

Bhutan Power Corporation Limited
Distribution Services
Distribution Construction Department
Electrification Division
Thimphu: Bhutan



Specification No. BPC/DS/DCD/ED/C-03

Bidding Document
For
Supply & Construction of UG Distribution Network
for Dhamdum Industrial Park, Samtse

Volume II – Form and GTPs

September 2020

Volume II – Part 1

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Section 3A – FORMS

1. FORM OF BID (Technical)

NAME OF CONTRACT: Supply & Construction of UG Distribution Network for
Dhamdum Industrial Park, Samtse

To: General Manager,
Distribution Construction Department,
Distribution Services,
Bhutan Power Corporation Limited,
Thimphu: Bhutan.

Gentlemen,

1. Having examined the Condition of Contract, Specification, Drawings and Bill of Quantities and Addenda for the execution of the above-named works, we, the undersigned, offer to execute and complete such works and remedy any defects therein in conformity with the Condition of Contract, Specification, Drawings, Bill of Quantities, Annexure and Addenda as specified in the Appendix to Bid or such other terms as may be ascertained in accordance with the said Conditions.
2. We undertake, if our Tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Tender.
3. We agree to abide by this Tender for the period of 120 days (April 9, 2021) from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
4. The Bid is submitted under our covering letter reference _____ dated _____ and the completed Bid documents and other information, required by the Instruction to Bidders, which are enclosed therewith all of which shall be read and construed as forming part hereof.
5. Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof, shall constitute a binding contract between us.
6. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this _____ Day of _____ 2020

Signature _____ in the capacity of _____

Duly authorized to sign tenders for and on behalf of _____

(IN BLOCK CAPITALS)

Address _____

Witness _____

Address _____.

Occupation _____

2. FORM OF BID (Financial)

NAME OF CONTRACT: Supply & Construction of UG Distribution Network for
Dhamdum Industrial Park, Samtse

To: General Manager,
Distribution Construction Department,
Distribution Services,
Bhutan Power Corporation Limited,
Thimphu: Bhutan.

Gentlemen,

1. Having examined the Condition of Contract, Specification, Drawings and Bill of Quantities and Addenda for the execution of the above-named works, we, the undersigned, offer to execute and complete such works and remedy any defects therein in conformity with the Condition of Contract, Specification, Drawings, Bill of Quantities, Annexure and Addenda for the sum of

as specified in the Appendix to Bid or such other sums as may be ascertained in accordance with the said Conditions.
2. We undertake, if our Tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Tender.
3. We agree to abide by this Tender for the period of 120 days (April 9, 2021) from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
4. The Bid is submitted under our covering letter reference _____ dated _____ and the completed Bid documents and other information, required by the Instruction to Bidders, which are enclosed therewith all of which shall be read and construed as forming part hereof.
5. Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof, shall constitute a binding contract between us.
6. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this _____ Day of _____ 2020

Signature _____ in the capacity of _____

Duly authorized to sign tenders for and on behalf of _____

(IN BLOCK CAPITALS)

Address _____

Witness _____

Address _____.

Occupation _____

3. APPENDIX TO BID

The bidders shall fill the Appendix to Bid.

Sub clause

Amount of Performance Security	10.1	Ten (10) percent of the contract price
Time for Completion	25.1	Eight (8) months from the date of handing over the site
Amount of Liquidated Damages	27.1	0.1% for every day of delay of the price of each package
Limit of Liquidated Damages	27.1	Ten (10) percent of the total contract Price of each package
Defects Liability Period	1.1.11	One (1) year from the taking over of the works
Retention Money	33.7	Ten(10) percent of the interim payment certificates

4. FORM OF BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [Name of Bidder] (hereinafter called “the Bidder”) has submitted his bid dated _____ [date] for the Supply & Construction of Distribution Network for Dhamdum Industrial Park, Samtse (hereinafter called “ the Bid”).

KNOW ALL MEN by these presents that We _____ [Name of Bank] of _____ [Name of Country] having our registered office at (hereinafter called the “ Bank”) are bound unto the sum of _____ [Mention amount in figure and in words] for which payment well and truly to be made to the said Employer, the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of 2020.

THE CONDITIONS of this obligation are:

If the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid: or

If the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instruction of Bidders: or

If the Bidder having been notified of the acceptance of his Bid by the Employer during the period of bid validity:

- a) fails or refuses to execute the Form of Agreement in accordance with the Instruction to Bidders, if required; or
- b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders,

we undertake to pay to the Employer up to the above amount upon the receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____ days beyond the period of bid validity as stated in the instruction to bidders or as it may be extended by the Employer, notice of which extensions(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____
(Signature, Name and Address)

5. AGREEMENT (To be used later)

This Agreement made the _____ day of _____ between Bhutan _____ (hereinafter called “the Employer”) of the one part _____ (hereinafter called “the Contractor”) of the other part.

