NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)

Distribution and Consumer Services Directorate

Nepalgunj Regional Office

Nepalgunj

BIDDING DOCUMENTS
FOR
SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 36KV VCB, CR PANEL, 33KV CT, PT AND 110V, 240Ah BATTERY & BATTERY CHARGER

TENDER NO: NRO/2074/075-VCB-01

(National Competitive Bidding)

Nepal Electricity Authority
Distribution and Consumer Services Directorate
Nepalgunj Regional Office
Nepalgunj
Phone/Fax : 081-523419/523508

December, 2017

Abbreviations

BDS..... Bid Data Sheet
BD ..... Bidding Document
DCS..... Delivery and Completion Schedule
DP …….Development Partner
EQC ..... Evaluation and Qualification Criteria
GCC ..... General Conditions of Contract
GoN ..... Government of Nepal
ICC..... International Chamber of Commerce
IFB ..... Invitation for Bids
Incoterms..... International Commercial Terms
ITB ..... Instructions to Bidders
LGRS ..... List of Goods and Related Services
NCB ……. National Competitive Bidding
PAN ……..Permanent Account Number
PPMO ……Public Procurement Monitoring Office
SBD..... Standard Bidding Document
SBQ..... Schedule of Bidder Qualifications
SCC……. Special Conditions of Contract
SR ..... Schedule of Requirements
TS..... Technical Specifications
UNCITRAL …….United Nations Commission on International Trade Law
VAT …… Value Added Tax

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Invitation for Bids
Nepal Electricity Authority
Nepalgunj Regional Office, Nepalgunj
First date of publication: 18 Dec 2017
National Competitive Bidding
Sealed tenders are invited for the following Schemes of Nepal Electricity Authority, Nepalgunj Regional Office, Nepalgunj.

S.N.	Works/Jobs	Tender No :	Sale of Tender Documents till date (Office time)	Last Date of Bid Submission, Opening Time and Place	Cost of Tender Documents (Bank Deposit)	Bid Security/ Bid Bond (Bank Deposit/Bank Guarentee)	Bank A/C No
1	Supply, Delivery, Installation, Testing and Commissioning of 36KV VCB, CR Panel, 33KV CT,PT, 240AH Battery and Battery Charger at different substation under Nepalgunj Regional Office, NEA.	NRO/2074/075-VCB-01	16 Jan ,2018	17 Jan ,2018 at or before 12:00 noon and 14:00 Hrs Respectively at NEA, Nepalgunj Regional Office	NRS. 3,000.00	NRs. 260,000.00 valid for 120 Days.	Bank of Kathmandu, Nepalgunj, AC No: 010500000354

For the further details and downloading of tender documents please visit our website http//www.nea.org.np and http//www.e-nea.org.np or Contact Tel No: 081-523419/526783

Section I. Instructions to Bidders

Section I. Instructions to Bidders

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Section I. Instructions to Bidders

A. General

1. Scope of Bid	The Purchaser ***indicated in the BDS*** issues this Bidding Document for the supply of Goods and Related Services incidental thereto as specified in Section V, Schedule of Requirements. Throughout this Bidding Document : (a) the term "in writing" means communicated in written form with proof of receipt; (b) if the context so requires, singular means plural and vice versa; and (c) "day" means calendar day.
2. Source of Funds	2.1 GoN Funded: In accordance with its annual program and budget, approved by the GoN, the Purchaser intends to apply a portion of the allocated budget to eligible payments under the contract(s) ***indicated in the BDS*** for which this Bidding Document is issued. Or DP Funded: The GoN has applied for or received financing (hereinafter called "funds") from the Development Partner (hereinafter called "the DP") ***indicated in the BDS*** toward the cost of the project ***named in the BDS***. The GoN intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued. 2.2 DP Funded: Payment by the DP will be made only at the request of the GoN and upon approval by the DP in accordance with the terms and conditions of the financing agreement between the GoN and the DP (hereinafter called the "Loan Agreement"), and will be subject in all respects to the terms and conditions of that Loan Agreement. No party other than the GoN shall derive any rights from the Loan Agreement or have any claim to the funds. 2.3 Public Entity's Resources Funded.
3. Fraud and Corruption	3.1 Anticorruption related laws require that GoN's officials (including beneficiaries of funds), as well as bidders, suppliers, and contractors and their sub-contractors under GoN/DP-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, this bidding document; (a) defines, for the purposes of this provision, the terms set forth below as

follows:

(i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

(ii) "fraudulent practice" means any 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;

(iii) "coercive practice" means 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;

(iv) "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

(v) "obstructive practice" means:

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a GoN/DP 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

(bb) acts intended to materially impede the exercise of the GoN's/DP's inspection and audit rights provided for under sub-clause 3.5 below.

(b) will reject bid(s) if it determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

(c) will sanction a firm or individual, including declaring ineligible, for a stated period of time, to be awarded a GoN/DP-financed contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for, or in executing, a GoN/DP-financed contract.

3.2 The Bidder shall not carry out or cause to carry out the following acts with an intention to influence the implementation of the procurement process or the procurement agreement :

(a) give or propose improper inducement directly or indirectly,

(b) distortion or misrepresentation of facts,

	(c) engaging in corrupt or fraudulent practice or involving in such act, (d) interference in participation of other competing bidders, (e) coercion or threatening directly or indirectly to cause harm to the person or the property of any person to be involved in the procurement proceedings, (f) collusive practice among bidders before or after submission of bids for distribution of works among bidders or fixing artificial/uncompetitive bid price with an intention to deprive the Employer the benefit of open competitive bid price, (g) contacting the Employer with an intention to influence the Employer with regards to the bids or interference of any kind in examination and evaluation of the bids during the period from the time of opening of the bids until the notification of award of contract. 3.3 Without prejudice to any other rights of the Purchaser under the related laws, GoN may **blacklist** a Bidder for its conduct for a period of one (1) to three (3) years on the following grounds and seriousness of the act committed by the bidder: (a) if convicted by a court of law in a criminal offence which disqualifies the Bidder from participating in the contract, (b) If it is proved that the bidder has committed an act contrary to ITB 3.2. 3.4 A bidder declared blacklisted and ineligible by the GoN, Public procurement Monitoring Office (PPMO), and/or the DP in case of DP funded project, shall be ineligible to bid for a contract during the period of time determined by the GoN, PPMO and/or the DP. 3.5 The Supplier shall permit the GoN/DP to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the GoN/DP, if so required by the GoN/DP. 3.6 DP Funded: In pursuance of the fraud and corruption policy, the DP. (a) will reject a proposal 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 cancel the portion of the loan/ credit/ grant allocated to a contract if it determines at any time that representative(s) of the GoN or of a beneficiary of the fund engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the GoN having taken timely

	and appropriate action satisfactory to the DP to address such practices when they occur.
4. Eligible Bidders	This Invitation for Bids is open to eligible Bidders from all countries, except for any ***specified in the BDS***. A Bidder may be a natural person, private entity, government-owned entity (subject to ITB 4.4) or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture (JV). In the case of a JV: (a) all parties to the JV shall be jointly and severally liable; and (b) a JV shall nominate a representative who shall have the authority to conduct all businesses for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if, including but not limited to: (a) have controlling shareholders in common; (b) receive or have received any direct or indirect subsidy from any of them; (c) have the same legal representative for purposes of this Bid; (d) have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; (e) a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which it is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one bid; or a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods and services that are the subject of the bid. A Bidder that is under a declaration of ineligibility by the GoN/DP in accordance with ITB 3.4, at the date of the deadline for bid submission or thereafter, shall be disqualified. A GoN-owned enterprise may also participate in the bid if it is legally and

	financially autonomous, it operates under commercial law, and it is not dependent agency of the Purchaser. Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request. 4.1 Firms shall be excluded in any of the cases, if (a) 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 prohibits any import of goods or Contracting of works or services from that country or any payments to persons or entities in that country. (b) DP Funded: as a matter of law or official regulation, GoN prohibits commercial relations with that country, provided that the DP is satisfied that such exclusion does not preclude effective competition for the supply of goods or related services required; (c) DP Funded: a firm has been determined to be ineligible by the DP in relation to their guidelines or appropriate provisions on preventing and combating fraud and corruption in projects financed by them.
	A bidder and all parties constituting the Bidder shall have the nationality of an eligible country as defined by the concerned DP for DP funded projects. The domestic Bidder who has obtained Permanent Account Number (PAN) and Value Added Tax (VAT) registration certificate(s) and Tax clearance certificate or proof of submission of tax return from the Inland Revenue Office shall only be eligible. The foreign bidder submitting the documents ***indicated in the BDS*** at the time of bid submission and a declaration to submit the document(s) ***indicated in the BDS*** at the time of contract agreement shall only be eligible
5. Eligible Goods and Related Services	5.1 All goods and related services to be supplied under the contract are eligible, unless their origin is from a country ***specified in the BDS***. 5.2 For purposes of this clause, "origin" means the place where the goods are mined, grown, or produced, or the place from which the related services are supplied 5.3 The origin of goods and services is distinct from the nationality of the Bidder.
6. Site Visit	For goods contracts requiring installation/ commissioning/ networking or similar services at site, the Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site and obtain all information that may be necessary for preparing the Bid and entering into a contract for the supply of goods and related services. The Bidder should ensure that the Purchaser is informed of the visit in

	adequate time to allow it to make appropriate arrangements. The costs of visiting the Site shall be at the Bidder's own expense.

B. Contents of Bidding Document

7. Sections of the Bidding Document	7.1 The Bidding Document consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read and construed in conjunction with any Addenda issued in accordance with ITB 9. **PART 1 Bidding Procedures** • Section I. Instructions to Bidders (ITB) • Section II. Bid Data Sheet (**BDS**) • Section III. Evaluation and Qualification Criteria • Section IV. Bidding Forms **PART 2 Supply Requirements** • Section V. Schedule of Requirements **PART 3 Conditions of Contract and Contract Forms** • Section VI. General Conditions of Contract (GCC) • Section VII. Special Conditions of Contract (SCC) Section VIII. Contract Forms The Purchaser will reject any Bid submission if the Bidding Document was not purchased directly from the Purchaser, or through its assigned office ***as stated in the BDS***. The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document as well as in Amendments, if any. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the Bid. The Invitation for Bids issued by the Purchaser is not part of the Bidding Document
8. Clarification of Bidding Document/Pre-bid meeting	A prospective Bidder requiring any clarification of the Bidding Document shall contact the Purchaser in writing at the Purchaser's address ***indicated in the BDS***. The Purchaser will respond in writing to any request for clarification, provided that such request is received within the time limit ***specified in the BDS*** prior to the deadline for submission of Bids. The Purchaser shall forward copies of its response to all Bidders who have acquired the Bidding Document directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Document as a result of a clarification, it shall do so following the

	procedure under ITB 9 and 24.2. The purchaser may organize a pre-bid meeting of Bidders at least ten (10) days before the deadline for submission of Bids at the place, date and time as ***specified in the BDS*** to provide information relating to Bidding Documents, Technical specifications and the like matters. Should the purchaser deem it necessary to amend the Bidding Document as a result of a clarification, it shall do so following the procedure under ITB 9 and ITB **24.2**.
9. Amendment of Bidding Document	At any time prior to the deadline for submission of the Bids, the Purchaser may amend the Bidding Document by issuing addenda. Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document directly from the Purchaser. To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of the Bids, pursuant to ITB **24.2**.

C. Preparation of Bids

10. Cost of Bidding	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	The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the language ***specified in the BDS***. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language ***specified in the BDS***, in which case, for purposes of interpretation of the Bid, such translation shall govern.
12. Documents Comprising the Bid	The Bid shall comprise the following: (a) Bid Submission Sheet and the applicable Price Schedules, in accordance with ITB Clauses 13, 15, and 16; (b) Bid Security in accordance with ITB 21; (c) alternative bids, if permissible, in accordance with ITB 14; (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 22; (e) documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to bid; (f) documentary evidence in accordance with ITB Clauses 18 and 31, that the Goods and Related Services conform to the Bidding

	Document; (g) documentary evidence in accordance with ITB 19 establishing the Bidder's qualifications to perform the contract if its Bid is accepted; and (h) any other document required in the BDS.
13. Bid Submission Sheet and Price Schedules	The Bidder shall submit the Bid Submission Sheet using the form furnished in Section IV, Bidding Forms. 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. The Bidder shall submit the Price Schedules for Goods and Related Services, according to their origin as appropriate, using the forms furnished in Section IV, Bidding Forms.
14. Alternative Bids	14.1 Unless otherwise ***indicated in the BDS***, alternative bids shall not be considered.
15. Bid Prices and Discounts	The Bidder shall complete the appropriate Price Schedule and the sources of Goods schedules included herein, stating the unit prices, total cost per item, the total Bid amount and the expected countries of origin of the Goods to be supplied under the contract. Prices quoted in the Price Schedules shall be entered separately in the following manner: 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: (i) on the components and raw materials used in the manufacture or assembly of goods quoted ex works or ex factory; or (ii) on the previously imported goods of foreign origin quoted ex warehouse, ex showroom or off-the-shelf; ii. the price for inland transportation, insurance, and other costs incidental to delivery of the goods to their final destination, if ***specified in the BDS***; iii. the price of other (incidental) services, if any, ***listed in the BDS***. 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 nonresponsive and shall be rejected, pursuant to ITB **31**. However, 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. The terms EXW shall be governed by the rules prescribed in the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Bidder's separation of price components in accordance with ITB 15.1 above will be solely for the purpose facilitating the comparison of bids by the Purchaser and will not in any way limit the Purchaser's right to contract on any of the terms offered. If the Bidder intends to offer any unconditional discount, it shall always be expressed in fixed percentage and that shall not vary as the quantity varies and be applicable to each unit rate. The methodology for its application shall be provided in bid submission sheet.
16. Currencies of Bid	All Prices shall be quoted in Nepalese Rupees.
17. Documents Establishing the Eligibility of the Bidder	To establish their eligibility in accordance with ITB 4, Bidders shall: (a) complete the eligibility declarations in the Bid Submission Sheet, included in Section IV, Bidding Forms; and (b) if the Bidder is an existing or intended JV in accordance with ITB 4.2, submit a copy of the JV Agreement, or a letter of intent to enter into such an Agreement. The respective document shall be signed by all legally authorized signatories of all the parties to the existing or intended JV, as appropriate. (c) submit the copy of the documents as ***specified in BDS***.
18. Documents Establishing the Conformity of the Goods and Related Services to the Bidding Document	To establish the conformity of the Goods and Related Services to the Bidding Document, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods and Related Services conform to the requirements specified in Section V, Supply Requirements. 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 those requirements, and if applicable, a statement of deviations and exceptions to the provisions of Section V, Schedule of Requirements. Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Section V, Schedule of Requirements, 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 substantial equivalence or are superior to those

	specified in Section V, Schedule of Requirements.
19. Documents Establishing the Qualifications of the Bidder	The documentary evidence of the Bidder's qualifications to perform the contract, if its bid is accepted, shall establish to the Purchaser's satisfaction that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria. If so ***required in the BDS***, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in Nepal and take care of the warranty provided. If so ***required in the BDS***, a Bidder that does not conduct business within Nepal shall submit evidence that it will be represented by an Agent in Nepal 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. A foreign Bidder wishing to have or already having a local agent shall state the following: a. Name and address of the Agent/Representative, b. The Agent/Representative providing type of services, c. Amount of commission if the Agent/Representative is entitled to get such payment and if it participates in the procedure of payment, d. Other agreement with Agent/Representative, if any, e. Bidder shall certify in the Letter of Authorization as follows: "We certify that the statement and disclosure made by us on the above are complete and true to the best of our knowledge and belief", If the agent has not been appointed: f. Source of information about tender invitation, g. The remuneration given to the individual or firm/company or organization to work on its behalf for submitting tender, representation in the bid opening and other required action in connection with the tender, h. Transfer or handover an evidence of foreign currency exchanged which required to be submitted with the tender, i. If the bank account of any Nepali citizen has been used for the exchange of foreign currency specify the name of the individual and his address. If the foreign currency has been exchanged by self then the certificate of currency exchange. If a foreign Bidder in its Bid, has not provided the information mentioned in ITB 19.4 or has submitted its bid stating that the Bidder does not have a

	local agent and later it is proved that the bidder has a local agent or it is proved that the commission mentioned in the Bid is less than the commission received by the local agent then the Purchaser shall initiate proceedings to blacklist such bidder in accordance with ITB 3.2.
20. Period of Validity of Bids	Bid shall remain valid for a period ***specified in the BDS*** after the bid submission deadline date prescribed by the purchaser. A bid valid for a shorter period shall be rejected by the purchaser as nonresponsive. In exceptional circumstances, prior to the expiration 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. If a Bid Security is requested in accordance with ITB 21, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid.
21. Bid Security	The Bidder shall furnish as part of its bid, in original form a Bid Security as ***specified in the BDS***. If a bid security is specified pursuant to ITB 21.1, the bid security shall be a demand guarantee in any of the following forms at the Bidder's option: (a) original copy of an unconditional bank guarantee from "A" class commercial bank or; (b) original copy of cash deposit voucher in the Employer's Account as ***specified in BDS***. In case of a bank guarantee, the Bid Security shall be submitted using the Bid Security Form included in Section IV, Bidding Forms. The form must include the complete name of the Bidder. The Bid Security shall be valid for minimum thirty (30) days beyond the end of the validity period of the bid. This shall also apply if the period for bid validity is extended. The bid security issued by any foreign Bank outside Nepal must be counter guaranteed by an "A" class Commercial Bank in Nepal. If a bid Security is required in accordance with ITB 21.1, any Bid not accompanied by an enforceable and compliant Bid Security in accordance with ITB 21.2, shall be rejected by the Purchaser as nonresponsive. In case of e- Submission, if the scanned copy of an acceptable bid security letter is not uploaded with the electronic bid then bid shall be rejected. If a Bid Security is specified pursuant to ITB 21.1, the Bid Security of unsuccessful Bidders shall be returned within three (3) days upon the successful Bidder furnishing of the signed Contract Agreement and the

