. The words “hereof” or “herein” if and when used in the Contract Documents shall mean a reference to the Contract Documents of this Contract.
- 3.5. 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 there under shall be as prescribed by Incoterms.
  - b) The terms EXW, CIF, CIP, DDP and other similar terms as specified in SCC, 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
- 3.6. 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.
- 3.7. Non-waiver
- a) Subject to GCC 0(a) 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.

- b) 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.

3.8. 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.

3.9. Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements of the parties with respect thereto made prior to the date of Contract.

**4. Fraud and Corruption**

- 4.1. If the Purchaser determines that the Supplier has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for or in executing the Contract then The Purchaser may, after giving fourteen (14) days' notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the Contract, and the provisions of GCC 37 shall apply as if such termination has been made under GCC 37.1.

- 4.2. For the purposes of this Sub-Clause:

- a) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value" to influence improperly the actions of another party;
- b) "fraudulent practice" is any intentional act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- c) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- d) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a Party;
- e) "obstructive practice" is:
  - i. deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order materially to impede any

investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- ii. acts intended materially to impede the exercise of the inspection and audit rights of the Purchaser and/or any other relevant RGoB agency provided for under GCC 21.

4.3. Should any employee of the Supplier be determined to have engaged in corrupt, fraudulent, collusive, coercive or obstructive practice during the purchase of the Goods, then that employee shall be removed.

4.4. Any communications between the Supplier and the Purchaser related to matters of alleged fraud or corruption must be made in writing.

## 5. Language

5.1. The Contract, as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the SCC. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the SCC, in which case, for purposes of interpretation of the Contract, the translation shall govern.

5.2. The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

## 6. Joint Venture, Consortium

6.1. If the Supplier is a Joint Venture, Consortium (JV/C), all of the parties shall be jointly and severally liable to the Purchaser for the fulfilment of the provisions of the Contract and shall designate one party to act as a lead with authority to bind the (JV/C). The composition or the constitution of the joint venture, consortium shall not be altered without the prior consent of the Purchaser.

## 7. Notices

7.1. 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.

7.2. A notice shall be effective when delivered or on the notice’s effective date, whichever is later.

## 8. Governing Law

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

## 9. Settlement of Disputes

- 9.1. The Purchaser 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.
- 9.2. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute. No arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.
- 9.3. Notwithstanding any reference to arbitration herein,  
(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and  
  
(b) the Purchaser shall pay the Supplier any monies due the Supplier.

## 10. Eligibility

- 10.1. The Supplier and its sub-contractors shall have the nationality of an eligible country. A Supplier and its sub-contractors shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.
- 10.2. All Goods and Related Services to be supplied under the Contract shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the Goods have been grown, mined, 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.

## 11. Supplier's Responsibilities

- 11.1. The Supplier shall supply all the Goods and Related Services included in the Scope of Supplies in accordance with GCC 23, and the delivery and completion requirements as per GCC 20.

## 12. Purchaser's Responsibilities

- 12.1. 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 Purchaser 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.

## 13. Contract Price

- 13.1. The Contract Price shall be the price payable to the Supplier 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.
- 13.2. 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, with the exception of any price adjustments authorized in the SCC.

## 14. Terms of Payment

- 14.1. The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the SCC.
- 14.2. The Supplier shall submit to the Purchaser, the invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC 20 and upon fulfilment of all the obligations stipulated in the Contract.
- 14.3. Payments shall be made promptly by the Purchaser, no later than thirty (30) days after the submission of verified invoice or request for payment by the Supplier, and the Purchaser has accepted it.
- 14.4. The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the Bid Price is expressed.

## 15. Taxes and Duties



- 15.1. For Goods manufactured outside Bhutan the Supplier shall bear and pay all applicable taxes, stamp duties, license fees and other similar levies imposed outside and inside Bhutan as applicable in line with the Incoterms.
- 15.2. 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 Purchaser.
- 15.3. At the time of release of payment, tax shall be deducted at source (TDS) from Bhutanese Bidders and International Bidders as specified in the SCC from the gross amount of bills. The Purchaser shall furnish necessary TDS Certificate to the Bidders, issued by the Department of Revenue & Customs, RGoB.
- 15.4. If any tax exemptions, reductions, allowances or privileges are available to the Supplier in the Kingdom of Bhutan, if applicable, the Purchaser shall use its best endeavours to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

## 16. Performance Security

- 16.1. The Supplier shall, provide a Performance Security for the due performance of the Contract in the amount and currency specified in the SCC.
- 16.2. The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 16.3. The Performance Security shall be denominated in the currency (ies) of the Contract or in a freely convertible currency acceptable to the Purchaser, shall be valid until the successful completion of the Supplier's performance obligations under the Contract, including any warranty obligations, and shall be in one of the forms stipulated by the Purchaser in the SCC.
- 16.4. The Performance Security shall be discharged by the Purchaser and returned to the Supplier on completion of the Supplier's performance obligations under the Contract, including any warranty obligations.