Whereas the Employer is desirous that certain Works should be executed by the Contractor namely _____ thereof and has accepted a bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein in the sum of _____ (herein called the “Contract Price”)

Now it is agreed 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 hereinafter referred to.
2. The contract shall consist of this contract agreement form and the following documents and the drawings, specifications and other documents referred to therein (herein called the “Contract Documents”), all of which by this reference are incorporated herein and made part thereof. The following document shall be deemed to form and be read and construed as part of this Agreement, viz:
 - i. This Agreement
 - ii. The Letter of Acceptance;
 - iii. The said Bid along with clarifications and correspondence from the date of Bid Opening to signing of Contract Agreement;
 - iv. The Technical Specifications and the Scope of Works as indicated in BPC’s bid document read along with all amendments thereof;
 - v. The Drawings; and
 - vi. The Priced Bill of Quantities.
 - vii. Any other document forming Part of the Contract.
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provision of the Contract at the times and in the manner prescribed by the Contract , the total estimated contract price and details of which are indicated in the Contract Price Schedule enclosed, all the unit rates therein being firm and not subject to any Price Variation provisions of the Original Contract.
5. Any notice under the contract shall be in the form of a letter, or facsimile. Notices to either party shall be given to the following address, unless subsequently modified by either party

in writing at the following address:

Client's Address

The General Manager,
Distribution Construction Department
Bhutan Power Corporation Limited
Post Box 580
Thimphu: Bhutan

Tel: +975-2-333819 (Direct) /325095

Fax: +975-2-335531

And notice to the Contractor shall be properly addressed to:

Tel:

Fax:

Email:

IN WITNESS WHEREOF, the parties hereto have caused the agreement to be signed in their respective names as on the date written.

SIGNED, SEALED AND DELIVERED

Binding Signature of Employer

Binding Signature of Contractor

Signed in the presence of:

Witness of Employer

Witness of Contractor

6. PERFORMANCE BANK GUARANTEE (To be used latter)

To: _____ (Name of Employer)
_____ (Address of Employer)

WHEREAS _____ [Name and address of Contractor] (hereinafter called “ the Contractor”) has undertaken, in pursuance of Contract No. _____ dated _____ to execute the complete works related to supply, construction, erection, testing and commission of 33/11 kV substations (hereinafter called “the Contract”);

AND WHEREAS it has been stipulated by you in the said contract that the Contractor shall furnish you with a Bank Guarantee by a recognized Bank for the same specified therein as security for compliance with his obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE, we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ (amount of Guarantee) _____ (in word), such sum being payable in the currency in which the Contract Price is payable, and we undertake to pay you , upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ (amount if Guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the date of taking over of the works and release of Performance Certificate by the Employer. A separate Bank Guarantee covering defects liability period will be necessary.

SIGNATURE AND SEAL OF THE GUARANTOR _____
NAME OF BANK _____
ADDRESS _____
DATE _____

7. BANK GUARANTEE FOR ADVANCE PAYMENT (To be used latter)

To: _____ (Name of Employer)
_____ (Address of Employer)
_____ (Name of the Contract)

Gentlemen:

In accordance with the provisions of the Terms & Condition of Contract, _____ [Name and address of Contractor] (hereinafter called “the Contractor”) shall deposit with the _____ (name of Employer), a bank guarantee for advance under the said Clause of the Contract in an amount of _____ (amount of Guarantee) _____ (in words).

We, the _____ (bank or financial institutions), as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ (name of Employer), on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding _____ (amount of Guarantee) _____ (in words).;

We further agree that no change or addition to or other modification of the terms of the contract or of works to be performed thereunder or of any of the Contract documents which may be made between, _____ (name of Employer), and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid for the whole contract period and until the advance payments are fully recovered.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ (name of Employer), received full repayment of the same amount from the Contractor.

SIGNATURE AND SEAL OF THE GUARANTOR

NAME OF BANK _____

ADDRESS _____

DATE _____

8. DEVIATIONS FROM AND EXCEPTION TO BID DOCUMENT

The Bidder shall specify below, in detail, all deviations from and exceptions to the Bid Document. Any entry shall be referenced to the Bid Document Clause No. 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 exceptions listed in this Schedule.

No deviation from and exception to the Bid Document shall be made subsequently to the Contract without the written approval of the Employer.

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

Declaration: This page and attached Pages of deviations from the Bid Document is a complete record of such deviations.

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

Signature of Bidder:

Place & Date

9. PROPOSED JV PARTNER

Bidder shall submit a list of all JV partners they propose to employ together with a brief description of the Plant of Works they propose to hire.

Equipment they propose to hire	Proposed JV Partner with details of JV agreement and responsibility of each partner.

Signature of Bidder:

Place & Date:

10. CONTRACOTR’S KEY PERSONNEL

The Bidder shall submit an organization structure chart and summaries below the names of all key personnel whom they or their major sub-contractors propose to employ on the works together with a brief resume of their qualification and experience. These persons shall be available at the site and changes can be done only after due approval of BPC.

Organization Structure Ref. No.	Position	Name	CV or Resume of previous Experience, Responsibilities and Employer

The duties and responsibilities of the above personnel should be shown on the organization structure chart (showing head office and site responsibility of key personnel). Site and Office organ gram shall be submitted.