	Performance Security pursuant to ITB 42. If a Bid Security is specified pursuant to ITB 21.1, the Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract Agreement and furnished the required Performance Security. The Bid Security may be forfeited: (c) If a Bidder requests for withdrawal or modification of its bid as against of the ITB clause 26.3 during the period of bid validity specified by the Bidder on the Bid submission form except as provided in ITB 20.2; or (d) If the successful Bidder fails to: (i) sign the Contract in accordance with ITB 42; or (ii) furnish a Performance Security in accordance with ITB 42. The Bid Security of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent mentioned in ITB 17.1.
22. Format and Signing of Bid	The Bidder shall prepare one original of the documents comprising the Bid as described in ITB 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. 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. This authorization shall consist of a written confirmation as ***specified in the BDS*** and shall be attached to the Bid. Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission and Opening of Bids

23. Sealing and Marking of Bids	Bidders may always submit their bids by mail or by hand or by courier, but in any means bid must be delivered within the deadline of submission as mentioned in ITB 24. When so ***specified in the BDS***, Bidders have the option of submitting their bids electronically. Bidders submitting bids electronically shall follow the electronic bid submission procedures ***specified in the BDS***. Bidders submitting bids by mail or by hand or by courier shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with ITB 14, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and

	"COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB 23.3 and 23.4. The inner and outer envelopes shall: (a) bear the name and address of the Bidder; (b) be addressed to the Purchaser in accordance with ITB 23.1; and (c) bear a warning "NOT TO OPEN BEFORE THE TIME AND DATE FOR BID OPENING". If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid.
24. Deadline for Submission of Bids	Bids must be received by the Purchaser at the address and no later than the date and time ***indicated in the BDS***. In case of e-submission, the standard time for e-submission is Nepal Standard Time as set out in the server. The e-procurement system will accept the e-submission of bid from the date of publishing of notice and will automatically not allow the e-submission of bid after the deadline for submission of bid. The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB 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.
25. Late Bids	The Purchaser shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 25. Any Bid received by the Purchaser after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.
26. Withdrawal, or Modification of Bids	A bidder may withdraw, or modify its bid after it has been submitted either in hard copy or by e-Submission. Procedures for withdrawal or modification of submitted bids are as follows: (i) Bids submitted in hard Copy a) Bidders may withdraw or modify its bids by sending a written notice in a sealed envelope, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.2 before 24 hours prior to the last deadline of submission of bid. The corresponding modification of the bid must accompany the respective written notice. All notices must be: (aa) prepared and submitted in accordance with ITB 20 and ITB 21,and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL", "MODIFICATION;" and (bb) received by the Employer 24 hours prior to the deadline prescribed for submission of bids, in accordance with ITB 22.

	ii) E-submitted bids. a) Bidder may submit modification or withdrawal prior to the deadline prescribed for submission of bids through e-portal system by using the forms and instructions provided by the system. Once a Bid is withdrawn, bidder shall not able to submit another bid for the same bid. Bids requested to be withdrawn in accordance with ITB 26.1 shall be returned unopened to the Bidders. In case of bids submitted in hard copy no bid shall be withdrawn or modified in the interval between 24 hours prior time of the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof. In case of e-submitted bids no bids shall be withdrawn or modified in the interval between deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the bid submission form or any extension thereof.
27. Bid Opening	The Purchaser shall conduct the bid opening in public in the presence of bidder or its representative who chose to attend at the address, date and time **specified in the BDS**. The Purchaser shall download the e-submitted bid files. The e-procurement system allows the Purchaser to download the e-submitted bid files (report) only after bid opening date and time after login simultaneously by at least two members of the Bid opening committee. Electronically submitted bid shall be opened at first in the same time and date as specified above. Electronic Bids shall be opened one by one and read out. The e-submitted bids must be readable through open standards interfaces. Unreadable and or partially submitted bid files shall be considered incomplete. Before opening the bids the purchaser shall separate the envelopes of the bids received after the deadline of bid submission, the envelopes containing an application given for WITHDRAWAL, MODIFICATION of bids and the envelopes of bids duly registered. The bids received after the deadline of submission shall be returned to the concerned bidder unopened. Then envelopes marked "WITHDRAWAL" shall be opened first, read out, and recorded, and the envelope containing the corresponding Bid shall not be opened, but returned to the Bidder. If the withdrawal notice is not accompanied by a copy of the valid authorization pursuant to ITB 22.2, the withdrawal shall not be permitted and the corresponding Bid will be opened. Envelopes marked "MODIFICATION" shall be opened, read out, and recorded with the corresponding Bid. No Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at bid opening. Only

	envelopes that are opened, read out, and recorded at bid opening shall be considered further. All other envelopes shall be opened one at a time, and the following read out and recorded: the name of the Bidder and whether there is a modification; the Bid Prices (per lot if applicable), any discounts and alternative offers; the presence of a Bid Security, if required; if there is discrepancy between figure and words, description of such discrepancy; whether the bid form is signed by the bidder or his agent; and any other details as the Purchaser may consider appropriate. Only discounts and alternative offers read out and recorded at bid opening shall be considered for evaluation. No Bid shall be rejected at bid opening except for late bids, in accordance with ITB 25.1. The Purchaser shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, or modification; the Bid Price, per lot if applicable, any discounts and alternative offers if they were permitted; and the presence or absence of a Bid Security. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted bids in time, and posted on line when electronic bidding is permitted. The Bidders' representatives who are present shall also be requested to sign an attendance sheet.

E. Evaluation and Comparison of Bids

28. Confidentiality	Information relating to the examination, evaluation, comparison, and post-qualification 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; thereafter, information will be disclosed in accordance with ITB 40.1. Any attempt 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. Notwithstanding ITB 28.2, 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.
29. Clarification of Bids	To assist in the examination, evaluation, comparison and post-qualification of the Bids, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder with regard to its Bid and 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 33.
30. Deviations, Reservations, and Omissions	During the evaluation of bids, the following definitions apply: (a) "Deviation" is a departure from the requirements specified in the Bidding Document; (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.
31. Determination of Responsiveness	The Purchaser's determination of the responsiveness of a Bid is to be based on the contents of the Bid itself, as defined in ITB 12. A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, (a) if accepted, would: (i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in Section V, Schedule of Requirements; or (ii) limits in any substantial way, inconsistent with the Bidding Document, the Purchaser's rights or the Bidder's obligations under the proposed Contract; or (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids. The Purchaser shall examine the technical aspects of the bid in particular, to confirm that all requirements of Section V, Schedule of Requirements have been met without any material deviation or reservation.
32. Non-material Non-conformities	The Purchaser may regard a Bid as responsive even if it contains minor deviations that do not materially alter or depart from the characteristics, terms, conditions and other requirement set forth in the Bidding Document or if it contains errors or oversights that are capable of being corrected without affecting the substance of the Bid. 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 non-material non-conformities or omissions in the Bid related to documentation requirements. Requesting information or documentation on such non-conformities 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. Provided that a Bid is substantially responsive, the Purchaser shall rectify non-material non-conformities or omissions. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of the missing or non-conforming item or component. The adjustment shall be made using the method indicated in Section III, Evaluation and Qualification Criteria. If small differences are found such as in technical specification, description, feature which does not make the bid to be rejected, then the cost, which is calculated to the extent possible due to such differences, shall be included while evaluating bid. If the value is found fifteen percent more than the quoted amount of the bidder on account of small differences pursuant to ITB 31.4, such bid shall be considered irresponsive in substance and shall not be considered for evaluation.
33. Correction of Arithmetical Errors	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 total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price 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 total price 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 (a) and (b) above. If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be rejected.
34. Domestic Preference	If the price of goods manufactured in Nepal, are higher up to ten percent than that of foreign goods, a margin of preference up to ten percent to the goods manufactured in Nepal shall be provided in the evaluation of the Bids. (This Clause shall be applicable only for GoN funded procurement.)
35. Evaluation and Comparison of	The Purchaser shall evaluate and compare each Bid that has been determined, up to this stage of the evaluation, to be substantially responsive. To evaluate a Bid, the Purchaser shall only use all the criteria and

Bids	methodologies defined in this Clause and in Section III, Evaluation and Qualification Criteria. No other criteria or methodology shall be permitted.
36. Post-qualification of the Bidder	The Purchaser shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive Bid is qualified to perform the Contract satisfactorily. The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 19. An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the Bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.
37. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids	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 the Bidders.

F. Award of Contract

38. Award Criteria	The Purchaser shall select to award the Contract to the Bidder whose offer has been determined to be the lowest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
39. Purchaser's Right to Vary Quantities at Time of Award	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 in Section V, Schedule of Requirements, provided this does not exceed the percentages ***indicated in the BDS***, and without any change in the unit prices or other terms and conditions of the Bid and the Bidding Document.
40. Notification of Intention to Award	The Purchaser shall notify the concerned Bidder whose bid has been selected in accordance with ITB 38.1 within seven days of the selection of the bid, in writing that the Purchaser has intention to accept his/her bid and shall Inform via the Letter of Intention included in the Contract Forms and the information of name, address and amount of selected bidder shall be given to all other bidders who submitted the bid. If no bidder submits an application pursuant to ITB 43.1 within a period of seven days of providing the notice under ITB 40.1 the Purchaser shall accept the bid selected in accordance with ITB 38.1 prior to the expiry of bid validity period, and notification of award shall be communicated to the bidder to furnish the performance security and sign the contract within fifteen days.

41. Performance Security	Within fifteen (15) days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section VIII, Contract Forms, or another form acceptable to the Purchaser. i) If bid price of the bidder selected for acceptance is up to 15 (fifteen) percent less than the approved cost estimate, the performance security amount shall be 5 (five) percent of the bid price. ii) For the bid price less than 15 percent of the cost estimate, the performance security amount shall be determined as follows: **Performance Security Amount =[(0.85 x Cost Estimate –Bid Price) x 0.5] + 5% of Bid Price.** The Bid Price and Cost Estimate shall be inclusive of Value Added Tax.
	Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract Agreement 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.
42. Signing of Contract	The successful Bidder shall sign the contract in the form included in section VIII after the submission of performance security in accordance with ITB 41. At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding, and shall publish in an English/Nepali language newspaper or well-known and freely accessible website the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at Bid Opening; (iii) name and evaluated prices of each Bid; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the Price it offered, as well as the duration and summary scope of the Contract awarded. The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, within thirty days from the date of issuance of notification of award in accordance with ITB 40.2, requests in writing the grounds on which its bid was not selected. If the bidder whose bid is accepted fails to sign the contract as stated ITB 39.1, the Public Procurement Monitoring Office shall blacklist the bidder on recommendation of Nepal Electricity Authority.
43. Complaint and	43.1 If a Bidder dissatisfies with the Procurement proceedings or the

Review	decision made by the Purchaser in the intention to award the Contract, it may file an application to the Chief of the concerning Public Entity of the Purchaser within seven (7) days of having, receipt of such notice or decision making, for review of the proceedings stating the factual and legal grounds. 43.2 An application filed after the deadline pursuant ITB 43.1 shall not be processed. 43.3 The chief of Public Entity of the Purchaser shall, within five (5) days after receiving the application, give its decision with reasons, in writing pursuant to ITB 43.1: (a) whether to suspend the procurement proceeding and the procedure for further proceedings to be adopted; or (b) whether or not to reject a application. No application can be submitted before the Review Committee for review against the decision made by the chief of the Public Entity for the Bid amount up to the value ***as stated in BDS***. 43.4 If the Bidder is not satisfied with the decision of the Public Entity in accordance with ITB 43.3, or the decision by the Public Entity is not given within five (5) days of receipt of application pursuant to ITB 43.1, it can, within seven (7) days of receipt of such decision, file an application to the Review Committee of the GoN, stating the reason of its disagreement on the decision of the chief of Public Entity and furnishing the relevant documents, provided that its Bid amount is above the amount as stated in ITB 43.3. The application may be sent by hand, or by post, or by courier, or by electronic media at the risk of the Bidder itself. 43.5 Late application filed after the deadline pursuant to ITB 43.4 shall not be processed. 43.6 Within three (3) days of the receipt of application from the Bidder, pursuant to ITB 43.4, the Review Committee shall notify the concerning Public Entity of the Purchaser to furnish its procurement proceedings and comments on the issue, pursuant to ITB 43.3. 43.7 Within three (3) days of receipt of the notification pursuant to ITB 43.6, the Public Entity shall furnish the copy of the related documents along with its comment or reaction of complaint to the Review Committee. 43.8 The Review Committee, after inquiring from the Bidder and the Public Entity, if needed, shall give its decision within one (1) month after receiving the application filed by the Bidder, pursuant to ITB 43.4. 43.9 The Bidder, filing application pursuant to ITB 43.4, shall have to furnish a cash amount or Bank guarantee ***as stated in BDS*** with the validity period of at least ninety (90) days from the date of the filing of

	application pursuant to ITB 43.4. Application filed without furnishing the security deposit shall not be processed. 43.10 If the claim made by the Bidder pursuant to ITB 43.4 is justified, the Review Committee shall have to return the security deposit to the applicant, pursuant to ITB 43.9, within seven (7) days of such decision made. 43.11 If the claim made by the Bidder pursuant to ITB 43.4 is rejected by the Review Committee, the security deposit submitted by the Bidder pursuant to ITB 43.9 shall be forfeited.
44. Provision of PPA and PPR	If any provision of this document are inconsistent with Public Procurement Act (PPA), 2063 or Public Procurement Regulations (PPR), 2064, the provision of this documents shall be void to the extent of such inconsistency and the provision of PPA and PPR shall prevail.

Section II. Bid Data Sheet

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A. Introduction	
ITB 1.1	Name of the Purchaser*:* **Nepal Electricity Authority** **Distribution and Consumers Services Directorate** **Nepalgunj Regional Office, Nepalgunj, Banke**
ITB 2.1	Identification number of the Contract: ***NRO/2074/075-VCB-01*, *(*Supply, Delivery, Installation, Testing and Commissioning of 36KV VCB, CR Panel, 33KV CT, PT, 240AH Battery and Battery Charger at different substation under Nepalgunj Regional Office, NEA).**
ITB 2.1	Name of the Project: **NA** Name of the DP: **Not Applicable** Implementing Agency: **Nepalgunj Regional Office, Nepal Electricity Authority (NEA), Nepalgunj** Funding : **GoN/NEA**
ITB 4.1	Bidders from the following countries are not eligible: **Not applicable**
ITB 4.9	The foreign Bidder at the time of bid submission: **Not Applicab**le
ITB 5.1	Goods and related services to be supplied from following countries are not eligible: **Not Applicable**
B. Bidding Document	
ITB 8.1	For **clarification purposes** only, the Purchaser's address is: Attention: **The Regional Chief** Name of the Purchaser: *:* **Nepal Electricity Authority** **Distribution and Consumers Services Directorate** **Nepalgunj Regional Office** City/Town: Nepalgunj District: Banke Country: Nepal Telephone: 081-523419/526783 Facsimile Number: 081-523508
ITB 8.1	The purchaser will respond in writing to any request for clarification provided that such request is received no later than ten (10) days prior

	to the deadline date for submission of bid.
ITB 8.2	Pre-Bid meeting ***shall not*** be organized.
C. Preparation of Bids	
ITB 11.1	The language of the Bid is: English / Nepali
ITB 12.1 (h)	The Bidder shall submit the following additional documents with its Bid: **The documents mentioned in the Section III: Evaluation and Qualification Criteria and Technical Specification.**
ITB 14.1	Alternative Bids *:* **are not** permitted
ITB 15.2 (i)	**The price quoted shall be :** The prices shall include all duties, taxes and other levies. The prices should be expressed in the term of EXW in Nepalese Rupees.
ITB 15.2 (ii)	**The final destination is : NEA, NRO Store and its DCS Stores**
ITB 15.2 (iii)	The price of other incidental services : Not Applicable.
ITB 15.3	The prices quoted by the Bidder shall be: Fixed.
ITB 15.4	The **incoterms** additions is: Incoterms 2016.
ITB 17.1 (c)	The Bidders shall submit: ▪ Copy of Firm Registration Certificate ▪ Copy of Business Registration Certificate ▪ Copy of VAT and PAN Registration Certificate, ▪ Copy of Tax Clearance Certificate/Tax return submission evidence for the F/Y 2073/074. ▪ A written declaration made by the bidder, with a statement that s/he is not ineligible to participate in the procurement proceedings; has no conflict of interest in the proposed procurement proceedings, and has not been punished for a profession or business related offense.
ITB 19.2	A Manufacturer's Authorization letter is required for all the items listed in Section V Schedule of Requirements , if the Bidder itself is not a manufacturer.
ITB 19.3	The Bidder is required to include with its bid, evidence that it will be represented by an Agent in Nepal.
ITB 20.1	The bid validity period shall be **90** days.
ITB 21.1	The Bidder shall furnish a bid security, from "A" class commercial bank with a minimum of **NRs. 260,000.00** which shall be valid for **30** days beyond the validity period of the bid.
ITB 21.2	If the Bidder wishes to submit the Bid Security in the form of cash, the cash should be deposited in Deposit Account No.: 010500000354 at Bank of Kathmandu, Nepalgunj and submit the receipt of the deposited

	amount of cash along with the bid.
ITB 22.1	In addition to the original of the Bid, the number of copies is: **Two**
ITB 22.2	The written confirmation of Authorization to sign on behalf of the Bidder shall consist of: **Notarized Power of Attorney.**
D. Submission and Opening of Bids	
ITB 23.1	Bidders shall have the option of submitting their bids electronically.
ITB 23.1	If bidders submit their bids electronically, the electronic bidding submission procedures shall be: **As specified in the "Special instructions to Bidders for e-bidding."**
ITB 24.1	For bid submission purposes only, the Purchaser's address is : **Nepalgunj Regional Office** **Distribution and Consumer Service Directorate** **Nepal Electricity Authority** **Nepalgunj, Banke** **Nepal** ***Tel: 081-523419/526783*** ***Fax: 081-523508***
ITB 24.1	**The deadline for bid submission is:** **Date: January 17, 2018** **Time: At or before 12:00 Noon.**
ITB 24.1	If the last date of purchasing, submission and opening of Bid falls on a government holiday then the next working day shall be considered as the last day without any change in the time and place as fixed.
ITB 27.1	The bid opening shall take place at: **Nepalgunj Regional Office** **Distribution and Consumer Service Directorate** **Nepal Electricity Authority** **Nepalgunj, Banke** **Nepal** ***Tel: 081-523419/526783*** ***Fax: 081-523508*** **Date: January 17, 2018** **Time: At 14:00 hours. (Local Time)**
ITB 27.1	If electronic bid submission is permitted in accordance with ITB 23.1, the specific bid opening procedures shall be: **As specified in the "special Instructions to Bidders for e-bidding."**
E. Evaluation and Comparison of Bids	
ITB 31	Following is the addition to the said clause:

Bids shall be rejected as being non-responsive if:

a. The bidder has not purchased and returned the original document issued by NEA.

b. The Bid Document is issued in the name of one firm and Bid proposal submitted by another firm. The bid has been purchased in the name of single firm and submitted in the name of Joint Venture and vice versa.

c. The Bid does not contain wax sealed bid proposal.

d. The Bid is not signed and stamped by the bidder or their authorized representative.

e. It is proved that bidders have submitted the bids by making such arrangements that limits the participation of other bidders or influences the bid price in any manner.

f. The Bid is received by NEA after the deadline for submission of Bids.

g. All the information required by the bid document is not mentioned or falsely quoted.

h. The documents and guarantee/bank voucher as required by the bid are not attached with the bid proposal.

i. The notarized copy of joint venture agreement is not attached, in case the bidder is participating in the bid in Joint Venture.

j. The information, amount of commission, currency of payment, and method of payment to the bidder's agent are not revealed.

k. Any other conditions with the agent is not revealed or falsely mentioned.

l. The notarized power of attorney to sign the bid on behalf of joint venture is not attached.

m. The percentage of liability among joint venture partners are not clearly mentioned.

n. The bid is conditional.

o. Any conditions mentioned in tender invitation are not fulfilled.

p. Data on qualifications of Bidder/ Manufacturer are not filled and the supporting documents required by the forms are not furnished.

q. Proposed delivery schedule showing completion dates more than NEA's requirement.

r. The Bid fails to satisfy that Bid is fully cognizant of the scope and details of the work involved.

s. The Bid does not contain technical information and documents for major items required by the Specifications for materials on which the bidder is offering.

t. The offered goods are not substantially in compliance with the specification.

u. If the attached Technical Data Sheet in the specification is not properly completed and/or data furnished are not supported by the catalogues and test reports (wherever

required).

v. Qualification criteria as per Bidding data Sheet are not met.

w. The description provided by the bidders pertaining to the qualification is found to be false or is substantially incomplete.

x. The bidder is blacklisted in its contractual obligations in past NEA contracts.

y. If the required documents are not submitted authenticated English version. However the documents in Nepali language issued from the concerned authority of Nepal will also be accepted.

z. The bidder does not offer all the items and quantity specified in Price Schedule.

aa. The Bid Security (Bid Bond) is not enclosed pursuant to Clause 20 or is not acceptable in form and / or substance.

bb. The Bid has price escalation clause.

cc. The Bid Security submitted is not specifically mentioned to be applicable to the offer of the Bidder.

dd. The Bid Bond submitted by some one other than the Bidder does not clearly mention that the Bond is submitted on behalf of the Bidder in the Bid Bond itself.

ee. The Bid Bond is not in the name of Joint Venture, in case of Joint Ventures.

ff. The bid price of lowest substantially responsive bidder is substantially higher than the estimated price.

ITB 39.1	The maximum percentage by which quantities may be increased is: **15** The maximum percentage by which quantities may be decreased is: **15**
ITB 43.3	No application can be submitted before the Review Committee for review against the decision made by the chief of the Public Entity for the bid amount up to the value of Nepalese Rupees 30,000,000 (thirty million)
ITB 43.9	The Bidder, filing application pursuant to ITB 43.4, shall have to furnish a cash amount or Bank guarantee equal to 0.5% of its bid price.
ITB 44	**This clause is modified as:** If any provision of this document is inconsistent with Public Procurement Act (PPA), 2063 or NEA, Financial Administration Regulation, 2068, the provision of this document shall be void to the extent of such inconsistency and the provision of PPA and NEA, Financial Administration Regulation, 2068 shall prevail.

Special Instructions to Bidders for E-Bidding

General procedures for electronic bid submission (e-submission) is described below.

Bid preparation
A Bidder who wish to submit the bid electronically may purchase the Bid Document directly from the Employer office or may download the bid document from the website and deposit the equivalent amount in the Revenue account of the employer as specified in the notice or/and Bid Document.

Description of bid submission procedure through electronically (e-submission) only:

i) Interested bidders shall, either purchase the Bid Document directly from the Employer office or may download the bid document from the website and deposit the equivalent amount in the Revenue account of the employer as specified in the notice or/and Bid Document.

ii) The Bidder shall fill the following documents and forms (in hard copy of issued bid documents), signed by the authorized representative with seal of the company
   a) Bill of Quantity (BOQ) with rate, amount
   b) Forms of Bid, Qualification Information

iii) The Bidder shall then scan the completed original documents, forms in PDF files with appropriate filename shown in the table below.

S No	Document	PDF File Name	Requirement	Remarks
1	Letter of Bid	Letter of Bid-1	Mandatory	
2	Bid Security (Bank Guarantee)	Bid Security-2	Mandatory	
3	Company Registration	Company Reg-3	Mandatory	All firms of JV
4	VAT Registration	VAT Reg-4	Mandatory for National firms	All firms of JV
5	Tax clearances certificate for F/Y 073/074	Tax-5	Mandatory for National firms	All firms of JV
6	Power of Attorney of Bid Signatory	Power of Att-6	Mandatory	
7	Business Registration (License) Certificate	License-7	Mandatory	

8	Bank Voucher for Cost of Bidding document	Voucher-8	Mandatory	
9	Joint Venture Agreement	JV-Doc-9	Mandatory for JV Firm	In case of JV
10	Qualification Information	Qualifications-10	Mandatory	
11	Applicable Price Adjustment Table	Price adjust-11	Mandatory if applicable	
12	Complete BOQ	BOQ-12	Mandatory	
13	Eligibility Information	Eligibility-13	Mandatory	Additional Documents
14	Schedule of Requirement	Sch. Of Req.-14	Mandatory	
15	Manufacturers Authorization	Auth-15	Not Mandatory	
16	Technical Data Sheet	TDS-16	Mandatory	
17	Catalogues mentioned in Technical Specification	Catalogues-17	Mandatory	
18	Type Test Certificate	Certificate-18	Not Mandatory	
19	ISO certificates	ISO-19	Not Mandatory	

Note; Mandatory means the mentioned files shall be in e-submission and non-submission of such file shall be considered as non-responsive.

iv) For e-submission purpose the Bidder shall, at first, register in the e-procurement section of NEA Web site http://www.nea.org.np

v) After preparing all the required bidding documents in PDF scan files as specified in (ii) and (iii), the Bidder shall upload the PDF bid files and submit his complete bid online through e-procurement section of NEA website http://www.nea.org.np within the specified date and time.

The Employers address for the purpose of e-submission of bid:

The Employers address for the purpose of electronic Bid submission is e-procurement section of http://www.nea.org.np.

In case of e-submission of bid, the bidder shall submit his bid electronically in PDF files in the manner as specified above and additional submission of hard copy of "Original plus one copy of bid" is not mandatory.

In case both the electronic bid and original bid in hard copy are submitted to the Employer within the specified time period, the Bidder's electronic bid and original bid in hard copy will be accepted for evaluation provided the Bid price in Bill of Quantity Sheet is same. If there is any discrepancy in Bid price in Bill of Quantity between the electronic and original bid in hard copy it will be treated as two separate bids from one Bidder and hence, both the electronic bid and original bid in hard copy shall be disqualified, as per ITB Clause.

However, for electronically submitted bid in PDF files, the bidder shall be required to submit documents/clarifications as specified in ITB Clause.

The deadline for e-submission of bids shall be;

- Bidders shall be also explained about the details of e-submission procedures in the pre-bid meeting.

- The e-procurement system will accept the e-submission of bid during office hours from the date after publishing the notice and will automatically not allow the e-submission of bid after the deadline for submission of bid, as specified above.
- The standard time for e-submission is Nepalese standard time as set out in the server of NEA.
- In case of e-submission of bid, the Bidder shall submit his bid electronically in PDF files in the manner as specified in ITB Clause only, and submission of "original plus one copy" shall not be required before deadline for submission time as per ITB Clause.

Provision for Substitution or Modification or Withdrawal of Bid

When a bidder submits his bid in hard copy the e-procurement section does not allow the Bidder to submit his Substitution, or Modification, or Withdrawal through e-procurement section of NEA's Web site.

In case of e-submitted bid;

- Bidders may submit his Substitution or Modification or Withdrawal either in hard copy or through e-submission.
- For Substitution of Bid the Bidder shall follow similar steps as specified in ITB - Clause with a Substitution letter in PDF file.
- For Modification or Withdrawal of bid the Bidder is required to submit PDF scan copy of their Modification or Withdrawal letter and a written Power of Attorney of the signatory for Modification/ Withdrawal, duly signed by Authorized Representative/s of the Firm / all authorized Joint Venture partners.

Bid opening for e-submitted bid;

- Electronically submitted bid shall be opened first at the same time and date as specified in the ITB and IFB notice.
- The e-procurement system allows the Employer to download and open the e-submitted bid files from bidders only after the time for opening the bids.
- The e-submitted bids must be readable through open standards interfaces. Unreadable and or partially submitted bid files (not complying the ITB Clauses) shall be considered incomplete and rejected for further bid evaluation.
- After opening of e-submitted bids files, all files shall be printed and recorded at the time of bid opening.

In case of "WITHDRAWAL" or "MODIFICATION" or "SUBSTITUTION" by the Bidder through e-submission, the e-submitted PDF files under "WITHDRAWAL" or "MODIFICATION" or "SUBSTITUTION" shall be opened and read out first. Bids for which acceptable notice of "WITHDRAWAL" or "SUBSTITUTION" has been submitted pursuant to ITB Clause shall not be opened.

Clarification of Bid

In case of e-submission of bid, the Bidder shall be required to submit the original completed Bid consisting of Forms of Bid, Qualification Information, Special Conditions of Contract,

Bill of Quantities, Supplementary Information and other clarifications for verification purpose upon notification to do so from the Employer.
Examination of e-submitted Bids and Determination of Responsiveness
For a e-submitted bid to be substantially responsive the requirement as specified in the ITB Clauses shall be fulfilled.

Evaluation and Comparison of e-submitted Bids
In case of e-submitted bids, the Employer evaluates the bid based on the information as per electronically submitted bid files. For clarification/ verification purpose, the Employer may request the Bidder to submit documents/ clarifications as specified in ITB Clause.
In case, the Bidder could not substantiate or provide evidence to prove the information provided in e-submitted bid through documents/ clarifications as per ITB Clause, the bid shall not be considered for further evaluation and respective ITB Clause for forfeiture of bid security shall be applicable.

Steps to be followed by a Bidder to submit the electronic bid submission

1. Prepare the paper bid document

- Either purchase the Bid Document directly from the Employer office or may download the bid document from the website and deposit the equivalent amount in the Revenue account of the employer as specified in the notice or/and Bid Document.
- Fill the rates and amount in BOQ,
- Fill the Bid Form,
- Prepare the necessary copy of Company registration, VAT/PAN registration, Tax clearance certificate,
- Prepare the necessary specific papers like Power of Attorney for bid signatory, Joint Venture agreement, if bidding in JV,
- Prepare summary of qualification information sheet (Financial turnover, Experience, Manpower, Equipment, Credit line, Litigation etc) in the specified format,
- Prepare the bid guarantee letter for the specified bid security amount and in the specified format,

2. Prepare the Electronic bid files in pdf format

Once prepared the above paper documents the bidder shall prepare the electronic bid files in pdf format as follows;

- Scan the above documents in pdf format, give the specific file name for each document,
- Prepare all scanned bid files in pdf format and save them in a separate folder in own computer to ease bid uploading process.

3. Electronic bid submission

- Once the electronic bid files are ready the Bidder shall connect to internet,
- Open the NEAs website www.nea.org.np and open E-procurement section,
- Register in the Bidders name and get User name and Password for Login,
- Confirm the registration by clicking the specified link in auto generated e-mail from NEAs web site,
- After confirmation for bidder's registration click Bidder, fill User name, Password and Login,
- Choose and click the specific tender notice for which the electronic bid files has been prepared,
- Click the Bid now button to submit the electronic bid files,
- Upload each specified electronic bid files by clicking the Upload button and select the respective bid files by Browsing,
- Once all the electronic bid files are uploaded, click the Submit the Bid button for final e-submission of electronic Bid,
- Once the e-submission is successfully completed the Bidder shall receive a auto generated confirmation e-mail from the NEAs website,
- Bidder to keep the conventional paper bid document, qualification information, and other related documents safe as the Buyer may seek the supporting bid documents and clarifications, as necessary during bid evaluation process.
- The Bidder shall submit the necessary supporting documents and clarifications (conventional bid document)

Section III. Evaluation and Qualification Criteria

Evaluation and Qualification Criteria

Failure to fulfill any of the requirements specified in Qualification Requirements given below shall result in disqualification of the Bid.

1. Power of Attorney

The Bid shall include a notarized power of attorney authorizing the signatory of the bid to commit the Bid on behalf of the Bidder.

2. Legal Status

2.1 For the Bidder which is not a Joint Venture (JV):

The Bidder shall be a manufacturer or supplier legally registered for at least five (5) years for conducting business similar to the one for which the Bid is invited. A notarized copy of legal registration certificate shall be submitted along with the Bid.

2.2 For the JV Bidder:

(a) Original of joint venture agreement legally binding on all JV partners shall be included in the Bid. The joint venture agreement shall bear the seal of the entities and signatures of personnel authorized by the respective entities forming the joint venture. All such authorization documents shall also be included in the Bid. These Authorization documents shall be on the original letterhead of the entity with stamp/seal of the entity.

(b) The number of joint venture partners shall not exceed three (3).

(c) The partners of the JV shall be manufacturers or suppliers. Each of the partners of JV shall be legally registered for at least five (5) years for conducting business similar to the one for which the Bid is invited.

(d) Notarized copies of legal registration certificates for each JV partners shall be submitted along with the Bid.

3. Financial Capacity of the Bidder

3.1 Financial Statements

The Bidder including joint venture partners, if any, shall submit audited financial statements (Balance Sheet and Profit and Loss Account) for the last three (3) fiscal years. Balance sheet and Profit & Loss Account sheet shall be signed and sealed by the registered auditor(s).

3.2 Line of Credit

In the event that the working capital of the Bidder (including each of the JV partner in the case of JV) is to be supplemented with the line of credit from a Bank, the Bidder shall submit original letter of the Bank pledging unequivocally that the Bank will provide required financial support in case the Bidder is awarded the contract. The amount of line of credit shall be clearly mentioned in

the Bank letter. The bid title and the bid number shall also be mentioned in the Bank letter.

3.3 Annual Turnover:

(a) For the Bidder which is not a Joint Venture (JV):

The Bidder shall have Average Annual Turnover (defined as the total payments received by the Bidder averaged over last three consecutive years period) of not less than **NRs 52,50,000.00**

(b) For the JV Bidder:

The Average Annual Turnover of the lead partner shall not be less than 40% of the amount stated above in sub-clause 3.3 (a).The Average Annual Turnover of other partners shall not be less than 25% of the amount stated in sub-clauses 3.3 (a). Aggregate Annual Turnover of all the JV partners shall not be less than the values specified in sub-clauses 3.3 (a).

3.4 Availability of Financial Resources (Working Capital)

a) For the Bidder which is not a Joint Venture (JV):

The Bidder shall have Working Capital (defined as total current assets less total current liabilities) of at least **NRs 34,70,000.00** in the last Fiscal Year.

If the Bidder's Working Capital is inadequate, the Bidder shall supplement Working Capital with Banker's letter confirming the availability of a line of credit such that aggregate of the Bidder's Working Capital for the last fiscal year and the line of credit shall not be less than the required amount.

(b) For the JV Bidder:

Working Capital of the lead partner shall not be less than 40% of the amount stated above in sub-clause 3.4 (a).Working Capital of other partners shall not be less than 25% of the amount stated in sub-clauses 3.4 (a). Aggregate Working Capital (with line of credit facilities) of all the JV partners shall not be less than the values specified in sub-clauses 3.4 (a).

4. Manufacturing Experience

4.1 In case the Bidder is not a manufacturer of the Goods offered, the Bidder shall submit manufacturer's certificate authorizing the Bidder to supply the manufacturers' Goods. This certificate shall bear details of the Goods that the manufacturer will be supplying under the authorization. The authorization shall be on the manufacturer's original letterhead with seal/stamp of the manufacturer.

4.2 The manufacturer of Goods to be supplied under this Bid shall hold valid quality ISO certificate as required by the specifications and a copy of ISO certificate shall be included in the Bid.

4.3 Type test certificate, if applicable, shall be included in the Bid and shall bear a date that is not earlier than five years from the last date of Bid submission. The type test certificate shall have been issued by a reputed independent laboratory

accredited by International Laboratory Accreditation (ILAC) or International Accreditation Forum (IAF) or other reputed accreditation agencies.
In case of the Type test certificate is not as per the requirement, the bidder shall upon award of the contract, undertake to carry out the required type test from an independent laboratory qualified as above or in a laboratory owned or nominated by the client/employer before delivery of the corresponding equipment at no extra cost to the client/employer.

4.4 The Bidder shall submit at least two numbers of end user certificates showing that the manufacturer has successfully completed the supply of at least **twice the bid Quantity** of ordered items as a main supplier over last five (5) years period ending on the last date of bid submission. Out of supplied quantity, a minimum of **half the bid quanity** shall have been in operation satisfactorily to the end users for at least One (1) year. The end user certificates shall be on the letterhead of the end user with valid address for correspondence and signed by or on behalf of the end user.

4.5 The manufacturer shall be legally registered for at least five (5) years for conducting business similar to the one of which the bids is invited. A notarized copy of Legal registration certificate shall be submitted along with the bid.