## 17. Copyright

- 17.1. The copyright in all drawings, documents and other materials containing data and information furnished to the Purchaser by the Supplier shall remain vested in the Supplier, or, if they are furnished to the Purchaser 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.

## 18. Confidential Information

- 18.1. The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other Party hereto, 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 Sub-contractors such documents, data and other information as it receives from the Purchaser to the extent required for the Sub-contractor to perform its obligations under the Contract, in which event the Supplier shall be under obligation to have a clause in the contracts with their sub-contractors regarding confidentiality similar to that provided herein.
- 18.2. The Purchaser 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 Purchaser for any purpose other than the design, procurement of plant and equipment, construction or such other work and services as are required for the performance of the Contract.
- 18.3. The obligation of a Party under GCC 18.1. and 18.1 above, however, shall not apply to information that:
- a) the Purchaser or the Supplier needs to share with the RGoB;
  - b) is already in public domain now, or enters the public domain during the execution of the contract 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.
- 18.4. The above provisions of GCC 18 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 performance of the Contract or any part thereof.
- 18.5. The provisions of GCC 18 shall survive completion or termination, for whatever reason, of the Contract.

## 19. Patent Indemnity

- 19.1. The Supplier shall, subject to the Purchaser's compliance with GCC 19.2, indemnify and hold harmless the Purchaser 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 Purchaser 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.

- 19.2. 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.
- 19.3. If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC 0, the Purchaser shall promptly give the Supplier notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- 19.4. If the Supplier fails to notify the Purchaser within thirty (30) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 19.5. The Purchaser 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 so doing.
- 19.6. The Purchaser 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 Purchaser.

## 20. Delivery and Documents

- 20.1. Subject to GCC 34.1, 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.

## 21. Inspection and Audits

- 21.1. The Supplier shall permit the Purchaser and/or persons appointed by the Purchaser 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 Purchaser if so, required by the Purchaser. The Supplier's attention is drawn to GCC 4, which provides, inter alia, that acts intended materially to impede the exercise of the inspection and audit rights provided for under this GCC 21.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility under ITB Sub-Clause 2.1 (c) of the Instructions to Bidders that preceded the placement of the Contract of which these GCC form a part).

## 22. Subcontracting

- 22.1. The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Such notification, in the original Bid or later, shall not relieve the Supplier of any of its obligations, duties, responsibilities or liabilities under the Contract.
- 22.2. Subcontracts shall comply with the provisions of GCC 4 and 10. Refer to SCC if Subcontracting is allowed.

## 23. Scope of Supplies

- 23.1. The Goods and Related Services to be supplied shall be as specified in the Schedule of Supply.
- 23.2. 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.

## 24. Specification and Standards

- 24.1. Technical Specifications and Drawings:
- a) the Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards stipulated in Schedule of Supply 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.

- b) 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 Purchaser, by giving a notice of such disclaimer to the Purchaser.
- c) 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 Purchaser and shall be treated in accordance with GCC 34.

## 25. Tests and Inspections

- 25.1. At its own expense and at no cost to the Purchaser, the Supplier shall carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC. The purchaser or its representative shall have the right to inspect and / or to test the Goods to confirm their conformity to the specifications.
- 25.2. 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 25.3, 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 Purchaser.
- 25.3. The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC 25.1, provided that the Purchaser 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.
- 25.4. Whenever the Supplier is ready to carry out any such test and inspection, it shall give reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 25.5. The Purchaser 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.

- 25.6. The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 25.7. The Purchaser 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 Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC 25.4.
- 25.8. 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 Purchaser or its representative, nor the issue of any report pursuant to GCC 25.6, shall release the Supplier from any warranties or other obligations under the Contract.

## 26. Packing and Documents

- 26.1. The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case sizes and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 26.2. 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 Purchaser.

## 27. Transportation

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

## 28. Warranty

- 28.1. 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.
- 28.2. Subject to GCC 24.1b), 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.
- 28.3. Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months or 18 months from the day of supply or from the date of putting the item into use as the case may be.
- 28.4. 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 Purchaser.
- 28.5. If, having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

## 29. Liquidated Damage

- 29.1. Except as provided for under GCC 33, 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 Purchaser 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 of the delivered price of the delayed Goods or unperformed Services for each day or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC 37.

## 30. Limitation of Liability

- 30.1. Except in cases of gross negligence or wilful misconduct:
  - a) 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 Purchaser; and

- b) the aggregate liability of the Supplier to the Purchaser, 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 Purchaser with respect to patent infringement.