Signature of Bidder:

Date:

11. BIDDER'S EXPERIENCE

Bidder shall state below the relevant project experience.

Items/Group of Items	Details of Bidder's Experience	Detail of JV/Sub-Contractor's Experience

Signature of Bidder:

Date:

12. QUALIFICATION REQUIREMENT OF BIDDER'S EXPERIENCE

Bidder shall furnish this information for such works which have been carried out during last ten (10) years and which are under successful operation for at least three years. Supporting documents shall be enclosed in respect of minimum quantum of works as per Qualification criteria given in Section 1 of this bidding document.

PAST EXPERIENCE OF BIDDER AS ERECTOR

Sl.# .	Name & Address of Clients	Name of Work	Voltage Level	Details of work carried out	Contract period	Start date	End date	Value of Works

Performance certificates to be enclosed

Signature of Bidder:

Date:

13. STATUS OF CONTRACTOR'S IN PROGRESS

Give full information of all the uncompleted works on the Contract now in progress.

Name of Project	Country	Employer/Clients	Contract Amount (Currency)	Amount Completed (Currency)	Date of Commencement	Schedule date of completion
TOTAL						

Signature of Bidder:

Date:

14. FINANCIAL STATUS OF BIDDER

Fill in the blanks for the last Three (3) years in the original currency and also attach copies of the Balance Sheets for the se years.

1.	Capital:	_____
2.	Total current assets:	_____
2.1	Total cash and deposit:	_____
2.2	Deposits with bids or otherwise as guarantees (due within 90 days)	_____
2.3	Accounts receivable from completed contracts (due within 90 days)	_____
2.4	Amount receivable after deducting retention from uncompleted contracts (due within 90 days)	_____
2.5	Stocks and bonds at present market value	_____
2.6	Buildings and loans at present market value	_____
2.7	Life insurance at cash surrender value (for an individual or partnership only)	_____
2.8	Other current assets	_____
3.	Total current liabilities	_____
3.1	Notes payable (to banks, regular and for certified checks and to others)	_____
3.2	Accounts payable	_____
3.3	Other current liabilities	_____
4.	Total assets	_____
5.	Total liabilities	_____
6.	Current credit resources	_____

7.	Net worth	_____
8.	Total profit before tax	_____
9.	Turnover in the previous financial years	_____
10.	Amount of balance	_____
11.	Date of balance	_____
12.	Bank references and address	_____
13.	Bonding capacity	List names of institutions and bondable amounts: attach respective letters from sureties

Institution	Currency
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Remarks:

Item 1: The amount for share capital shall include retained earnings.

Item 6: The maximum current credit resources the Bidder's bank(s) available for the fulfillment of Bidder's obligation for the Project if the Bidder is awarded the contract shall be stated and certified by the Bank.

Item 13: Attach respective letters from the banks.

Signature of Bidder:

Date:

Signature of the Auditor:

Place & date:

15. IMPLEMENTATION METHODOLOGY

WORK SCHEDULE

The bidder shall provide a detailed programme covering installation and commissioning phases of the project. This programme shall conform to the key dates in the Bidding Document.

The programme shall include a bar chart of the principal quantities of work forecast for execution monthly, and payments expected to be made in connection herewith in accordance with the Condition of Contract.

The programme shall be made using a Project Management software like Microsoft Project and submit with the bid. The Bidder shall also submit soft copy of the detail schedule to the Engineer/Employer for approval after 15 days of the signing of the contract agreement.

16. Equipments and Tools

a) List of main equipment and plants available with the contractor.

Item No.	Description	Quantity Capacity	Place where they are	Present value	Remarks Hire/Purchased

b) List all the equipments and plants to be made available for Construction and Erection in case you are awarded the Contract.

Item No.	Description	Quantity Capacity	Place where they are	Present value

17. INTEGRITY PACT

1 General

Whereasrepresenting, the Royal Government of Bhutan, hereafter referred to as the Employer on one part and representing the on the other part, hereby execute this agreement as follows:

This agreement should be part of the tender document, which shall be signed and submitted along with the tender document. The head of the employing agency/or his authorized representative should be the signing authority. For the Bidders, the Bidder himself or his authorized representative must sign the Integrity Pact (IP). If the winning Bidder had not signed during the submission of the bid, the bid of that bidder will be rejected.

2 Objectives

Now, therefore, the Employer and the Bidder agree to enter into this pre-contract agreement, hereinafter 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 Enabling the Employer to obtain the desired works at a reasonable and competitive price in conformity with the defined specifications of the goods and services; and
- 2.2 Enabling bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices and the Employer will commit to prevent corruption, in any form by their officials by following transparent procedures.

3 Commitments of the Employer:

The Employer commits itself to the following:

- 3.1 The Employer undertakes that no official of the Employer, connected directly or indirectly with the Contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the Bidder, either for themselves

or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.

3.2 The Employer further confirms that its officials has not favored any prospective Bidder in any form that could afford an undue advantage to that particular Bidder during the tendering stage and will further treat all Bidders alike.