4.6 The manufacturer shall have average annual turnover (defined as the total payments received by the bidder averaged over last three consecutive years period) for foreign manufacturer of not less than **NRs. 3,20,00,000.00** and for domestic manufacturer not less than **NRs. NRs 52,50,000.00**

5. Miscellaneous

The Bidder or any of the Joint Venture partners shall not be on the blacklist circulated by Public Procurement Monitoring Office, Government of Nepal or Nepal Electricity Authority.

Section IV. Bidding Forms

Section IV. Bidding Forms

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1. Bid Submission Form

(The Bidder shall accomplish the Bid Submission Form in its Letter Head Clearly showing the Bidders Complete name and address)

Date: _____
Contract No.: _____
Invitation for Bid No.: _____

To: _____

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Document, including Addenda No.: _____;

(b) We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule specified in the Schedule of Requirements, the following Goods and Related Services: _____
_____;

(c) The total price of our Bid, excluding any discounts offered in item (d) below is: _____
_____;

(d) The discounts offered and the methodology for their application are: _____
_____
_____
_____
_____;

(e) Our Bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(f) If our Bid is accepted, we commit to obtain a Performance Security in the amount of _____percent of the Contract Price for the due performance of the Contract;

(g) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Document;

(h) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the GoN;

(i) The following commissions, gratuities, or fees, if any, have been paid or are to be paid with respect to the bidding process or execution of the Contract:

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.")

(j) 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.

(k) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

(l) We declare that, we have not been black listed as per ITB 3.4 and no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or business.

(m) We agree to permit GoN/DP or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the GoN/DP.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

2. Bidder's Information Form

[The Bidder shall fill in this Form. No alterations to its format shall be permitted and no substitutions shall be accepted. In case of joint venture, each partner shall fill the information in separate form.]

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

Page _____ of_ _____ pages

1.	Bidder's Legal Name	
2	Bidder's Address:	
3	Bidder's Country of Registration:	
4.	Bidder's Year of Registration:	
5.	Bidder's Legal Address in Country of Registration	
6.	Bidder's Authorized Representative Information: …..Name: Address: Telephone/Fax numbers: Email Address	
7	Bidder's Telephone/Fax numbers:	
8	Bidder's Email Address:	
	Attached are copies of the following original documents. ❑ 1. Firm Registration Certificate ❑ 2. Authorization to represent the firm	

3. Joint Venture Information Form

Lead Partner	Name of the Lead Partner in Joint Venture: Share of the Lead Partner: Place of Firm Registration: Place of Business Registration: Percentage of Partnership:	
Partner	Name of the Partner in Joint Venture: Share of the Lead Partner: Place of Firm Registration: Place of Business Registration: Percentage of Partnership:	
Partner	Name of the Partner in Joint Venture: Share of the Lead Partner: Place of Firm Registration: Place of Business Registration: Percentage of Partnership:	

4. Financial Situation Form

Financial Data for Previous 3 Years (in NRs)		
Year 1: 2071/072	**Year 2: 2072/073**	**Year 3: 2073/074**

Information from Balance Sheet

Total Assets			
Total Liabilities			
Net Worth			
Current Assets			
Current Liabilities			

Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

❑ Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three or above years, as indicated above, complying with the following conditions?

- Historic financial statements must be audited by a certified accountant.
- Historic financial statements must be complete, including all notes to the financial statements.
- Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

5. Average Annual Turnover Form

The information supplied should be the Annual Turnover of the Bidder in terms of the amounts billed to clients for each year for work in progress or completed to NRs at the end of the period reported.

Annual Turnover Data for the Latest 3 Years	
Year	**Amount (in NRs)**
Average Annual Turnover	

6. Financial Resources Form

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, available to meet the total cash flow requirements of the subject contract

Financial Resources		
No.	**Source of financing**	**Amount (in NRs)**
1		
2		
3		

Note:

The letter from the Bank must be unconditional.

7. Pending Litigation Form

Each Bidder or member of a JV must fill in this form

Year	Matter in Dispute	Value of Pending Claim in NRs	Value of Pending Claim as a Percentage of Net Worth

8. Specific Experience Form

Bidder's Legal Name: _____ Date: _____

IFB No.:

Page _____ of _____ pages

Similar Contract	**Information**		
Contract Identification	_____		
Award date Completion date	_____ _____		
Role in Contract	☐ Contractor	☐ Management Contractor	☐ Subcontractor
Total Contract amount	_____		Currency____
Description of the works performed by the Bidder			
If partner in a JV or subcontractor, specify participation of total Contract amount	_____%	_____	Currency____
Employer's Name:	_____		
Employer's Address:			
Employer's Telephone/fax number: Employer's E-mail:	_____ _____ _____ _____		

The Bidder shall complete this form for each contract completed/in progress.

Price Schedules

Bill of Quantities

NEPAL ELECTRICITY AUTHORITY
Distribution & Consumer Services Directorate
Nepalgunj Regional Office
Nepalgunj

Tender No: NRO/2074/075-VCB-01 **FY 2074/075**

S.No.	Description	Unit	Qty	Cost of Supply & Delivery at Site		Installation, Testing and Commissioning Work		Total Amount	Remarks
				Unit Rate	Amount	Unit Rate	Amount		
1	Supply, Delivery, Installation, Testing and Commissioning of 36 KV, 800 A, Incoming Vacuum Circuit Breaker at Nepalgunj DCS.	Set	4						
2	Supply, Delivery, Installation, Testing and Commissioning of 36 KV Control and Relay Panel with all accessories for system operation at Nepalgunj DCS.	Set	4						
3	Supply, Delivery, Installation, Testing and Commissioning of 36 KV Control and Relay Panel with all accessories for system operation at Tulsipur DCS.	Set	1						
4	Supply, Delivery, Installation, Testing and Commissioning of 33 KV, 600/400/200/5A Current Transformer for system operation at Ghorahi DCS.	Set (1 Set = 3 Nos)	1						

5	Supply, Delivery, Installation, Testing and Commissioning of 33 KV, 33/0.11KV Potential Transformer for system operation at Dailekh DCS.	Set (1 Set = 3 Nos)	1						
6	Supply, Delivery, Installation, Testing and Commissioning of 110V Battery Charger at Tulsipur DCS.	Set	1						
7	Supply, Delivery, Installation, Testing and Commissioning of 240Ah, 110V Maintenance free Battery at Tulsipur DCS.	Set (1 Set = 55 Nos)	1						
	Sub-Total								
	Custom Duty (@5%)								
	Total without VAT								
	VAT (@13%)								
	Grand Total (NRs.)								

In Words:

Name of Bidder

Seal/Stamp of Bidder Firm:
Date:

Duly authorized to sign the bid for and on behalf of:

Bid Security

[This is the format for the Bid Security to be issued on the letterhead by a "A" class commercial bank specified by Nepal Rastra Bank]

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

Date: ***[insert date]***

Beneficiary: ***[insert Name and Address of Purchaser]***

BID GUARANTEE No.: ***[insert number]***

We have been informed that ***[insert name of the Bidder]*** (hereinafter called "the Bidder") intends to submit its bid to you (hereinafter called "the Bid") for the execution of ***[insert name of contract]*** under Invitation for Bids No***. [insert IFB number]*** ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we ***[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, if required, or (ii) fails or refuses to furnish the performance security, in accordance with the ITB.

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; and (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 (30) days after the expiration of the Bidder's bid which comes to be ***[insert the date]***.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

Name _____
In the capacity of _____
Signed _____
Duly authorized to sign the Bid Security for and on behalf of _____
Date _____

Manufacturer's Authorization Letter

[This letter of authorisation should be on the letterhead of the manufacturer and should be signed by the person with the proper authority to sign documents that are binding on the manufacturer]

Date: _____

IFB No.: _____

To: _____

WHEREAS _____ who are official manufacturers of _____ having factories at _____ do hereby authorize _____ exclusively to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is exclusively to provide the following Goods, manufactured by us _____ and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 27 of the General Conditions of Contract, with respect to the Goods offered by the above firm in reply to this Invitation for Bids.

Name _____

In the capacity of: _____

Signed _____

Duly authorized to sign the Authorization for and on behalf of _____

Date _____

Section V. Schedule of Requirements

Section V. Schedule of Requirements

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1. List of Goods and Related Services

(Delivery Schedule)

Delivery Site: NEA stores (Nepalgunj DCS, Tulsipur DCS, Ghorahi DCS, Dailekh DCS) as specified in the Delivery Site Schedules.

Delivery Period: 180 Days

S.No.	Description	Unit	Qty	Quantity to Supply within 180 days
1	Supply, Delivery, Installation, Testing and Commissioning of 36 KV, 800 A, Incoming Vacuum Circuit Breaker at Nepalgunj DCS.	Set	4	100%
2	Supply, Delivery, Installation, Testing and Commissioning of 36 KV Control and Relay Panel with all accessories for system operation at Nepalgunj DCS.	Set	4	
3	Supply, Delivery, Installation, Testing and Commissioning of 36 KV Control and Relay Panel with all accessories for system operation at Tulsipur DCS.	Set	1	
4	Supply, Delivery, Installation, Testing and Commissioning of 33 KV, 600/400/200/5A Current Transformer for system operation at Ghorahi DCS.	Set (1 Set = 3 Nos)	1	
5	Supply, Delivery, Installation, Testing and Commissioning of 33 KV, 33/0.11KV Potential Transformer for system operation at Dailekh DCS.	Set (1 Set = 3 Nos)	1	
6	Supply, Delivery, Installation, Testing and Commissioning of 110V Battery Charger at Tulsipur DCS.	Set	1	
7	Supply, Delivery, Installation, Testing and Commissioning of 240Ah, 110V Maintenance free Battery at Tulsipur DCS.	Set (1 Set = 55 Nos)	1	

2. Technical Specifications

1. **33 kV Circuit Breaker**

1.1. General

This specification covers the design, manufacture, assembly, shop test, supply, delivery, installation works and field test of 33kV vacuum circuit breakers complete with all accessories for efficient and trouble free operation as specified here in under. Circuit breakers shall be offered from reputed makes like Hitachi /GE /ABB/Mitsubishi /LG /Fuji / Siemens/CGL, Areva or equivalent.

The equipment specified in this Section shall conform to the latest edition of the appropriate IEC specifications and/or other recognized international standards. In particular:

IEC 60056	High-voltage alternating switchgear
IEC 62271	High-voltage alternating switchgear and control gear
IEC 60376	Specification and acceptance of new sulphur hexafluoride
IEC 60529	Degree of protection provided by enclosures
IEC 60694	Common specifications for high-voltage switchgear and control gear standards

1.2 Equipment to be furnished

1.2.1 The equipment to be furnished shall strictly be in accordance with the specifications and the Price Schedule.

1.3 Design Requirements

1.3.1 The circuit breakers shall be suitable for 3 phase, 50Hz in 33kV system.

1.3.2 Circuit breaker shall be installed outdoor in a hot and humid climate. All equipment and accessories shall be provided with tropical finish to prevent fungus growth.

1.3.3 The maximum temperature rise in any part of the equipment at specified rating shall not exceed the permissible limit as stipulated in relevant standards. The de-rating of the equipment shall be made taking 45 deg. C as an ambient temperature of the site, if it is designed for any lower ambient temperature.

1.3.4 The rated peak short circuit current or the rated short time current carried by the equipment shall not cause:

(a) Mechanical damage to any part of the equipment.
(b) Separation of contacts.
(c) Insulation damage of "Current Carrying Part".

1.3.5 Technical particulars of the circuit breaker shall be as per **Appendix 1.5.1.**

1.3.6 All auxiliary equipment shall be suitable for 3 phase 4 wire, 50Hz, 400 V**.**

1.4 Construction Features

1.4.1 This circuit breaker shall be outdoor, three phase, single throw, pneumatically or spring charged motor operated, vacuum type, trip free in any position, complete with operating mechanism and supporting structure.

1.4.2 Bushing or tanks shall be accurately aligned and assembled with the operating mechanism as a complete rigidly mounted unit on a structural steel base or frame at the factory, to permit shipment and installation as an assembled unit.

1.4.3 Contacts

The contacts shall be designed to have adequate thermal and current carrying capacity for carrying full-rated current without exceeding the allowable temperature rise as specified by IEC standards. They shall be designed to have long life so that frequent replacement or maintenance will be unnecessary. The surfaces of either of both moving and stationary arcing contacts, which are exposed directly to the arc, shall be faced with suitable arc resisting material.

1.4.4 Local test switch

Each mechanism shall be equipped with a local test switch for electrically testing the closing and tripping operations of the circuit breaker. A separate manually operated cutout device to disconnect the circuits to remote closing, re-closing and tripping devices shall be provided on each circuit breaker. A warning nameplate requiring operation of this device before operation of the local test switch shall be mounted adjacent to the local test switch.

1.4.5 Emergency trip

Each circuit breaker shall be provided with an emergency hand trip device. This device shall be provided with mechanically interlocked contacts to disconnect circuits from remote closing and re-closing devices.

1.4.6 Position indicator

The circuit breaker shall be equipped with mechanical position indictor. The indicator shall be provided for each pole.

1.4.7 Operating mechanism

The operating mechanism of the circuit breakers shall be spring charged by 110V D.C. motor and with mechanical charging.

The tripping circuit mechanism and the closing control circuit mechanism shall each have a nominal voltage rating of 110 volts DC. The tripping circuit shall operate satisfactorily for a tripping operation over a voltage range of 70-110%. The closing control circuit shall operate satisfactorily over a voltage range of 85-110%.

1.4.8 Operation Counter

There shall be the counter to read the number of operation of VCB.

1.4.9 Accessories

The Contractor shall furnish following accessories as an integral part of the circuit breaker:

(a) Padlocks and duplicate keys
(b) Operation counter
(c) Earthing terminals
(d) Nameplate
(e) Other necessary accessories
(f) Operating handle

1.4.10 Spare parts

Following spare parts shall be provided in required quantities as listed in Price Schedule.

1.5 Tests

1.5.1 Routine tests

One circuit breaker of each type ordered under the Contract shall be fully assembled

at the manufacturer's works and subjected to routine tests in accordance with IEC 56 and shall comprise but not limited to the following.

(a) Construction inspection
(b) Leakage test
(c) Operating speed check
(d) Dielectric test
(e) Pressure test
(f) Control and secondary wiring check test
(g) Mechanical operation test
(h) Operating mechanism system check

1.5.2 Design tests

The Contractor shall conduct the following design tests on one circuit breaker being furnished. However, if these tests have been previously conducted on identical circuit breakers, the Contractor may furnish certified copies of such previous reports instead of performing tests on the actual circuit breakers being furnished. The Bidder shall submit the copy of design test for identical circuit breaker with the proposal.

(a) Bushing tests
(b) Dielectric withstand test
(c) Current carrying test
(d) Normal current switching test
(e) Short circuit switching test
(f) Mechanical operation life test

If a circuit breaker has been used for design tests, the test breaker will not be accepted unless the following minimum maintenance are completed, including any other provisions not included herein, but required to render the breaker equivalent of a new breaker:

(a) Replace all latches and pins

(b) Replace all major parts which are subject to fatigue, including, but not restricted to, contacts, movable cross-heads, spring and linkages**.**

1.5.3 Field tests

After installation at Site, the circuit breaker shall be subjected but not limited to the following field tests:

(a) Construction inspection
(b) Measurement of insulation resistance
(c) Operating speed check

(d) Mechanical operation test
(e) Operating mechanism system check

1.6 Performance Guarantee

The performance guarantee figures quoted on the schedule of technical data shall be guaranteed within the tolerances permitted by relevant standard and will become a part of successful Tender's Contract**.**

1.7 Drawings, Data and Manuals

1.7.1 The following drawings and data shall be furnished along with the Tender.
(a) General equipment layout
(b) Outline drawings of the breaker and control cubicle with accessories

1.7.2 After award of Contract the successful Bidder shall submit the required number of copies of the following drawings and data for approval of the Employer/Employer's Representative.
(a) General equipment layout
(b) Outline drawing of the breaker and control cubical with accessories.
(c) Loading data and foundation detail.
(d) Elementary control wiring diagram.
(e) Internal wiring diagram.
(f) External connection diagrams, showing terminal boards and other external connection points for each assembly and the required interconnecting wiring.
(g) Drawing showing typical cross-section of the operating mechanism and breaker mechanism.
(h) Drawing showing typical cross-section and assembly of interrupting device.
(i) Drawing showing assembly of principal component parts and accessories.
(j) Drawing showing details of bushing or porcelain supporting columns, including dimension details of flanges and outline dimensions.
(k) Drawing to show details at all points where adjustments may be made to operating dimension mechanism, breaker mechanisms and contacts.
(l) Any other drawings and data required for design and installation of circuit breaker.
(m) Instruction manual for storage, installation, operation and maintenance of circuit breaker and operating mechanism.

1.8 Nameplate

Each circuit breaker shall be provided with nameplate of weather resistant material fitted in a visible position showing the following items as a minimum.

- **(a)** Manufacturer's name
- **(b)** Manufacturer's serial number and type designation
- **(c)** Year of manufacture
- **(d)** Rated voltage, kV
- **(e)** Rated insulation level, kV
- **(f)** Rated frequency, Hz
- **(g)** Rated normal current, A
- **(h)** Rated short-circuit breaking current, kA
- **(i)** Rated interrupting time cycles
- **(j)** Weight of circuit breaker, kg

1.9 Special Tools

In addition to the tools, which are regularly furnished with such breakers, the Contractor shall also supply all necessary special tools or equipment for assembling and disassembling the breaker. The Contractor shall submit an itemized list of such equipment.

APPENDIX 1.5.1

TECHNICAL PARTICULARS OF 33 kV CIRCUIT BREAKER

1.	**Type**	**Vaccum, Outdoor Type**
2.	**Quantity Required**	**As per Schedule**
3.	**Voltage rating**	
	(a) Nominal system Voltage	**33 kV**
	(b) Rated Maximum Voltage	**36kV**
3.	**Insulation Level**	
	(a) Impulse withstand voltage	**170kV**
	(b) Power frequency withstand voltage(1 min)	**75kV**
5.	**Frequency**	**50Hz**
6.	**Current rating**	
	(a) Rated continuous current at 45 deg. C ambient	**800A**
	(b) Rated interrupting current	**25 kA**
7.	**7. Re-closing duty cycle**	**0-0.3 sec-CO-3 min.-CO (Rated operating sequence)**
8.	**Auxiliary supply**	
	(a) Control circuit	**DC 110V**
	(b) Space heater and auxiliary equipment	**AC, 3Ph-4W, 400V, 50Hz**

9.