### 31. Insurance

- 31.1. Unless otherwise specified in the SCC the Goods supplied under the Contract 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.

### 32. Change in Laws and Regulations

- 32.1. If, after thirty (30) days prior to the date of Bid submission, any law, regulation, ordinance, order or bylaw 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 13.2.

### 33. Force Majeure

- 33.1. 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.
- 33.2. 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 Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 33.3. If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser 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.

#### **34. Change Orders and Contract Amendments**

- 34.1. The Purchaser may at any time order the Supplier through notice in accordance with GCC 7 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 is to be specifically manufactured for the Purchaser;
  - b) the method of shipment or packing; the place of delivery; and the Related Services to be provided by the Supplier.
- 34.2. 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 Purchaser's change order.
- 34.3. 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.
- 34.4. 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.

#### **35. Extension of Time**

- 35.1. 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 20, the Supplier shall promptly notify the Purchaser in writing of the delay, the likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser 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.
- 35.2. Except in case of Force Majeure, as provided under GCC 33, 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 29, unless an extension of time is agreed upon, pursuant to GCC 35.1.

### 36. Export Restriction

- 36.1. Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, 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, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser 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 Purchaser's convenience pursuant to GCC 37.3.

### 37. Terminations

#### 37.1. Termination for Default:

- a) The Purchaser, 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 Purchaser pursuant to GCC 35.1; or
  - ii. if the Supplier fails to perform any other obligation under the Contract; or
  - iii. if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC 4, in competing for or in executing the Contract.
- b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC 37.1a), the Purchaser 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 Purchaser for any additional costs for such similar Goods or Related Services. Wherever the Contract is terminated in part, the Supplier shall continue performance of the Contract to the extent not terminated.

#### 37.2. Termination for Insolvency:

The Purchaser 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 Purchaser.

37.3. Termination for Convenience.

- a) The Purchaser, 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 Purchaser'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 Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser 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.

38. Assignment

- 38.1. Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with the prior written consent of the other party.

## SECTION VI CONTRACT FORMS

### I. Contract Agreement

*[The successful Bidder shall fill in this form in accordance with the instructions indicated]*

THIS AGREEMENT is made on the *[insert number]* day of *[insert month]*, *[insert year]*,

#### BETWEEN

- (1) *[insert complete name of Purchaser]*, a Purchaser registered under the ..... the laws of Bhutan and having its principal place of business at *[insert address of Purchaser]* (hereinafter called “The Purchaser”),  
and
- (2) *[insert name of Supplier]*, 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 Purchaser invited Bids for certain Goods and related 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 are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between The Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract, viz.:
  - (a) This Contract Agreement;
  - (b) The Purchaser’s Notification of Award of Contract;
  - (c) Integrity Pact;
  - (d) The Special Conditions of Contract;
  - (e) The General Conditions of Contract;
  - (f) Technical Requirements (including Schedule of Supply and Technical Specifications.)
  - (g) The Supplier’s Bid and original Price Schedules;
  - (h) The form of Performance Security;
  - (i) The form of Bank Guarantee for Advance Payment;
  - (j) Minutes of Contact Negotiation Meeting (if any)
  - (k) *[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 Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with The Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Purchaser 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 and on behalf of the Purchaser

Signed: *[insert signature, affix legal stamp]*

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert signature] [insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier, affix legal stamp]*

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert signature] [insert identification of official witness]*

## II. Performance Security

*[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]*

Tender No. .... *[ insert tender number]*

Name of the Tender: ..... *[insert name of the tender]*

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

**Beneficiary:** *[insert complete name of the Purchaser]*

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

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s)]*<sup>1</sup> *in figures and in 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 sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*,<sup>2</sup> 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 *[six months]* *[one year]*, in response to the Purchaser'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]*

<sup>1</sup> \_\_\_\_\_  
The Bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Purchaser.

<sup>2</sup> Date established in accordance with Clause 16.4 of the General Conditions of Contract ("GCC"). The Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this Guarantee from the Bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee.



### III. Bank Guarantee 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]*

Tender No. .... *[insert tender number]*

Name of the Tender: ..... *[insert name of the tender].*

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

**Beneficiary:** ..... *[insert Name and address of the Purchaser]*

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

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)]*<sup>1</sup> *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 account 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]*<sup>2</sup>. We agree to a one-time extension of this Guarantee for a period not to exceed *[six months]* *[one year]*, in response to The Purchaser'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]*

<sup>1</sup> The bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency (ies) of the Contract or a freely convertible currency acceptable to the Purchaser.

<sup>2</sup> Insert the Delivery date stipulated in the Contract Delivery Schedule. the Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this Guarantee from the bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee.