3.3 All the officials of the Employer shall report to the Head of the employing agency or an appropriate Government office any attempted or completed violation of the 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 Employer and such a person shall be debarred from further dealings related to the contract process. In such a case while on enquiry is being conducted by the Employer 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 will not offer, directly or through intermediaries, any bribe, gift, consideration, reward favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Employer, 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, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Employer 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 Government for showing or forbearing to show favor or disfavor to any person in relation to the Contract or any other contract with the Government.

4.3 The Bidder will 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 Employer or their family members, agents, brokers or any other intermediaries in connection with the Contract and the details of services agreed upon for such payments.

5 Sanctions for violation

The breach of any aforesaid provisions or providing false information by the employers, 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.

The Employer/relevant agency shall also take all or any one of the following actions, whenever required:

5.1 To immediately call off the pre-contact negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.

5.2 To immediately cancel the Contract, if already awarded/signed, without giving any compensation to the Bidder.

5.3 The Earnest Money/Security Deposit/Performance bond shall stand forfeited.

5.4 To recover all sums already paid by the Employer.

5.5 To 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 Employer, along with interest.

5.6 To cancel all or any other Contracts with the Bidder.

5.7 To debar the Bidder from entering into any bid from the government of Bhutan as per the Debarment Rule.

6 Conflict of Interest

6.1 A conflict of interest involves a conflict between the public duty and private interests (for favor or vengeance) of a public official, in which the public official has private interest which could improperly influence the performance of their official duties and responsibilities. Conflict of Interest would arise in a situation when any concerned members of both the parties are related either directly or indirectly, or has any association or had any confrontation. Thus, conflict of interest of any tender committee member must be declared in the prescribed form (attached).

6.2 The Bidder shall not lent to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any committee member, and if he does so, the Employer shall be entitled forthwith to rescind the Contract and all other Contracts with the Bidder.

7 Examination of Books of Accounts

7.1 In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Employer/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.

8 Monitoring and Arbitration

8.1 The respective procuring agency shall be responsible for monitoring and arbitration of IP as per the Procurement Rules.

9 Legal Actions

9.1 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 proceedings.

10 Validity

10.1 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 Employer and the Bidder.

10.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will 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 are true and correct to the best of our knowledge and belief.

The parties hereby sign this Integrity Pact at on

.....

EMPLOYER

Witness:

1. _____

2. _____

.....

BIDDER

Witness

1. _____

2. _____

Section 3B – Guaranteed Technical Particulars

SCHEDULE-1: GUARANTEE TECHNICAL PARTICULAR (GTP) OF RING MAIN UNIT			
Sl. No	Description	Unit	particulars
1	General		
1.1	Manufacturer Name & Country of Origin		
1.2	Type & Model No.		
1.3	Application (Outdoor/Indoor)		
1.4	Rated Voltage	kV	
1.5	Rated lightning withstand voltage*	kVp	
1.6	Rated power frequency withstand voltage*	kVrms	
1.7	Rated frequency	Hz	
1.8	Rated current	Amps	
1.9	Rated Short Circuit current for 3 sec	kA	
2	Outdoor Enclosure for RMU		
2.1	Internal Arc Classification type		
2.2	Internal arc withstand test provided with RMU fitted (type test of enclosure)	kA/s	
2.3	Internal Arc withstand test (rear, front & side) provided	kA/s	
2.4	Degree of protection		
2.5	Enclosure color		
3	Switchboard (Main Tank)		
3.1	Standard to which Switch gear complies		
3.2	Number of phases		
3.3	Rated lightning withstand voltage*	kVp	
3.4	Rated power frequency withstand voltage*	kVrms	
3.5	Whether RMU is type tested an report submitted (Yes/No)		
3.6	Insulating gas		
3.7	Gas leakage rate/annum	%/year	
3.8	Expected operating lifetime	years	
3.9	Whether gas monitoring facility provided		
3.1	Material used in tank construction		
3.11	RMU provided with necessary terminal blocks which shall be used for connecting RTUs/FRTUs for automations (Yes/No)		

3.12	Degree of protection		
3.13	Internal arc withstand test (rear, front and side)	kA/s	
4	Busbars		
4.1	Material		
4.2	Rated current	Amps	
4.3	Rated short time current	kA/s	
5	Isolator (Load Break Switch – LBS)		
5.1	Reference standard		
5.2	Construction per phase		
5.3	Rated current	Amps	
5.4	Making capacity	kAp	
5.5	Short term current rating for 3 sec.	kA	
5.6	Operation (Manual/electrical)		
5.7	Motor type and supply voltage		
5.8	Re-chargeable battery pack for motor		
5.9	Charger for battery pack		
6	Circuit Breaker		
6.1	Make		
6.2	Type (Mention offered model)		
6.3	Reference Standard		
6.4	Rated Voltage	kV	
6.5	Rated frequency	Hz	
6.6	Interrupter make		
6.7	Arc quenching medium		
6.8	Rated current	Amps	
6.9	Rupturing capacity	kA	
6.1	Making capacity	kA	
6.11	Short term current rating for 3 sec.	kA	
6.12	Impulse withstand voltage *	kVp	
6.13	Power frequency withstand voltage*	kA rms	
6.14	Rated operating duty cycle		
6.15	No of breaker operations		
a)	At 100 % rated current		
b)	At 100% rated breaking current		
6.16	Type of contact		
a)	Main		
b)	Arching		
6.17	Operation mechanism		
a)	Closing		
b)	Tripping		
6.18	Motor		
a)	Rating	W	
b)	Voltage	V	
7	Current Transformer		
7.1	No of cores		
7.2	Accuracy Class		