Total maximum break time	60 ms
First pole to clear factor	1.5
Additional Auxiliary Contacts	8 NO, 8 NC
Maximum make time	120 ms
Spring charging motor	110 V DC

2. CONTROL AND RELAY PANEL

2.1 General

2.1.1 This specification covers Study**,** Design, Manufacture, Assembly Factory Test, Supply, Delivery, Installation works and Field Test and Commissioning of Control and Relay Panels as specified herein under. The panel shall be used for the protection of the following :

Transformer Protection equipment/ relays as required shall have to be supplied and installed accordingly.

2.1.2 It is not the intent to specify completely herein all details of Design and Construction of Equipment supplied. However, the equipment supplied shall conform, in all respects, to high standards of Engineering, Design and Workmanship and be capable of performing in continuous commercial operation up to Contractor's guarantee in a manner acceptable to the Employer who will interpret the meaning of Drawings and Specifications and shall have the power to reject any work or material which in his judgment are not in full accordance therewith.

The Tenderer shall submit his proposed Control Panel Arrangement & Layout. The Tenderer is warned that the available space in the existing control rooms is very limited and the panels shall be of such size to fit in available space.

The cost of any relocation of equipment in the control room and outdoor switchyard necessary to complete the specified works shall be included in his bid price and no additional payment will be made for such work.

2.1.3 The indication and annunciation schemes for existing substations shall be compatible with the existing system as far as possible.

2.1.4 Manufacturers for Protection Equipment

All protection relays like over current, earth fault, differential, definite time over current etc shall be of static type and shall be from following manufacturers or equivalent.

a)	ALSTHOM (Areva)	b)	Fuji
c)	CGELEC	d)	Reyrolle / Easun Reyrolle
e)	ABB	f)	Siemens
g)	Toshiba	h)	Mitsubishi

2.2 Equipment to be furnished

2.2.1 Control and Relay panels shall be more or less of the color matching with the existing one

2.2.2 In addition to the above, the following shall be supplied:

(a) Floor channel seals, vibration damping pads, kick plates, earthing pads and holding down bolts and nuts.

(b) Special tools and tackle.

2.3 CONSTRUCTION FEATURES

2.3.1 The Panel Dimensions specified are tentative only and it is the responsibility of Tenderer to ensure that all the equipment required can be properly accommodated in the respective space. The panels shall also be of a size & type which can be easily accommodated within the space of existing Panels & existing control room without the necessity for expansion of the control room. Such oversized panels will not be accepted.

2.3.2 The 33 kV panel shall be of Simplex type or Duplex type as per the layout of the respective Substation.

i. In case, the Panels are Duplex type, it shall comprise two vertical front and rear panel sections connected back-to-back by formed sheet steel roof tie members and a central corridor in between. The corridor shall facilitate access to internal wiring and external cable connections. Both ends of the corridor shall be provided with double leaf doors with lift off hinges.

Doors shall have handles with built-in locking facility. Separate cable entries shall be provided for the front and rear panels. However, interconnection between panels shall be by means of inter panel wiring at the top of the panels.

ii. If the panels are of Simplex type, it shall comprise of two vertical fronts side by side, with door at rear sections with built in locking facility.

2.3.3 Panels shall be completely metal enclosed and shall be dust, moisture and vermin proof. Panel enclosures shall provide a degree of protection not less than IP 54 as per IEC.

2.3.4 Panels shall be free standing, floor mounting type and shall comprise rigid welded structural frames enclosed completely with specially selected smooth finished, cold rolled sheet steel of thickness not less than 3mm for front and rear portions and 2mm for sides, top and bottom portions. There shall be sufficient reinforcement to provide level surfaces, resistance to

vibration and rigidity during transportation and installation.

2.3.5 All doors, removable covers and panels shall be gasketed all around with gaskets. Ventilation louvers, if provided, shall have screens and filters. The screens shall be made of either brass or GI wire mesh.

2.3.6 Design, materials selection and workmanship shall be such as to result in neat appearance inside and outside with no welds, rivets or bolt heads apparent from outside, with all exterior surfaces true and smooth.

2.3.7 Panels shall be suitable for floor mounting. Metal sills in the form of galvanized steel channels properly drilled shall be furnished along with anchor bolts and necessary hardware for mounting to a concrete floor. Any irregularity between the sills and flooring shall be sealed to prevent entry of dust, moisture and vermin. Panels shall have additional rolled channel plinth at the bottom with smooth bearing surface. The panels shall be fixed on the sills with intervening materials. The type of anti-vibration strips which shall be supplied by the Contractor shall be subject to the approval of the Employer.

2.3.8 Cable entries to the panels shall be from the bottom unless otherwise specified. The bottom plates of the panels shall be fitted with removable plates of adequate size for holding the cables using cable connectors to seal from dust and moisture. All cable connectors required shall be provided by the Contractor and shall be screwed type and shall be suitable for PVC armored cables.

Control and relay panel enclosure protection class shall be of IP 54. When in closed position there shall not be any chances of entering lizards, mousse etc inside the panel

2.4 Component Mounting

2.4.1 All equipment on front of panel shall be mounted flush or semi-flush. In case of semi-flush mounting, only flange or bezel shall be visible from the front.

2.4.2 Equipment shall be mounted such that removal and replacement can be accomplished individually without interruption of service to adjacent equipment. Equipment mounted inside the panel shall be so located that terminals and adjacent devices are readily accessible without the use of special tools. Terminal markings shall be clearly visible.

2.4.3 Cut-outs and wiring for free issue items, if any, shall be according to corresponding equipment manufacturer's drawings. Cut-outs, if any, provided for future mounting of equipment shall include cover plates.

2.4.4 The centerline of switches, push buttons and indicating lamps shall be not less than 750mm

from the bottom of the panel. The centerline of relays with targets and/or requiring adjustment, motors, test switches, and recorders shall be not less than 450mm from the bottom of the panel. No components shall extend below 200mm.

It will be preferable if existing panel layout is used to give uniform appearances.

2.4.5 The centerline of switches, push buttons and indicating lamps shall be matched to give a neat and uniform appearance. Likewise, the top lines of all meters, relays and recorders, etc. shall be matched.

2.4.6 No equipment shall be mounted on the doors without prior approval of the Employer.

2.4.7 In the existing substation, panels shall be as far as possible matched with the existing panels in the control room in respect of Dimensions, Color, Appearance, Size and Arrangement of equipment on the front.

2.4.8 The standard phase arrangement when facing the front of the switch-board shall be R-S-T from left to right, from top to bottom, and front to back. All relays, instruments, other devices, buses and equipment involving three phase circuit shall be arranged and connected in accordance with the standard phase arrangement.

2.5 Mimic Diagrams

2.5.1 Mimic diagrams shall be provided on panels as required. Mimic diagrams shall be screwed on to panels and shall be made of anodized aluminum or plastic of approved fast color material which can be easily cleaned. The width of the mimic bus shall be subject to approval of the Employer.

2.5.2 The colors for the various voltages in the mimic diagram shall be as per the existing colors.

2.5.3 When semaphore indicators are used for disconnecting switch positions, they shall be so mounted in the mimic that the disconnecting switch's 'close' position shall complete the continuity of the mimic. Similarly, when control switches of stay-put type are mounted in the mimic, the 'close' position of the switch shall complete the mimic.

2.6 Annunciators

2.6.1 Annunciators of the visual and audible type shall be provided on the panels when called for in the equipment lists, if enclosed. Annunciators shall be suitable for operation for the voltages specified.

2.6.2 Annunciators shall be of facia type with 35mm x 50mm (minimum) translucent plastic window for each alarm point. Annunciator facia plates shall be engraved in block letter with respective alarm inscriptions, which will be furnished to Contractor by Employer. Alarm inscriptions shall be engraved on each window in not more than three lines and size of the lettering shall be not less than 3mm. The inscriptions shall be visible only when the respective light is lighted. If any other type of Annunciators are to be used, prior approval from the Owner should be taken before manufacturing..

2.6.3 The annunciators shall be suitable for operation with normally open fault contacts which close on a fault. When specified in bill of materials, some of the annunciator points shall be suitable for operation with normally closed faults contacts which open on a fault. It shall be possible at site to change annunciators from "open to fault" to "close to fault" and vice versa. Annunciators shall be suitable for accepting fleeting faults of duration not less than 15 milliseconds.

2.6.4 Annunciators shall be compact self- contained units with associated relays mounted behind the facia units. In case the associated relays cannot be housed behind the annunciator facia units, these shall be mounted and wired in a separate panel which shall be included in the offer. However, the latter arrangement is not preferred due to additional space requirement and wiring interconnections. Alarm relays and facia units shall be interchangeable.

2.6.5 Annunciator facia units shall be suitable for flush/semi-flush mounting on panels. Replacement of individual facia inscription plates and lamps / LED / LCD shall be possible from front of the panels.

2.6.6 One alarm buzzer common to annunciators on all the panels shall be provided. Similarly, "Sound Cancel", "Acknowledge", "Reset" and "Lamp Test" push buttons common to annunciators on all the panels shall be provided. These common devices shall be located in a particular panel as determined by the Employer.

2.6.7 In case of static annunciator schemes, special precaution shall be taken by the Contractor to ensure that spurious alarm conditions do not appear due to false influence of external magnetic fields on the annunciator wiring and switching disturbances from the neighboring circuits.

2.6.8 Each annunciation window shall be provided with two lamps to provide safety against lamp failure. Lamps shall operate in parallel such that failure of one will not affect operation of the other.

2.6.9 Sequence of Operation of the Annunciator shall be as follows:

Alarm Condition	Fault Contact	Audible Alarm	Visual Alarm

Normal	Open	Off	Off
Abnormal	Close	On	Flashing
Sound cancel	Close or Open	Off	Flashing
Acknowledge	Close or Open	Off	Steady On
Back to Normal	Open	Off	Steady On
Reset	Open	Off	Off
Lamp Test	Open	Off	Steady On

In case 'RESET' push-button is pressed before abnormality is cleared, the lamps shall continue to glow steady and shall go out only when 'Normal' condition is restored.

2.6.10 Any new annunciation appearing after the operation of "Sound Cancel" for previous annunciation, shall provide a fresh "Audible Alarm" with accompanied "Visual Alarm" even if the process of "Acknowledging" or "Resetting" of previous alarm is going on or yet to be carried out.

2.6.11 Provision of testing facilities for flasher and audible alarm circuits of annunciators shall be provided.

2.7 Specific Protection Requirements

2.7.1 Relay Protection

8.7.1.1 Overcurrent and Earthfault Protection

i. Non-Directional Phase Overcurrent Protection shall:

be single pole & have an inverse characteristic with a definite minimum time of 3sec.at 10times setting.

have a variable setting range of 20-200% of rated Current

ii. Non-Directional Earth Fault Protection shall :

be single pole type.

have an inverse characteristic with a definite minimum time of 3sec. at 10 times setting.

have an adjustable setting of 10-80% of rated current.

2.7.1.2 Directional Overcurrent Protection (not applicable)

i. Phase over current relay shall :

be single pole X 3 type

have an inverse characteristic with a definite minimum time of 3secs. at 10 times setting.

have a variable setting range of 50-200% of rated current.

have a characteristic angle of 45 degree.

have a directional controlled low transient over-reach high set instantaneous unit of continuously variable setting range 200-1200% times of rated current.

be of voltage polarized directional controlled type.

ii. Directional Earthfault overcurrent protection (not applicable)

Earth fault overcurrent relay shall :

Single pole type.

be of zero-sequence voltage polarized directional controlled.

have an inverse characteristic with a definite minimum time of 3 secs. at 10 times setting.

have an adjustable setting range of 10-80% of rated current.

have a directional controlled low transient over reach high set with a continuously variable setting range of 5-20 times of rated current.

have a characteristics angle of 45 degree.

2.7.1.3 Local Breaker Back Up Protection

Relay shall :

- be triple pole type.
- have an operating time of less than 15 milliseconds.
- have 2 over current and 1 Earth fault elements.
- have a re-setting time of less than 15 milliseconds.
- have a setting range of 30-320% of rated current.
- have a separate time delay relay with a continuously adjustable setting range of 0.1-1 second.
- have necessary auxiliary relays to make a comprehensive scheme.
- have a continuous thermal withstand two times rated current irrespective of setting.
- provide both retrip and back-up trip output contacts.

2.7.2 Manufacturer of Protection Relay shall be as specified

2.7.3 Other Requirements

i. Layout of panel in the control room, individual panel layout incorporating the hardware and control wiring diagrams and schematics shall be prepared by the Contractor and be sent to the Employer for approval.

ii. All auxiliary relays, if and when required for the completeness of the various protection schemes covered in this order, shall be deemed to be included in the scope of supply whether or not such items are specifically mentioned in the enclosed bill of material.

ii. Omission of hardware specifically mentioned in Price schedule material such as auxiliary relays/protective relays, etc. if found necessary during detailed engineering shall be shipped to the Employer with spare parts, without any extra cost to the Employer.

iv. All terminal blocks for CT and PT circuits shall be of disconnecting line type. Suitable plastic covers for all terminal blocks shall be provided in order to prevent dust accumulation.

v. Panels shall be mounted to concrete foundation on galvanized steel channels with an intervening layer of anti-vibration strips made of shock absorbing materials which shall be supplied by the Contractor.

Vi. Cable entries for all the panels shall be from bottom. The bottom plates of the panels shall be fitted with removable plates of adequate size for holding cables and sealing from dust and moisture.

vii. A ground bus of bare copper strip of minimum size 25 x 6mm along the length of each panel shall be provided and shall be connected to the ground mat of the station.

2.8 ENERGY METERS

2.9 SPECIFICATION FOR SOLID STATE ENERGY METERS

1. Scope

This specification covers the design, engineering, manufacture, assembly, testing and delivery at site of CT and VT operated A.C. static watt hour meter. The meters shall be 3-Phase 4 wire 0.5 accuracy class for measurement of active, reactive (lead & lag) and apparent power and energy as per power tariff requirement of A.C. balanced and unbalanced load at nominal frequency in the range of 47.5Hz to 52.5Hz using Digital Technology. Meter shall be manufactured using latest and 'state of art' technology and methods prevalent in electronic industry.

It is not the intent to specify completely herein all the details of the hardware, software, communication and design of the system. The material shall, however, conform in all

respects to the best standards of engineering, design and workmanship and shall be capable of performing for continuous commercial operation.

Energy meters shall be numeric type and shall be offered from reputed makes like Landis & Gyr, ABB or EDMI or equivalent.

2.0 Service Conditions

The meters to be supplied against this specification shall be suitable for satisfactory continuous operation under the following tropical conditions:

Environmental Condition

a)	Maximum ambient temperature	-5 to 55^{0}C
b)	Maximum ambient temperature in shade	45 ^{0}C
c)	Minimum temperature of air in shade	35 ^{0}C
d)	Maximum daily average temperature	40 ^{0}C
e)	Maximum yearly weighted average temperature	32 ^{0}C
f)	Relative Humidity (%)	10 to 95
g)	Maximum Annual rainfall (mm)	1450
h)	Maximum wind pressure (Kg/m.sq)	150
i)	Maximum altitude above mean sea level (meters)	Upto 2000
j)	Isoceraunic level (days/year)	50
k)	Seismic level (Horizontal acceleration)	0.3g

l) Climate: - Moderately hot and humid tropical climate conducive to rust and fungus growth.

The meters should be designed for tropical condition and shall be constructed to be capable of withstanding all severe stresses and vibrations and dust environments likely to encounter in actual practice.

3.0 Applicable Standards, Accuracy and Certification

The meters shall conform (for testing, performance and accuracy) in all respects the relevant /International standards with latest amendments thereof.

S.No	Standard No.	Title
1.	***IEC62053-22 Ed. 1.0 B – 2003 with latest amendment.***	***A.C. Static Watt-hour Meters For Active Energy, Class 0.5s / 0.2 s***

There should be no drift of accuracy, which means that the initial accuracy is sustained over the entire life of the meter and there should be no need for adjustment of the accuracy after installation.

The manufacturer of the offered meter must have been accredited with ISO 9001 (including design) quality certification.

4.0 Rating & Type of Service

The energy meters shall be outdoor type connected with the secondary side of out door current and voltage transformers.

S.No	Item	Specification
i)	***Type of Installation***	***Indoor in panelboard,***
ii)	***CT Secondary***	***/ 5 A***
ii)	***PT Secondary***	For 3 Phase 3 Wire and 4 Wire (HT Metering): ***110 V/ √ 3 Volts (Phase to Neutral)*** ***110 V Volts (Phase to Phase)*** For 3 Phase 4 Wire (LT Metering): ***400 V/ √ 3 Volts (Phase to Neutral)*** ***400 V Volts (Phase to Phase)*** The voltage range shall be +15% to – 40% of ***rated voltage (Secondary side of Potential Transformer).***

iv)	***Power Factor range***	***Zero Lag-Unity-Zero Lead. For leading Power factor the value of KVAh should be equal to KWh, for the purpose of calculation of average power factor (on the basis of KWh / KVAh). i.e. The value of KVAh shall be based on lagging value of KVARh & KWh.***
v)	***Power consumption***	***As per IEC62053-22–2003 with latest amendment.***
vi)	***Frequency range***	***50Hz ±5%***
vii)	***Earthing System***	***Solidly Grounded***

The maximum continuous current of the meter for guaranteed accuracy is 2 times (200 %) of Ib. The starting current for the meter should be 0.1% of Ib. The meter shall not register with no-load. It should also meet the requirements of withstanding short time over current for 1.0 second up to 20 times $I_{b.}$ The meter shall be suitable for balanced as well as unbalanced loads at all power factors. Unbalance in load should not affect the accuracy of meter.