a)	Core 1 (metering)		
b)	Core 2 (protection)		
7.3	CT ratio (both the cores)		
7.4	Burden	VA	
8	Protection		
8.1	Relay type		
8.2	Spare auxiliary contact		
9	Fault Passage Indicator		
9.1	Type/Model		
9.2	Self-powered (Yes/No)		
10	Cable compartment		
10.1	Degree of protection		
10.2	Internal arc withstand test (rear, front and side)	kA/s	
10.3	Electrical clearances of cable bushings *		
a)	Phase to phase clearance	mm	
b)	Phase to earth clearance	mm	

SCHEDULE-2: GUARANTEE TECHNICAL PARTICULAR (GTP) of CSS

Sl. No.	Description	Unit	Particulars
1	General		
1.1	Manufacturer Name & Country of Origin		
1.2	Type & Model No.		
1.3	Application (Outdoor/Indoor)		
1.4	Rated Voltage	kV	
1.5	Service Voltage	kV	
1.6	Rated lightning withstand voltage	kVp	
1.7	Rated power frequency withstand voltage	kV (rms)	
1.8	Rated frequency	Hz	
1.9	Rated current	Amps	
1.10	Rated Short Circuit current for 3 sec	kA	
2	Outdoor Enclosure for RMU		
2.1	Internal Arc Classification type		
2.2	Internal arc withstand test provided with RMU fitted (type test of enclosure)	kA/sec	
2.3	Internal Arc withstand test (rear, front & side) provided	kA/sec	
2.4	Degree of protection		
2.5	Enclosure color		
3	Switchboard (Main Tank)		
3.1	Standard to which Switch gear complies		
3.2	Number of phases		
3.3	Rated lightning withstand voltage*	kVp	
3.4	Rated power frequency withstand voltage*	kV (rms)	
3.5	Whether RMU is type tested an report submitted (Yes/No)		
3.6	Insulating gas		
3.7	Gas leakage rate/annum	%/year	
3.8	Expected operating lifetime	Years	
3.9	Whether gas monitoring facility provided		
3.1	Material used in tank construction		
3.11	RMU provided with necessary terminal blocks which shall be used for connecting RTUs/FRTUs for automations (Yes/No)		

3.12	Degree of protection		
3.13	Internal arc withstand test (rear, front and side)	kA/sec	
4	Busbars		
4.1	Material		
4.2	Rated current	Amps	
4.3	Rated short time current	kA/s	
5	Isolator (Load Break Switch – LBS)		
5.1	Reference standard		
5.2	Construction per phase		
5.3	Rated current	Amps	
5.4	Making capacity	kAp	
5.5	Short term current rating for 3 sec.	kA	
5.6	Operation (Manual/electrical)		
5.7	Motor type and Supply Voltage	V	
5.8	Re-chargeable battery pack for motor		
5.9	Charger for battery pack		
6	Circuit Breaker		
6.1	Make		
6.2	Type (Mention offered model)		
6.3	Reference Standard		
6.4	Rated Voltage	kV	
6.5	Rated frequency	Hz	
6.6	Interrupter make		
6.7	Arc quenching medium		
6.8	Rated current	Amps	
6.9	Rupturing (breaking) capacity	kA (rms)	
6.1	Making capacity	kAp	
6.11	Short term current rating for 3 sec.	kA	
6.12	Impulse withstand voltage	kVp	
6.13	Power frequency withstand voltage	kV	
6.14	Rated operating duty cycle		
6.15	No of breaker operations		
a)	At 100 % rated current		
b)	At 100% rated breaking current		
6.16	Type of contact		
a)	Main		
b)	Arching		
6.17	Operation mechanism		
a)	Closing		
b)	Tripping		
6.18	Motor		
a)	Rating		
b)	Voltage	V	
7	Current Transformer		