5.0 General and Constructional Requirements

5.1 The meter should be housed in a safe high grade Thermo engineering plastic/ polycarbonate casing and is dust/moisture proof conforming to IP: 52. The meter cover should be made up of moulded flame retardant polycarbonate, which is tough, resilient and can be fixed up with the help of screws. Provision should be made for sealing the cover also.

5.2 The meter shall have Poly –carbonate opaque base and cover of Poly-carbonate material. The thickness of material for meter cover and base shall be 2 mm (minimum).

5.3 (a) The terminal block should be made out of moulded bakelite/ polycarbonate and should house solid brass terminals with 2 fixing screws per terminal. The terminals should be liberally designed to permit high overload withstand capability. The engineering plastic used for terminal block and cover shall withstand the heat deflection test as per ISO: 75 and Glow wire test as per IEC:62053-22.

The terminal block should have cover which should be separately sealable at two places and housed at the bottom of the meter and once sealed should prevent unauthorized tampering.

(b) The terminals in the terminal block shall be of adequate length in order to have proper grip of conductor with the help of two screws.

(c) Dust proof window of any transparent material (Toughened glass or poly carbonate), which shall not fade in prolonged use, shall be provided to permit clear view of the register. The fixing arrangement shall be such that the window glass cannot be removed without breaking the seals.

(d) The extended terminal cover shall be transparent.

(e) Meter shall be designed in such a fashion that it should be installed in a separate box (surface type) which may be fixed on the electric pole in outdoor condition.

(f) All the insulating materials used in the construction of the meter shall be of non-hygroscopic, non-ageing and of tested quality.

(g) The entire design and construction shall be capable of withstanding the severest stress likely to occur in actual service. The soldering shall be perfect without dry solders.

(h) All parts that are likely to develop corrosion under normal working condition shallbe effectively protected against corrosion by suitable method to achieve durable results.

(i) The meters shall be designed with application of specific integrated circuits. The electronic components shall be mounted on the printed circuit board using latest Surface Mount Technology (SMT).

(j) The meter shall have a suitable test output device for testing meter. Preferably the blinking LED or other similar device like blinking LCD shall be provided. The test output device should have constant pulse rate i.e. Pulse/kWh and pulse/kVARhand its value (meter constant) should be indelibly printed on the name plate.

(k) The Push button shall be provided for high resolution reading of display, as

brought out elsewhere in this specification.

(l) The meter accuracy shall not be affected by AC/DC magnetic field upto 0.2 Tesla on all the sides of meter i.e. front, sides, top and bottom of the meter. Moreover meter accuracy shall not be affected if permanent magnet of 0.5 Tesla is applied for 15 minutes.

(m) The meter shall also be capable to withstand and shall not get damaged if phase to phase voltage is applied between phases & neutral for five minutes.

(n) Non specified display parameter in the meter should be blocked and it should not be accessible for reprogramming at site.

(o) Complete metering system should not be affected by the external electromagnetic interference such as electrical discharge of cables and Capacitors, harmonics, electrostatic discharges, external magnetic fields and DC current in AC supply etc. The meter shall withstand any type of High Voltage and High Frequency surges which are similar to the surges produced by induction coil type instruments without affecting the accuracy of the meter.The manufacturers should have type test certificates for the same.

(p) The meter should have facility for data retrieval through optical port using CMRI and Laptop PC and RS232 communication port for remote meter reading facility.

(q) The meter PCB should be wire less to avoid improper and loose connections/ contacts.

5.4 Sealing

Proper sealing arrangement shall be provided on the meter to make it tamper proof and to avoid mishandling by un-authorized person. At least two (2) seals on the body, two (2) seals on the terminals block and one seal each on maximum demand resetting device and communication ports shall be provided. Meter base and cover shall be tightened from rear side with at least two nos. so that meter body could not be opened at site in any case and two nos. firms stickers seals bearing serial no., which should not be repeated shall be provided between meter base and cover.

The meter shall be totally sealed and tamper-proof with no possibility of any adjustment at site.

6.0 Connection Diagram & Terminal Marking

The connection diagram of the metering module shall be clearly shown inside portion of the terminal cover and shall be of permanent nature. The meter terminals shall also be marked and this marking should appear in the above diagram. In case any special precautions need to be taken at the time of testing the meter the same may be indicated alongwith the circuit diagram.

7.0 Marking of Meter:

The marking on every meter shall be in accordance with IEC 62053. The basic marking on the meter name plate shall be as follows:-

i. Manufacturer's name and trade mark.
ii. Type designation
iii. Number of phases and wires
iv. Serial number
v. Month & year of manufacture
vi. Reference voltage/ PT ratio
vii. Frequency
viii. Rated secondary current of CT (-/1 or -/5 A).
ix. Principal unit(s) of measurement.
x. Meter constant (impulse/kWh).

xi. Class index of meter.
xii. Text "SUPPLIED BY NEPAL ELECTRICITY AUTHORITY"
xiii. P.O. No. & Date.
xiv. Guarantee period

8.0 Real Time Clock

The real time quartz clock shall only be used in the meter for maintaining time (NS) and calendar. The time accuracy shall be as per provision of relevant IEC Standard. Facility for adjustment of real time should be provided through CMRI and Laptop with proper security.

9.0 M.D. Registration and Demand Resetting

9.1. The meter shall continuously monitor & calculate the average demand in kVA during the Integration period and maximum out of these shall be stored alongwith date & Time in the meter's memory. The integration period shall be programmable for 15/30/60 minutes on real time basis on block / sliding window principle that should also be programmable.

9.2 The meter shall also display M.D. reset count. The M.D. resetting should be possible in following way:-

a. Automatic reset on a predetermined date & time of the month.

10. T.O.D. Compatibility

There shall be provision for at least 8 (Eight) different TOD register at least in 6 channels for maximum demand kVA, kWh, kVARh and power factor. Similarly, there shall be provision for at least 4 (Four) TOD time zones for energy and demand. The number and timings of these TOD time Zones shall be programmable from base computer as per the requirements of Employer.

11. Self Diagnostic Features.

11.1 The meter shall be capable of performing complete self diagnostic check at regular interval to monitor the circuits for any malfunctioning to ensure integrity of data memory location all the time. The meter shall also keep log in its memory for unsatisfactory functioning or nonfunctioning of Real Time Clock battery, also it shall be recorded and indicated in reading file at base computer software.

11.2 All display segments: "LCD Test" display shall be provided for this purpose.

12. Display of Measured Values

12.1 Permanently backlit LCD panel shall show the relevant information about the parameters to be displayed. The corresponding non-volatile memory shall have a minimum retention time of 12 years. In the case of multiple values presented by a single display it shall be possible to display the content of all relevant memories.

When displaying the memory, the identification of each parameter applied shall be possible. The principal unit for the measured values shall be the kilowatthour (kWh) for active energy, kVARh for reactive energy and kVAh for apparent energy.

12.2 The display shall be minimum full 8 or more digit type display of liquid crystal display (LCD). The display shall be digital type with non-destructive read out. The meter should have non-volatile memory (NVM) so that the registered parameters will not be affected by loss of power. An additional LCD display should show the legend of the quantity.The size of digit should be minimum 9X5 mm. The adequate back up arrangement for storing of energy registered at the time of power interruption shall be provided.The meter should have alternate display modes for showing required information. Default mode should be auto scroll type. The number of parameters and the scrolling period shall be field programmable. In alternate mode, required parameters should be displayed and should be possible to view the parameters using push button.

12.3There shall be arrangement for displaying of consumer ID, consumer no, name and address for which record number field should be at least of 8 digits.

12.4 The meter shall be capable of recording and displaying automatically the following:

Display Parameters (Auto Display)

Following parameters shall be diplayed continuously in cyclic order on the meter face to enable NEA to know the parameter at any instant. The time for display shall be programmable and shall not drift throughout the life cycle of meter.

1. Active and Reactive Power,kW & kVAR (forward and reverse)
2. Cumulative Active Energy, kWH (forward and reverse)
3. Cumulative Reactive Energy, kVARH (forward and reverse)
4. Cumulative Apparent Energy, kVAH (forward and reverse)
5. TODActive Energy, kWH (forward and reverse)
6. TOD Reactive Energy, kVARH (forward and reverse)
7. TOD Apparent Energy (kVAH) (forward and reverse)
8. Maximum Demand kVA since Reset (forward and reverse with occurrence, Date & Time)
9. M.D. Reset Count

10. Last month MD (between reset)
11. Date of last month MD reset
12. Cumulative MD
13. Instantaneous Power Factor
14. Line Frequency
15. Instantaneous phase currents
16. Phase voltage (Instantaneous)
17. Real time & date
18. Self diagnostic (LCD) segment check and Battery check
19. CT & PT Ratio

Display Parameters (Push Button)

After using pushbutton the following parameters should be displayed.

1. Active and Reactive Power,kW & kVAR (forward and reverse)
2. Cumulative Active Energy, kWH (forward and reverse)
3. Cumulative Reactive Energy, kVARH (forward and reverse)
4. Cumulative Apparent Energy, kVAH (forward and reverse)
5. TODActive Energy, kWH (forward and reverse)
6. TOD Reactive Energy, kVARH (forward and reverse)
7. TOD Apparent Energy (kVAH) (forward and reverse)
8. Maximum Demand kVA since Reset (forward and reverse with occurrence, Date & Time)
9. M.D. Reset Count
10. Last month MD (between reset)
11. Date of last month MD reset
12. Cumulative MD
13. Instantaneous Power Factor
14. Line Frequency
15. Instantaneous phase currents
16. Phase voltage (Instantaneous)
17. Real time & date
18. Self diagnostic (LCD) segment check and Battery check
19. CT & PT Ratio

NOTE : The meter display should return to Default Display mode (mentioned above) if the ' Push button ' is not operated for more than 15 seconds.

12.5 The meter should measure & record total energy consisting of energy due to harmonics.

12.6 Maximum Demand Integration Period: - Integration period for kVA MD should be of 30 minutes real time based. However, it shall be programmable to 15 minutes if required.

13. Memory

The data stored in the registers should not be lost in the event of power failure and the meter should have non-volatile memory, which does not even need battery back-up. Each meter shall have a non-volatile memory and the data stored on the NVM should be retained upto twelve years without power.

Following monthly data should be stored for 12 months in the non-erasable memory along with the name of the month and shall be accessible for reading through Lap Top.

i. Active energy import, kWh
ii. Active energy export, kWh
iii. Maximum Demand, kVA
iv. Average power factor or kVARh
v. Average frequency for each successive 15-minute block
vi. Reactive Energy Import (while Active Import/Export)

14. Billing History and Load Survey

The meter shall have sufficient non-volatile memory for recording history of following billing parameters and load survey.

14.1 Monthly records for billing

Following monthly data should be stored for at least 18 months (FIFO) with date &

time of Reset in the non-erasable memory along with the name of the month and shall be accessible for reading through Lap Top.

a. Cumulative Active energy, kWh Forward Direction
b. TOD Active energy, kWh Forward Direction
c. Cumulative Active energy, kWh Reverse Direction
d. TOD Active energy, kWh Reverse Direction
e. Maximum Demand, kVA
f. Consumer Number
g. CT & PT Ratio
h. Meter Serial Number

14.2 Load survey parameters :-

Storage in non–volatile memory for more than 120 days with 30 minutes time integration period of the following parameters – kWH / kW, kVAH / kVA, Phase wise currents, Phase Voltages, Average Current, Average Voltage, Power Factor– shall be provided on non time based basis. Whenever meter is taken out and brought to laboratory the L/S data shall be retained for the period of actual use of meter. This load survey data can be retrieved as and when desired and load profiles shall be viewed graphically / analytically with the help of meter application software. The meter application software shall be capable of exporting / transmitting these data for analysis to other user software in spreadsheet format. The time required for downloading this data should be as minimum as possible.

15. Tamper and Fraud Detection/Evidence

The meter shall detect and correctly register energy only in forward direction under following tamper conditions:

15.1 The meter accuracy shall not be affected by change of phase sequence. It should maintain the desired accuracy in case of reversal of phase sequence.

15.2 The meter should continue to work even without neutral.

15.3 The meter should work in absence of any two phases i.e. it should work on any one phase wire and neutral, to record relevant energy. It should also work with two phases in case of missing neutral.

15.4 The meter should keep registering correct energy when all the CT polarities are reversed.

15.5 The meter shall not get damaged or rendered non-functional even if any phase and neutral are interchanged.

15.5 Tamper Events

The meter should have features to detect the occurrence and restoration of the following abnormal events.

Missing potential and potential imbalance

The meter shall be capable of detecting and recording occurrence and restoration with date and time the cases of potential failure and low potential, which could happen due to disconnection of potential leads (one or two). The log report should contain the date, time, TOD energy, Consumer Number and the Meter Serial Number. The threshold time for the recording of such events should be programmable and at least 200 sec.

Current unbalance

The meter shall be capable of detecting and recording occurrence and restoration with date and time of current unbalance (30% or more for 15 minutes). Higher of the 3 phase currents shall be considered as reference for this purpose.

Current Reversal

The meter shall be capable of detecting and recording occurrence and restoration with date and time of reversal of current with phase identification.

Power ON / OFF

The meter shall be capable to record power ON/OFF events in the meter memory. All potential failure should record as power off event.

Current circuit short

The meter shall be capable of detecting and recording occurrences and restoration of shorting of any one or two phases of current.

The meter shall keep records for should keep record of at least **500** such tamper events all the events (Occurrence +Restoration). For above abnormal conditions the recording of events shall be on FIFO basis. It shall be possible to retrieve the abnormal event data along with all related snap shots data through the meter optical port with the help of CMRI & downloaded the same to the base computer. All the information shall be made available in simple & easy to understand format.

16. Data Communication Capability

16.1 Each meter shall have an optical port on its front for tapping all data stored in its memory. Portable or hand held data collection devices/ Lap Top PC shall be used for this purpose. The overall intention is to tap the data stored in the meter's memories once in a month, and transmit the same to a central computer. It shall also be possible to obtain a print out (hard copy) of all data collected from the meters, using the local PC. The data transfer should be reliable and fraud proof.

16.2 Additionally, the metering system shall have a serial RS232 port for transferring the meter data to a remote location via a suitable communication infrastructure.

16.3 The metering system shall be compatible with suitable Base Computer software.

16.4 All meters of the same model shall be totally identical in all respects except for their unique identification codes. They shall also be totally sealed and tamper proof, with no possibility of any adjustment at site, except for clock correction.

16.5 There shall be magnetic device at optical port to hold up one end of communication cable (used to down load the data to Lap Top).The bidder shall supply a minimum of 40 numbers of optical probe for connection with the Lap Top computers. The price of the optical probe shall be included in the price of the meter itself.

17. Software:

The purchaser shall have the right to use the software as required for the operation of the meter. The supplier shall not charge extra costs for the use of the software. Further, the software should be able to display the three-phase voltages and current waveforms measured by the meter. It should able to display the phasor diagram.

The following software shall be supplied by the meter manufacturer without any extra cost.

17.1 Software for reading and programming the meter contents through CMRI/Laptop Computer.

17.2 Base Computer software for accepting data from CMRI and downloading instructions from Base Computer to MRI.

17.3 Base Computer should have facility to program the display and/or other required parameters in the meter.

17.4 The meters should be capable to communicate directly to Lap Top Computer.

17.5 The base computer software shall be executable on MS Windows 98/2000/XP/Vista system.

17.6 For efficient and speedy recovery of data downloaded through CMRI/Laptop PC on base computer, licensed copies of base computer software shall have to be supplied. This software will be used at numbers of places up to Branch level. As many copies of base computer software as required up to Branch level shall be provided free of cost. If there is common software for downloading of data to be given out to branch offices and the operation of software is restricted through security code, a code generating software shall be provided by the manufacturer. The code so generated will be distributed from central level to the branch offices as per requirements.

17.7 The base computer software shall be Window based & user friendly. The data transfer shall be highly reliable and fraud proof (No editing shall be possible on base computer by any means.

17.8 The protocol used in the meter shall have to be provided at the time of supply for the purpose of Automatic Meter Reading System. The Suppliers shall also have to submit the protocol for meters supplied in the past and ensure that protocol corresponds to the type of meter supplied. The protocol shall be shared by NEA.

17.9 Security Features

1. Communication session count should be available though display and with Lap Top.

2. The meter should log the date and time of at least last five program changes in a billing period.

3. The meter should have programmable facility to restrict the access to the information recorded at different security level such as communication read, communication write etc.

17.10 The Supplier or Manufacturer shall provide a software for generating a report in concise and desired format so that these can be used for billing, meter data management, outage management etc.

18. Additional Features

18.1 External Power Supply

Meter shall be provided with super capacitor and battery. The rated shelf life of battery shall be of 15 years. Super capacitor will provide carry over power for all normal power outages at least for 36 hr. duration. Battery will work when super capacitor is discharged or when programmed meter is stored for

extended period without electric supply. No auxiliary supply should be required for the meter.

18.2 Meter Calibration

The meter should have a blinking LED, which blinks and is analogous to the rotation of the disk in an electro-mechanical meter for calibration of kWh. The watt-hour per pulse constant is definable by the manufacturer.

18.3 Recovery of Data

The meter shall have provision to communicate with the CMRI/PC even in event of failure of display. In event of failure of component affecting more than just LCD function, manufacturer shall extract the stored data at no cost to the purchaser during the warranty period. All the cost (including transportation to and fro) involved in the process shall be borne by the supplier. Similarly, the memory of the meter shall be suitably protected and secured against unexpected fault conditions.

18.4 Connection Check

The meter should have capability to check the correctness of connections at site.

18.4 Missing Voltage Indication

There shall be visual display of the missing voltage on the face of the meter.

19. Guarantee

The Meter shall be guaranteed for the period of five years from the date of commissioning of meter. Meters found defective/ functioning abnormally within the above guarantee period shall be replaced / repaired by the supplier free of cost within one month of receipt of intimation. If the defective meters are not replaced/repaired within the specified period above, the NEA shall recover an equivalent amount plus 15 % supervision charges from any of the bills of the supplier.