7.1	No of cores		
7.2	Accuracy Class		
a)	Core 1 (metering)		
b)	Core 2 (protection)		
7.3	CT ratio (both the cores)		
7.4	Burden	VA	
8	Protection		
8.1	Relay type		
8.2	Spare auxiliary contact		
9	Fault Passage Indicator		
9.1	Type/Model		
9.2	Self-powered (Yes/No)		
10	Cable compartment		
10.1	Degree of protection		
10.2	Internal arc withstand test (rear, front and side)	kA/s	
10.3	Electrical clearances of cable bushings *		
a)	Phase to phase clearance	mm	
b)	Phase to earth clearance	mm	
11	TRANSFORMER		
11.1	Country of Manufacture		
11.2	Manufacturer's Type No.		
11.3	Applicable Standards		
11.4	Rating	kVA	
11.5	Number of Phases		
11.6	Rated frequency	Hz	
11.7	Rated Primary Voltage	kV	
11.8	Rated Secondary Voltage	kV	
11.9	Vector Group		
11.1	Tank construction		
11.11	Tank cover construction		
11.12	Off-Load Tapings, Primary	%	
11.13	Ambient temperature	°C	
11.14	Temperature Rise in - Winding	°C	
11.15	Temperature Rise in - Top oil	°c	
11.17	Power frequency withstand voltage		
a	Primary winding	kV	
b	Secondary Winding	kV	
11.18	Impulse withsatnd test voltage Full wave, Primary winding		
a	Primary winding	KVp	
b	Secondary winding	KVp	
11.19	No Load Loss	KW	
11.20	Load Loss	KW	
11.21	Impedence Voltage	%	

11.22	No Load Current	%	
11.23	Terminal Bolts		
a	diameter, primary side	mm	
b	diameter, Secondary side	mm	
11.24	Material of winding		
a	High Voltage		
b	Low voltage		
11.25	Mass of Transfomer (Approx.)		
a	Total mass	Kg	
b	Mass of Oil	Kg	
c	Un-tankd mass	Kg	
12	LT SWITCHGEAR		
12.1	Air Circuit Breaker		
a)	Make		
b)	Rated voltage	V	
c)	Rated frequency	Hz	
d)	Number of poles		
e)	Breaking Capacity	kA	
f)	Rated current	A	
g)	Rated operational voltage	V	
h)	Type		
i)	Release		
12.2	Moulded Case Circuit Breaker		
a)	Make		
b)	Rated frequency	Hz	
c)	Number of poles		
d)	Breaking Capacity	kA	
e)	Rated current	A	
f)	Rated operational voltage	V	
g)	Type		
h)	Release		

Schedule-3: GUARANTEED TECHNICAL PARTICULARS OF CABLES

Sl. No.	Description	Unit	Particulars
1.0	Name of manufacturer and country		
2.0	Applicable standards		
3.0	Rated voltage	kV	
4.0	<u>Conductor</u>		
4.1	Material		
4.2	Cross sectional area	mm ²	
4.3	Whether stranded	Yes/No	
5.0	<u>Insulation</u>		
5.1	Material		
5.2	Thickness	mm	
6.0	<u>Inner sheath</u>		
6.1	Material		
6.2	Whether extruded or wrapped ?		
6.3	Thickness	mm	
7.0	<u>Outer Sheath</u>		
7.1	Material		
7.2	Thickness	mm	
8.0	Material of armour		
9.0	Whether round wire or tape ?		
10.0	Details of screen, if any		
11.0	Total overall diameter of cable	mm	
12.0	DC resistance at 20°C	ohms/km	
13.0	<u>Test voltage</u>		
13.1	One minute power frequency withstand voltage	kV	
13.2	Impulse withstand voltage	kVp	
13.3	Water immersion test voltage	kV	
14.0	Type of cable end sealing		
15.0	<u>Cable drums</u>		
15.1	Dimensions	mm	
15.2	Weight	kg	
15.3	Nominal length per drum	m	

Volume II: Part – 2

SCHEDULE OF PRICES

Preamble:

1. The Contract is of item rate turnkey in nature and includes the definitive engineering and design that shall ultimately define actual quantities of work.
2. The provisional quantities of various items of civil works like excavation/ filling, foundations, supply and erection of steelwork, construction of control building structures for the proposed substation/works and for electrical items such as 33 kV LT cables etc. are given in the price-schedule. However, the quantities may vary consequent to actual execution of the work. The payment shall be made for the actual quantities used for various items. For all items especially cables etc., after the award of the work, the contractor shall assess the required quantities and shall procure the requisite quantities only so as to minimize the stores and spares. BPC will take back only minimum spares.
3. Where the unit rates have been asked in the price schedule, the quantity variation may not be limited to 20% and the unit rates will govern for the actual quantity of work and no price variation will be permitted. For items where quantity is mentioned as 'LOT', is deemed that the Contractor has included the all inclusive price, which will be on lumpsum basis, and the total payment for any LOT item shall not exceed the amount quoted in the Bid. Contractor shall submit the list of items considered for the LOT with breakup of prices in the Bid.
4. It shall be a condition of this contract that the all-inclusive rates quoted in Schedule of Rates / Prices shall not be varied for reasons of change in respective quantities.
5. Further, it shall also be an important condition of this contract that there shall not be any change in Unit Rates of items consequent to revision of labour rates, fuel rates etc. by the Government of Bhutan.
6. The supply rate against each item shall be an all-inclusive rate, and be inclusive of supply, freight, transport, insurance. The Bidder shall indicate the all-inclusive rate separately for each item. Further, the all-inclusive unit rates shall be on FAS basis inclusive of ex-works price, packing and forwarding charges, railway freight, transport charges to actual work site, storage where necessary, charges for transit insurance, insurance of material/ goods at site. Bidder shall indicate Bhutan Sales Tax(BST) and Customs Duty(CD) applicable on the item separately.
7. All labour, supervision, inspection, testing and commissioning costs should be covered in Schedules for erection of substation equipment. The charges/ expenses to be incurred on testing and commissioning of the entire system as a whole shall be included in the prices for individual activities.
8. The total price for each activity should cover all costs and expenses required for supply, delivery, storage, erection, testing, commissioning and maintenance of works