20. Tests

20.1 **Type Tests:-**The Meter shall be fully type tested as per the relevant standards within 5 years from the date of opening of Tender. The type test reports of the offered meters shall be submitted along with the offer. All the Type Test shall be carried out from an internationally recognised independent meter test laboratory, such as PTB, Germany; PTP, Austria; KEMA, Holland; NMI, Holland; CESI, Italy; Falcon, UK etc, Ofgem (formerly known as Offer) and test lab recognised and approved by ANSI (American National Standards Institute) or testing laboratories and authorities duly accredited by the Internationally recognised accreditation body like International laboratory Accreditation Co-operation (ILAC) to prove that the Meters meets the requirements of the specification. In case of test lab recognised and approved by ANSI/ILAC, the

certificate of approval/ recognition shall be submitted with the Bid. Type Test Reports conducted in manufacturers own laboratory and certified by testing institute shall not be acceptable. The purchaser reserves the right to demand repetition of some or all the type tests in presence of purchaser's representative at purchaser's cost. For this purpose, the tenderer shall quote unit rates for carrying out each type test. However, such unit rates will not be considered for evaluation of the offer. In case the meters is type tested earlier to 5 years from the date of opening of tender, the supplier/manufacturer have to carry our the fresh type tests at their cost before signing the contract.

20.2 **Acceptance Tests**:-All acceptance tests as per relevant IEC standard shall be carried out on the meter.

20.3 **Routine Test:-** All routine tests as per relevant IEC standard shall be carried out on all the meters.

21. Pre-Dispatch Inspection

All Acceptance tests and inspection shall be carried out at the place of manufacturer unless otherwise specially agreed upon by the manufacturer and purchaser at the time of purchases. The manufacturer shall offer to the inspector representing the purchaser all the reasonable facilities, free of charge, for inspection and testing, to satisfy him that the material is being supplied in accordance with this specification. The Company's representative/Engineer attending the above testing will carry out testing as per relevant & this specification and issue test certificate approval to the manufacturer and give clearance for despatch.

22. Joint Inspection after Receipt At Stores (Random Sample Testing)

From each lot (lot means the total number of meters received in a Store out of inspected and approved lot by purchaser's representative under one approval letter) of meters received at Stores, 5 sample meters shall be drawn and these meters will be tested by Our Testing Engineer in presence of Supplier/Manufacturer's representative jointly for (i) noload condition,(ii) limits of error test (iii) starting & (iv) repeatability of error test and (v) tamper conditions as per this specification. The 15 days advance intimation will be given to the supplier and if the supplier/manufacturer fails to attend the joint inspection on the date informed, the testing will be carried out by our Testing Engineer in absence of Supplier/Manufacturer representative .If the meters failed in above random sample testing, the lot will be rejected.

23. Packing

The meters shall be suitably packed in order to avoid damage or disturbance during transit or handling. Each meter may be suitably packed in the first instance to prevent ingress of moisture and dust and then placed in a cushioned carton of a suitable material to prevent damage due to shocks during transit. The lid of the carton may be suitably sealed. A suitable number of sealed cartons may be packed in a case of adequate strength with extra cushioning, if considered necessary. The cases may then be properly sealed against accidental opening in transit. The packing cases may be marked to indicate the fragile nature of the contents.

24. Guaranteed Technical Particulars

The technical particulars as specified in IEC shall be guaranteed and statement of guaranteed technical particulars shall be furnished along with tender.

25. Drawings Leaflets

Two sets of drawing showing clearly the general arrangements, fitting details, electrical connections and design features of each component part should accompany the tender. Technical leaflets or brochures giving operating instructions should also be furnished along with the tender. ***TENDERS*** without ***DETAILS ARE LIABLE FOR REJECTION***.

26. User's Manual

The supplier shall furnish the operation & maintenance manual of the Meter offered and the required software for the smooth functioning of the meter.

27. Departure from Specification

If the supplier wishes to depart from this specification in any respect, he should draw the attention to such points of departure explaining fully the reasons thereof. Unless this is done, the requirements of this specification shall be deemed to have been accepted in every respect.

28. Bid Documentation

31.1 The Bidder shall provide the following with the Bid:

a) One (1) clear copy of the governing standard referenced, and
b) Certified type test results for all characteristics of the meter as per **IEC62053-22.**

SCHEDULE OF GUARANTEED TECHNICAL PARTICULAR
(TECHNICAL DATA SHEET)
(To be filled in by the Bidder/ Manufacturer)

The Bidders/manufacturers are required to furnish the following information in the Data Sheet. Separate sheets can be used if additional space is required. The information furnished shall be supported by the catalogue and test reports. The information not supported by the catalogues, test reports etc. shall be deemed to have been "Not Provided". The bidders/manufacturers are also required to underline the information asked for in the catalogue and /or test reports. Any deviation from NEA's requirements shall be clearly mentioned giving the reasons thereof.

S.No	Description	Unit	NEA's Requirements	Bidders Offer
1	Name of Manufacturer and Country of Origin			
2	Type and Catalogue number/Model number			
3	Accuracy Class		0.5 or better	
4	Applicable Standard		IEC62053-22	
5	Service Condition		As per clause 2.0 of Specification	
6	Rating & Type of Service	-	As per clause 4.0 of Specification	
7	General and Constructional Requirements	-	As per clause 5.0 of Specification	
8	Connection Diagram & Terminal Marking	-	As per clause 6.0 of Specification	
9	Marking of Meter	-	As per clause 7.0 of Specification	
10	Real Time Clock	-	As per clause 8.0 of	

		Specification	
M.D. Registration and Demand Resetting	-	As per clause 9.0 of Specification	
T.O.D. Compatibility	-	As per clause 10.0 of Specification	
Self Diagnostic Features	-	As per clause 11.0 of Specification	

S.No	Description	Unit	NEA's Requirements	Bidders Offer
14	Display of Measured Values	-	As per clause 12.0 of Specification	
15	Type of Display	-	LCD	
16	Retention Time of Non-Volatile Memory	Years	Min. 12	
17	Digit of Display of LCD	No.	At least 8 in full	
18	Arrangement for Display of consumer ID, mer no, Name and Address	Yes/No	Yes	
19	Display of Parameter			
	i) Auto Display of Parameter as in 12.4	Yes/No	Yes	
	ii) Display of Parameter as in 12.4 using Push Button	Yes/No	Yes	
	iii)The Time for Display Programmable	Yes/No	Yes	

	iv) Drift in Time for Display throughout the Life Cycle of Meter.	Yes/No	No	
20	Maximum Demand Integration Period	-	As per clause 12.6 of Specification	
21	Memory	-	As per clause 13.0 of Specification	
22	Following monthly data stored for 12 months in the non-erasable memory along with the name of the month accessible for reading through Lap Top			
	i) Active energy import, kWh	Yes/No	Yes	
	ii) Active energy export, kWh	Yes/No	Yes	
	iii) Maximum Demand, kVA	Yes/No	Yes	
	iv) Average power factor or kVARh	Yes/No	Yes	
	v) Average frequency for each successive 15-minute block	Yes/No	Yes	
	vi) Reactive Energy Import (while Active Import/Export)	Yes/No	Yes	

S.No	**Description**	**Unit**	**NEA's Requirements**	**Bidders Offer**
23	Billing History and Load Survey			
	i) Monthly Records for Billing	-	As per clause 14.1 of Specification	
	ii) Load survey parameters	-	As per clause 14.2 of Specification	
24	Tamper and Fraud Detection/Evidence	-	As per clause 15.0 of Specification	
25	Number of Tamper Events	Nos.	Min. 500	
26	Data Communication Capability	-	As per clause 16.0 of Specification	
27	40 Numbers of Optical Probe for Connection With the Lap Top Computers Provided	Yes/ No	Yes	

28	All the Software Specified in Clause 17.0 of Specification are Provided at no Cost to Purchaser	Yes/ No	Yes	
29	Whether the Meters is Capable to Communicate Directly to Lap Top Computer/CMRI	Yes/ No	Yes	
30	Whether the Base Computer Software is Executable on MS Windows 98/2000/XP/Vista System	Yes/ No	Yes	
31	The Code Generating Software for Downloading of Data from Meter provided?	Yes/N	Yes	

32	Whether the Base Computer Software is Window Based & User Friendly?	Yes/No	Yes	
33	The Protocol Used in the Meter for the Purpose of Automatic Meter Reading System Provided?	Yes/No	Yes	
34	Security Features as Specified in 17.9 Incorporated?	Yes/No	Yes	
35	Software for Generating a Report in Concise and Desired Format for Billing, Meter Data Management, Outage Management etc.Provided?	Yes/No	Yes	
36	Meter Provided with Super Capacitor and Battery?	Yes/No	Yes	
37	The Rated Shelf Life of Battery	Years	Min. 15	

S.No	**Description**	**Unit**	**NEA's Requirements**	**Bidders Offer**
38	Whether Super Capacitor will Provide Carry Over Power for All Normal Power Outages at least for 36 hr. Duration ?	Yes/No	Yes	
39	Whether the Bidder agrees to Recover the Meter data in the Conditions Specified in 18.3 of Specification?	Yes/No	Yes	
40	Whether the Meter has Capability to Check the Correctness of Connections at Site?	Yes/No	Yes	
41	Missing Voltage Indication as Specified in 18.4 Available?	Yes/No	Yes	
42	Whether Bidder Agrees on the Guarantee Clause as Specified in Clause 19.0?	Yes/No	Yes	
43	Type Test Report Carried Out Within 5 Years from The Date of Opening of Tender from The Testing Laboratories Specified in Clause 20.1 Submitted?	Yes/No	Yes	
44	Whether Bidder Agrees on After Sales Service after Warranty Period as Specified in Clause 23 of Specification?	Yes/No	Yes	

Miscellaneous Accessories

2.9.1 Space Heater

Each panel shall be equipped with space heaters to prevent moisture condensation within the enclosure and shall be completed with switch fuse units for power supply. Space heaters and switch fuse units shall be suitable for continuous operation.

2.9.2 Plug Point

A 230 V, 1 phase, 50Hz AC plug point shall be provided in the interior of each cubicle with on-off switch for connection of hand lamps.

2.10 Tests

2.10.1 Relay and Control Panels shall be subjected but not limited to the following tests:

i. Mechanical operation test

ii. Verification of degree of protection

iii. Calibration test for meters

iv. Characteristic test for relays

v. High voltage test of insulation (2000 volts for 1 minute)

vi. Electrical control, interlock and sequential operation tests

vii. Verification of wiring as per approved schematic diagram.

2.10.2 Type tests and routine tests shall be carried out on all associated equipment as per relevant standards approved by the Employer.

2.10.3 Certified copies of all type and routine test certificates shall be submitted for the Employer's approval before dispatching the control and relay panel.

2.10.4 After completion of the installation, panels shall be subjected but not limited to the following field tests :

i. Electrical control, interlock and sequential operation tests

ii. Calibration test for meters

iii. Measurement of insulation resistance

vi Characteristic test for relays

2.10.5 Transformer Protection

33/11 KV , 3 MVA transformer shall be protected by the following relays a

Over current relay

b Earth fault relay

c Differential relay

d Definite over current relay (if applicable)

APPENDIX: 1.4 .1

BILL OF MATERIAL

The bill of materials shall cover only the major equipment, or such information as will require particular information from the Tenderer. Tenderer is to be understood that, all other associated auxiliary equipment and accessories, although not listed in the bill of materials, but necessary for the complete and sound function of the control board as described in this specification, shall be furnished by the Contractor.

CONTROL & RELAY PANEL

1. Major Components

	Legend	Description	Quantity per Panel
1.	ANN	Annunciator assembly, 24 active points,110V DC, 4 rows high by 6 columns wide, flush mounted, and with: 3-separately mounted push buttons 2-separately mounted indicating lamps, one white lamp, and one red lamp Following minimum annunciation shall be provided: 1. Transformer HV Backup Protection trip 2. Transformer LV Backup Protection trip 3. Transformer Differential Protection trip (3 MVA Transformer) 4. Transformer Bucholz Alarm / Trip 5. Transformer Low Oil Level 6. Tap Changer Bucholz Alarm / Trip 7. Tap Changer Low Oil Level 8. Circuit Breaker Trip 9. Transformer Winding Temperature High 10. Transformer Winding Temperature Extra High 11. Tap changer Temperature High 12. Tap changer Out of Step 13. Transformer Cooling System Fail 14. Pressure Relief Device Operated 15. AC Fail 16. DC Fail 17 –22. Spare	1Lot
2.	Relay	Only main relays and instruments are listed here. All the trip relays and auxiliary relays required for	

		satisfactory operation of the scheme shall be included by the Contractor.	
2.1	50/51/50N / 51N	Overcurrent and Earth Fault Protection with Instantaneous Protection	1 Lot
2.2	50B	Breaker Failure Protection	1Nos
2.3		Trip circuit supervision relay	1Nos
2.4	51E	Transformer Protection	1Nos
2.6		Interlocks, Switching & Tripping Relay	1 Lot
3.	A	Indicating ammeter , Digital 0-100A; 0-200A 300-200-100/1A	3Nos
4.	MWH	Electronic type with 0.22 Class	To be Supplied by NEA
5.	P.F.	Power factor 0.6-1-0.6 lead	1Nos
6.	KVA	0-10 MVA	1Nos
7.	CS	Breaker control switch, and with : 2-separately mounted indicating lamps,	1Nos
8.	CS	Disconnecting control switch, and with: 2-separately mounted indicating lamps	1Nos
9.		Electrically operated mimic disconnec device, 110V	1Lot
10.		Electrically operated mimic connected tc position of line ground switch	1Lot
11		Trip Transfer Switch, for transferring trip signal, reclosing relay, PT circuit to bus tie Breaker. (wherever required)	1Lot
12		Multiple Adjustable Ratio Intermediate Current Transformer for Differential Protection, if required	1 Set

3. INSTRUMENT TRANSFORMER

3.1 General

This specification covers the design, manufacture, assembly, shop test, supply, delivery, and installation works and field test of instrument transformers as specified herein under.

The equipment specified in this Section shall conform to the latest edition of the appropriate IEC specifications and/or other recognized international standards. In

particular:

IEC 60044 Voltage transformers
IEC 60044 Instrument transformers
IEC 60529 Degree of protection provided by enclosures

Manufacturer of instrument transformer shall hold valid ISO 9001(including design) quality certificate.

3.2 Equipment to be furnished

The Following Equipment shall be furnished, if seemed necessary, after the approval of Schematic Diagram submitted by the Bidders or as Instructed by the Owner**.** The Schematic diagram should be prepared and submitted by the Bidders with Technical Proposal, after studying the existing Protection and Metering System, such as to provide necessary and adequate Protection to the Transformer Bay as a Whole. The Bidders are required to make the Site visit and access necessary Data and Drawings from the respective Substation. Similarly, the details about the Ratio / Burden / Class will be finalized after the approval of the Schematic Diagram or as Instructed by the Owner.

i. 33 kV Current Transformer for Measurement & Protection

ii. 33 kV Bushing current Transformer for Protection

iii. 11kV Bushing Current Transformer for Protection

iv. 11kV Current Transformer for Measurement & Protection.

V 11kV / 110V Potential Transformer for measurement & Protection

3.3 Design Requirements

3.3.1 Instrument transformers shall be suitable 33kV 50Hz. 3 Phase with neutral solidly grounded system.

3.3.2 Instrument transformers shall be installed outdoor in a hot, humid climate. All equipment and accessories shall be provided with tropical finish to prevent fungus growth.

Burden of the instrument transformers stated herein is the minimum value required. Where higher burden is required to suit the designs, the Contractor shall supply the same without additional cost.

3.4 Construction Features

3.4.1 The instrument transformers shall be oil-filled construction and shall be designed for outdoor service and suitable for vertical mounting.

3.4.2 The core and coils of current transformer shall be mounted in a steel tank on the top of the unit with the primary coil leads extending through insulated bushings for series or multiple connections. A steel base shall support the high voltage bushing and tank. The high voltage bushing shall be sealed to the tank and the base with oil-tight joints.

3.4.3 The primary terminals of instruments shall include provisions for externally connecting the primary winding. The secondary terminals shall be enclosed in a weatherproof terminal box.

3.4.4 Porcelain bushings shall have adequate mechanical and electrical strength. The color of porcelain shall be brown.

3.4.5 Junction boxes

unction boxes shall be rigid weatherproof type complete with terminal blocks suitable for cable size having the range up to 2x6 sq. mm for termination of the secondary connections (such as delta or wye connection). They shall be made of metal, which will resist corrosion on both inside and outside surfaces; otherwise they shall be suitably protected by galvanizing. Cover of the junction box shall be of hinge door type complete with door handle. Two drainage holes shall be provided at the bottom of the junction box. In case the junction boxes are steel sheet, the thickness of such steel sheet shall be at least 1.2mm. Junction boxes shall be sized and arranged to provide easy access for external cables and adequate space for internal wiring and installed equipment. Enclosure protection class of the junction boxes shall be IP55W

The terminal blocks used should be provided with shorting links on the top of the unit with the primary coil leads extending through insulated bushing for series or multiple connections .A steel base shall support the high voltage bushing and tank. The bushings shall be sealed to the tank and the base with oil tight joints.

3.4.7 Termination

(a) Current transformers

All current transformer secondary winding terminals shall be connected to terminals on terminal located in the junction boxes. In addition, a short -circuit type terminal block shall be provided for each maximum ratio of each core at the terminal blocks in both the secondary terminal box and junction box.

(b) Potential transformer

All PT’s secondary terminals shall be connected to terminals on terminal blocks located in the junction boxes.

3.4.8 Protective devices

(a) The secondary phase wire for external connection shall be equipped on all potential transformers with switch and fuse. Fuses shall be rated to provide external short-circuit protection and shall be high rupturing capacity non-deteriorating type. Switches shall be rated not less than 250V AC 50Hz. Switches and fuses shall be contained within the junction box provided for termination. Supply fuse failure supervision shall be provided.

3.4.9 Accessories

The following items shall be provided for each instrument transformer:

(a) Nameplate

(b) Oil level gauge

(c) Oil valves or plugs

(d) Power factor test terminals

(e) Necessary terminal connections

(f) Grounding terminals

(g) Other necessary accessories

3.5 Tests

Tests shall be performed as specified hereunder.