- together with all risks, liabilities, contingencies, insurances and obligations imposed and implied by the Contractor.
9. Bidder shall enter prices in relevant schedules for the supply of specified spares to site. These prices will be considered during bid evaluation.
 10. All items of work specified in the specifications may not have been included in the price-schedule. The items of work not specifically called for in the Schedules are deemed to have been covered under the items called for, to leave the works complete, as per the specifications. The rate quoted by the Contractor shall be deemed to be all inclusive, to cover the smaller items specified but not included in the Price-Schedule. In case if any major item has been missed out in the schedule, the bidders shall make a mention of such item separately in the respective schedule, with the cost of carrying out the works.
 11. In addition to the points stipulated/ highlighted in these clauses, all the conditions mentioned in the specifications, pertaining to measurement of quantities and unit rates of scheduled items shall apply.
 12. It is deemed that the Bidder has understood the site conditions, environment, transport facilities, soil data etc. while preparing the price schedule and has adequately provided for them in his quoted prices. No claims of extra compensation will be payable for items and situations not foreseen and not incorporated by him in the schedules.
 13. The wording under "Description" in the schedules is for subject matter guidance only. The Bidder's price shall include separately all works as specified in the specifications and drawings and all contractual obligations whether specifically mentioned or not.
 14. The Bidder shall, if so desired by the Employer/Engineer, furnish at any stage of the bidding or Contract execution, break-up of prices considered for any or all items covered in various activities.
 15. The contractor shall be paid for the foundations and other RCC items of work to suit actual soil characteristics as per the Unit Rates of individual items like ordinary concrete, steel reinforcement bars, excavation etc, based on the actual quantities.
 16. The rates for excavation shall be deemed to include execution of all items mentioned in the specifications like earth work for casting of foundations, benching and back filling, compacting, leveling, de-watering etc., It also includes cost of shoring and shuttering wherever used. The rates for concreting shall together cover cost of all materials for concreting, forming including form boxes, casting concrete, curing and also cost of all materials related with the item.
 17. Unit rates for reinforcement shall include supply, cutting, bending, tying, properly placing, providing lap and every other work needed for casting of the concrete, as specified. Similarly the Rates for other items like stone masonry revetment shall be deemed to be all-inclusive.

18. Adjustment of Prices not in the schedule.

a) For Supply

If the rates contained in the Schedules are not directly applicable to the specific work in question, suitable rates shall be established by the Engineer reflecting the level of pricing in the Schedule of Prices.

Where the rates are not contained in the said Schedule, the amount shall be such as is in all the circumstances reasonable. Else the rates shall be derived based on joint observation of cost and the payment shall be made on the basis of quotation or the actual invoices from the manufacturer plus 20%(Twenty percent) towards Contractors overheads & profit, including taxes and deductions.

b) For Erection & Civil Works

“The determination of rates for the erection and civil variation shall be based on the following”:

- i. Any item of the work, for which the unit rate is available in the contract (with or without specified quantity), shall be valued using the unit rate in the contract, irrespective of the quantity of the work.
- ii. If any altered or substituted work includes any item/work for which no rate is specified in the contract, the rate for such item/work shall be derived from the rate available in the contract for similar items based on appropriate measures like weights, volume, etc. as applicable.
- iii. If any altered or substituted work includes any item/work for which no rate is specified in the contract and the rate can not be derived as indicated in (ii) above, then the rate of such item of work shall be worked out based on the rates available for such item in BSR 2020(or latest BSR), if applicable in BSR 2020, the cost index on BSR 2020 being determined by the ratio of the value of the contract price for similar works (using the original estimated quantities in the contract) to the value of these similar works of the contract with BSR 2020 rates.
- iv. For deriving rate of those items, which do not exist in BSR 2020(or latest BSR) or in the contract cannot be derived as indicated above, “similar class of work” shall be interpreted as items having similar procedure of working. The rates shall be derived by adding/deducting the additional/reduction material/labour components involved in the BSR 2020 and worked out as per the procedure provided in (iii) above.
- v. If the items altered/substituted works do not fall under all the above categories, the rates shall be fixed by the Engineer, on the basis of the other rates in the contract with proper rate analysis and/or using any other reasonable means. This shall be based on the joint observation of the cost for the actual payment made for such works plus 20% overhead and profit.

SUMMARY OF PRICES

Description	Price in Ngultrum
Total Schedule 1	
Total Schedule 2	
Total Schedule 3	
GRAND TOTAL	

Amount in words:

A. SUPPLY AND DELIVERY OF MATERIALS

[illegible]

B. Erection, Testing and Commissioning

Sl. No.	Description	Unit	Quantity	Rate (Nu.)	Total Amount (Nu.)
A	33kV UG				
1	33kV, 6-Ways RMU with all feeders VCB (with PT in two incomer), rated 850 Amps and with O/C and E/F protection, short time current - 21kA for 3 sec, Outdoor Type	No	5		
2	Compact Secondary Substation, 750kVA, 33/0.415kV, Outdoor type, 6-Ways RMU (all feeders VCB), rated 850 Amps and with O/C and E/F protection, short time current - 21kA for 3 sec, with 1 Nos ACB - 1250 amps and 1 no. 630 Amps & 5 nos. of 200 Amps MCCB outgoing feeders with adjustable setting, Non - Walk in type	No	2		
3	33 kV, 3C x 400 sq.mm, XLPE grade cable.	Mtr	3,500		
4	33kV Indoor termination kit including accessories for RMU	Set	40		
5	33 kV, Outdoor termination kit with accessories	sets	2		
6	33 kV, Straight through termination kit with accessories	sets	14		
7	Laying of GEE slab including nuts and bolts as per the drawing	No	175		
8	Earthing conductor - GI Strip 25 x 6 mm	Mtr	280		
B	LV UG				
1	Laying of 1.1 kV XLPE insulated, PVC sheathed, steel armoured underground cable with aluminium conductor of 1C x 630 sq.mm in trenches, with lugs & double Compression glands, GI nuts & bolts to terminate the cables in Distribution pillar.	Mtr	5,200		
2	Digging of cable trench, with supply and laying of bricks 250 mm long, sand bedding and LT route marker & joint marker every after 15 m to complete the work in full as per the specification and approved drawings.	Mtr	200		
3	1.1 kV, straight through jointing kit including all accessories.	No	21		
4	Distribution pillar as per the specification with 6 outgoing with 200 Amps MCCB	No	2		
5	Spike earthing rod, 40 mm dia x 2500 mm long with GI earthing flats (25 x 6mm)	Set	8		
TOTAL LABOUR COST (Nu.)					

C CIVIL WORKS

Price schedule for Construction of foundation for Package substations/Ring main Unit

Sl.#.	Particulars	Unit	Provisional Qty.	Unit rate	Total Price
1	Earthwork in foundation trenches or drains not exceeding 1.5m in width or 10sq.m in area on plan including dressing & ramming, disposal of surplus soil within all lead and lifts All kinds of soil as per the drawing and directed by engineer in charge.	cu.m	30.00		-
2	Filling of trenches, sides of foundation etc. in layers<200mm using selected excavated earth, ramming etc. within lead 50m & lift 1.5m as directed by engineer in charge.	cu.m	18.00		-
3	Providing & laying cement concrete excluding the cost of centering and shuttering - 1:2:4, 20mm aggregates excluding the cost of centering & shuttering - in foundation & plinth as per drawings.	cu.m	0.48		-
4	Providing & laying Cement concrete 1:3:6, 40 mm agg., excluding p&f the cost of centering & shuttering-in foundation and plinth as per drawings.	cu.m	0.84		-
5	Providing & laying R.C.C 1:1.5:3, 20mm agg. excluding p&f the cost of formwork & reinforcement cost, below & incl. floor 2 level - Foundation, footings, bases of columns etc complete as shown in the drawings. (USS foundation)	cu.m	7.20		-
6	Providing & fixing cold twisted deformed bar (Fe500) for R.C.C work incl. cutting, bending, binding & placing in position complete.	kg	1,800.00		-
7	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork as directed by engineer in charge.	sq.m	42.00		-
8	Providing & laying 2nd class bricks work in foundation and plinth - CM 1:4 as per the requirement and drawings.	cu.m	0.84		-
9	Providing & laying 50mm thick Plinth Protection & grouted with fine sand mix including well rammed, finishing the top smooth - With cement CC 1:3:6, 20mm agg., laid over 75mm thick layer of compacted gravel (40mm) as directed by engineer in charge.	sq.m	9.84		-
10	Constructing second class brick masonry open surface drian in CM 1:4 incl. earth work in excavation, 100mm thk Cement Concrete bed 1:5:10, 40mm agg. 25mm thick CC 1:2:4, 12mm agg. for filling haunches, incl. 12mm cement plastering with a floating coat of neat cement (150 x 200 mm) as directed by engineer in charge.	m	20.40		-
11	Providing and laying hand packed stone soling or filling with stones - 400mm thick as per the drawing and directed by engineer in charge.	cu.m	1.80		-
12	Providing & laying 12mm cement plaster in CM 1:4	sq.m	35.93		-
13	Construction of earth pit chamber with supply and installation of earthing by 40 mm dia. x 3000 mm long GI pipe earth electrode with 40 x 8 mm GI plates. 3000 mm earth electrode including all civil works in complete as per the approved drawings.	Nos	4		-
	Amount for 1 foundation Nu.				-
	Amount for 7 Foundations Nu.				-