3.5.1 Current transformer

(a) Routine tests

Each current transformer shall be subjected to the following tests.

- Applied potential test
- Induced potential test
- Accuracy tests (including excitation curve for relaying class)
- Polarity check
- Winding resistance measurement for each ratio

(b) Design tests

Type test records of an identical unit of current transformer shall be submitted to Employer/Employer's Representative. In case type test records are not available, the actual tests shall be performed. The items of test shall be as follow:

- Short time current test
- Temperature rise test
- Power frequency withstand voltage (wet) test
- Impulse voltage withstand test
- Temperature rise test

3.5.2 Potential transformer

(a) Routine tests

Each capacitor voltage transformer shall be subjected but not limited to the following tests:

- Power frequency withstand voltage (dry) test.
- Dielectric tests for electromagnetic unit
- Accuracy tests
- Polarity check
- Ratio test

(b) Design tests

Type test records of an identical unit of potential transformer shall be submitted. In case type tests records are not available, the actual tests shall be performed. The items of test shall be as follows:

- Voltage test between phase and ground terminals
- Power frequency withstand (wet) test
- Impulse test
- Radio-influence voltage test
- Short-time over voltage test
- Thermal burden test

3.5.3 Field tests

After installation at Site, all instrument transformers shall be subjected but not limited to the following tests:

(a) Constructions inspection

(b) Polarity check

(c) Ratio test

(d) Measurement of insulation resistance

3.6 Drawings, Data and Manuals

3.6.1 The following drawings and data shall be furnished with the Tender.

(a) Outline dimensional drawings of the equipment

(b) Characteristics and performance data

(c) Type test certificates of similar equipment

3.6.2 After award of Contract the successful Bidder shall submit the required number of copies of the following drawings for approval of the Employer/Employer's Representative.

(a) Outline dimensional drawings of the equipment

(b) Transport/shipping dimensions with weights

(c) Foundation and anchor bolt details

(d) Characteristic and performance data including ratings, ratio and phase angle curves, accuracy for standard burdens, and thermal burden ratings.

(e) Instruction books including complete information for installation, testing, operation and maintenance with renewal parts data.

(f) Any other relevant drawings and data necessary for review of the items stated above.

APPENDIX A-1
TECHNICAL PARTICULARS OF 33kV CURRENT TRANSFORMER

1.	Type	Outdoor, oil immersed for protection and metering
2.	Quantity required	As per Price Schedule
3.	Rated primary voltage	33kV
4.	Max. system voltage	36kV
5.	Impulse withstand voltage	170kV
6.	Rated frequency	50Hz
7.	Number of cores	2
8.	Current Ratio	600-400-200/5A
9.	Rated Burden	50 VA
10.	Accuracy	5P/20 and 0.5 for metering
11	Power Factor	0.85
12	Over voltage factor	1.1 Continuous 1.5 For 30 sec
13	No of secondary windings	as required
14	over load factor	200%
15.	Short time thermal rating	25 kA

APPENDIX A-2
TECHNICAL PARTICULARS OF 33kV POTENTIAL TRANSFORMER

1.	Type	Outdoor, oil immersed
2.	Quantity required	As per Price Schedule
3.	Rated primary voltage	33/ √3 kV
4.	Max. system voltage	36kV
5.	Impulse withstand voltage	170kV
6.	Rated frequency	50Hz
7.	Connection	Line to ground
8.	Number of secondary winding	2
9.	Voltage ratio	33,000/ √3/110/√3V
10.	Rated burden for each winding	100 VA
11.	Accuracy	3P and 0.5 for metering
12.	Power factor	0.85
13.	Rated voltage factor	1.1 continuous, 1.5 for 30 sec

4. BATTERY AND BATTERY CHARGER

4.1 General

This specification covers the design, manufacture, delivery, installation and field test of the maintenance free battery and suitable battery charger for 110V DC system complete with all necessaries for efficient and trouble-free operation as specified herein under.

Manufacturer of battery and battery charger shall be holder of valid ISO 9001Certificate

The Battery charger shall also include D.C. distribution board.

4.2 Equipment to be furnished

110 V Battery and Battery Charger

4.2.1 The equipment to be furnished shall strictly be in accordance with the specifications and the Price Schedule.

4.3 Design Requirements

4.3.1 Battery & battery charger

4.3.1.1 Maintenance free Battery

(a) The Maintenance free Battery shall be rated for supplying total DC load of the each substation. The duration of the load shall be ninety (90) minutes. The total DC load cycle shall consist of the following:

0-1 min. - Simultaneous tripping of all breakers on under voltage. In case the circuit breakers charge after tripping, starting current of the spring charged motor of all the above circuit breakers shall be considered for the entire 0-1 minute period.

- Emergency lighting load

- Control, indication, protection and annunciation load

1-89 minutes - Emergency lighting load

- Control, indication, protection and annunciation load.

Last minute - Control, indication, protection and annunciation load, emergency lighting load.

- Closing of breaker-one at a time and spring charging if spring charging occurs after closing of breaker. Consider staring current of one spring charging motor and running current of another spring charging motor to occur simultaneously during the entire one minute a period.

The Contractor shall compute the Ampere hour rating (10 hour rating) of the battery considering margin over the above duty cycle so that the battery shall be capable of delivering the ultimate DC load of the substation when the future switchgear and its protection panel will be installed in the same substation. The minimum capacity shall be not less than **240 AH.**

(b) The Contractor shall compute the Ampere-hour capacity at 10-hour discharge rate based on the above cycle and furnish the calculation. The minimum ambient temperature shall be 5 deg. C. The minimum voltage at the end of the load cycle shall not be less than 1.75 volts per cell.

(c) The batteries shall be storage type as specified.

(d) The cells shall be maintenance free Lead acid type.

(e) Each cell shall be in a suitable leak proof container with sealed cover.

(f) The batteries shall be furnished complete with cell interconnectors and a suitable rack protected with acid resistant paint. The arrangement of the rack shall be such as to allow easy access and adequate space for normal maintenance in battery room.

(g) Rated life of each battery shall be at least ten (10) years.

(h) The Bidder shall furnish along with the Tender, his proposed layout of the battery racks to suit the space available.

(i) The manufacturer of above said maintenance free battery shall be holder of ISO 9001 certificate.

4.3.1.2 Battery charger

(a) The battery charger shall be suitable for maintenance free batteries and solid-state electronic type using silicon rectifiers and complete with all switches, fuses, contactors and instruments.

(b) The battery charger shall be suitable for 400 volts +10%, 3-phase, 50Hz supply.

The charger shall have fully automatic voltage regulation and electronic current

limiting. The voltage regulation shall be within +1% for a 0-100% load variation and +10% voltage variation on the AC side. Cooling shall be by means of natural convection.

(c) The minimum rating of the battery charger shall be not less than 75 amperes.

(d) The battery charger shall be housed in a freestanding floor mounted cabinet with enclosure protection of IP-30 as per IEC.

(e) The instruments, switches and lamps shall be flush or semi flush mounted on the front panel.

(f) The battery charger shall be constant voltage type with provision of voltage variation from float charging to boost charging voltage. The float charging voltage shall be between 2.1 to 2.2 volts per cell or at any other voltage recommended by the battery manufacturer. At float charging voltage the charger shall furnish the continuous DC load consisting of control, indication, annunciation, breaker spring charging mechanism and continuously "On" emergency light as well as float charge its associated battery. The boost charging voltage shall be about 2.4 to 2.5 volts/cell or at any other voltage recommended by the battery manufacturer. During equalizing or boost charging, the continuous DC load shall be fed by the charger. The loads that can not tolerate the high equalizing or boost charging voltage shall be connected through dropper diode. The battery charger shall recharge the completely discharged battery to fully capacity in 9 hours. The charger shall have
10% excess capacity.

(g) The manufacturer of above said battery charger shall be holder of valid ISO 9001 certificate. In case such manufacturer is not available the contractor has to take the written permission from the employer.

4.3.2 Wiring

The wiring shall be complete in all respects so as to ensure proper functioning of control, protection and metering scheme.

All wiring shall be completed up to terminal blocks.

Wiring shall be done with 2.5sqmm (minimum) Class 5 stranded copper conductor, flexible PVC insulated wire. The wire shall have a voltage grade of 600V as per IEC. Lower cross section of wires may be used for solid-state devices only.

Each wire shall be identified at both ends with wire designations in accordance with the approved wiring diagram. Interlocking type ferrules shall be used for identification.

Not more than two wires shall be connected to any terminal at each end. If necessary, a number of terminals shall be jumpered together to provide wiring points.

Wires shall be neatly bunched and adequately supported so as to prevent sagging strain on termination. Wires shall not be spliced or tapped between terminal points.

All spare contacts of relays and contactors shall be wired up to the terminal block.

4.3.3 Cable termination

The equipment shall be designed to facilitate cable entry from bottom. Removable plates shall be furnished with compression type cable glands to make entry dust tight and no weight is transferred on the terminal. The glands shall be suitable for terminating cable armor. Compression type cable lugs as required shall be furnished for termination of power and control cables.

Sufficient space shall be provided to avoid sharp bending and for easy connection. A minimum space of 200mm from the gland plate to the nearest terminal block shall be provided.

4.3.4 Terminal blocks

Terminal blocks shall be specified in Technical Requirements under Sub-Clause 2.4 of Section VA.

4.3.5 Ground bus

A copper ground bus of 25mm x 6mm cross section shall be furnished along the entire length of each panel.

All devices shall be grounded to the ground bus.

4.4 Accessories

4.4.1 The following accessories shall be furnished for the

batteries: (a) One (1) connector bolt wrench

(b) One (1) cell testing voltmeter

with leads. (c) Battery racks

(d) Other necessary accessories

4.4.2 The charger shall be complete with the standard accessories including but not limited to the following:

(a) Solid state surge protectors on the AC and DC sides

(b) AC failure alarm relay

(c) DC time delay low voltage relay

(d) Ground detection alarm for positive and negative leads

(e) Manual voltage adjust switch

(f) DC ammeter and voltmeter

4.5 Tests

4.5.1 Type and routine tests at manufacturer's works and acceptance test at site shall be carried out on battery as per stipulation of latest standard of IEC.

The test shall include following tests:

(a) General inspection.

(b) Leakage test and internal short test for each cell.

(c) One cell shall be type tested for discharge at ten-hour rate to 1.85V DC at 25 deg C.

After initial charging the following tests shall be performed at site :

(a) Capacity test

(b) Efficiency test

4.5.2 The battery charger shall be subjected to the following tests at manufacturer's works:

(a) Measurement on insulation resistance

(b) High voltage test

(c) Performance test

(d) Temperature rise test

4.5.3 Test certificates shall be submitted to the Employer/Employer's Representative for approval.

4.6 Drawings, Data and Manuals

4.6.1 The following drawings and detail shall be furnished with the Tender :

(a) Layout arrangement of battery and battery charger in the available space shown in the drawing.

(b) Schematic and wiring diagram of battery charger

(c) Cell voltage characteristic for battery

(d) Technical leaflets on battery and battery charger

4.6.2 The following drawings and manuals shall be submitted by the successful Bidder for approval

(a) Dimensional layout arrangement of battery and battery charger

(b) Dimensional outline drawing of battery charger panel clearly showing the

(c) Wiring diagram of the battery charger panel

(d) Instruction manuals of battery and battery charger

4.7 Performance Guarantee

The performance figures quoted in Schedule of Technical Data shall be guaranteed within the tolerance permitted by relevant standard. In case of failure of the equipment to meet the guarantee, the Employer reserves the right to reject the equipment. The Contractor shall have to rectify the defect as no extra cost to the Employer and without delaying the commissioning schedule.

TECHNICAL DATA SHEET

33kV CIRCUIT BREAKER

S. No	Description	Unit	NEA requirement	Bidders Offer
1	Manufacturer and Country of Origin			
	Model No.			
2	Year of manufacturing experience			
3	Applicable Standard		IEC	
4	Type		VCB Out door	
5	Poles		Three pole	
6	Pole breaking		Three	
7	Rated Voltage			
7.1	Nominal	kV	33	
7.2	Maximum	kV	36	
8	Rated Current			
8.1	Continuous at 45 degree ambient	A	800	
8.2	Rated intrrupting current	kA	25	
8.3	Momentory	kA		
9	Frequency	Hz	50	
10	Temperature rise above 45 deg C ambient		As per IEC	
10.1	Contacts	Deg C		
10.2	Terminals	Deg C		
11	Rated short circuit breaking current			
12	Rated short circuit making current			
12.1	Peak	kA		
12.2	RMS symmetrical	kA		
13	Interrupting time at 100% capacity			
13.1	Maximum opening time	ms	60	
13.2	Total interrupting time	ms	60	
14	Closing time	ms		
15	Make time	ms		
16	Maximum current breaking capacity	A		
17	Insulation level			
17.1	Impulse withstand voltage(peak)	kV	170	
17.2	Power frequency withstand voltage	kV	70	
18	Operating Mechanism			
18.1	Type		Spring Loaded	
18.2	Number of mechnism per beaker			
18.3	Single/Three phase autorecloser		Not required	
18.4	Operating voltage of closing and tripping coil	V DC	110	
18.5	Operating voltage range			
	Closing	% of rated	85-110%	
	Tripping	voltage	70-110%	
18.6	Closing and tripping current	A		
18.7	Spring charging motor rating			
	Capacity	kW		
	Rated voltage	V	110 DC	
18.8	Time required for the motor to charge the spring completely	Sec	<30	
18.9	Space heater and auxialiary equipment			
18.10	Push bottom for local operation	Yes/No	Yes	
18.11	Selection switch for local and remote comtrol	Yes/No	Yes	
19	Operating counter provided	Yes/No	Yes	
20	Space heater provided for cubicle	Yes/No	Yes	

21	Thickness of sheet steel of cubicle	mm	2	
22	Number of auxiliary contacts	No	6No,6NC,6MBB	
23	Operating duty cycle		0-0.3sec-CO-3min-CO	
24	Number of possible operation without maintenance under			
	Rated short circuit breaking current	No		
	Rated Normal Current	No		
25	Porcelain insulator			
25.1	Manufacturer			
25.2	Creepage distance	mm	900	
26	Pad locking provision for local cubicle	Yes/No	Yes	
27	Total weight of the cubicle	kg		
28	Mechanical dimension (LxwxH)			

TECHNICAL DATA SHEET

CURRENT TRANSFORMER

S. No	Description	Unit	NEA requirement	Bidder's Offer
1	Manufacturer and Country of Origin Model No.			
2	Year of manufacturing experience	Years		
3	Applicable Standards		IEC	
4	Type		One phase outdoor, oil immeresed	
5	Number of phases	Nos	1	
6	Number of core in each CT	Nos	1	
7	Frequency	Hz	50	
8	Rated primary voltage			
8.1	Nominal	kV	33	
8.2	Maximum	kV	36	
9	Trmperature rise above 45deg C ambient at Normal rated current	deg C		
10	Insulation level			
10.1	Impulse withstand voltage	kV	170	
10.2	Power frequence withstand voltage (1min rms)	kV	75	
11	Creepage distance	mm		
12	Short time thermal rating	kA	25	
13	Current ratings	A	300-200-100/5	
14	Rated VA burden	VA	50	
15	Accuracy class		5P20 for protection and 0.5 for metering	
16	Rated thermal VA burden	VA		
17	Over load factor	%	200	
18	Dimension	cu mm		
19	Weight	kg		
20	ISO 9001 holder	Yes/No	Yes	
21	ISO 9001 certificate submitted	Yes/No	Yes	
22	Type test certificate submitted	Yes/No	Yes	

TECHNICAL DATA SHEET

POTENTIAL TRANSFORMER

S. No	Description	Unit	NEA requirement	Bidder's Offer
1	Manufacturer and Country of Origin Model No.			
2	Year of manufacturing experience	Years		
3	Applicable Standards		IEC	
4	Type		Outdoor, oil immeresed	
5	Number of phases	No.	1	
6	Frequency	Hz	50	
7	Rated primary voltage			
7.1	Nominal	kV	33√3	
7.2	Maximum	kV	36√3	
8	Temperature rise above 45 deg C ambient at Normal rated current			
8.1	With 1.1 times rated primary voltage continuously	deg C		
8.2	With 1.5 times rated voltage for 30 seconds	deg C		
9	Insulation levels			
9.1	Impulse withstand voltage (peak)	kV	170	
9.2	Power frequency withstand voltage (1min rms)	kV	75	
10	Creepage distance	mm	825	
11	Open circuit intermediate voltage	V		
12	Ratings			
12.1	Voltage ratio	kV	33/√3:0.11/√3	
12.2	Rated burden	VA	100	
12.3	Accuracy class		5P and 0.5	
12.4	Over voltage factor			
12.4.1	30 seconds		1.1	
12.4.2	Dontinuous		1.5	
12.5	Connection			
12.6	Secondary fuse Manufacturer Amp. Ratings	A		
12.7	By pass device for protection provided	Yes/No	Yes	
12.8	Knife switch and fuse on secondary provided	Yes/No	Yes	
13	No of secondary windings	No	2	
14	Dimension	mm		
15	Weight	kg		
16	ISO 9001 holder	Yes/No	Yes	
17	ISO 9001 certificate submitted	Yes/No	Yes	
18	Type test certificate submitted	Yes/No	Yes	

TECHNICAL DATA SHEET
33kV CONTROL AND RELAY PANEL

S. No	Description	Unit	NEA requirement	Bidder's Offer
1	Control and relay panel type			
1.1	Manufacturer and Country of origin			
1.2	Year of manufacturing experience	Years		
2	Control switches			
2.1	Manufacturer and Country of origin			
2.2	Type			
2.3	Current Rating	A		
2.4	Catalog Furnished	Yes/No	Yes	
3	Push Botton			
3.1	Manufacturer and Country of origin			
3.2	Type			
3.3	Contact rating continuous	Amp		
	Making current	Amp		
	Breaking current	Amp		
3.4	Catalog Furnished	Yes/No	Yes	
4	Indicating Lamps			
4.1	Manufacturer			
4.2	Voltage ratings	V		
4.3	Wattage	W		
5	Indicating instruments			
5.1	Ammeter			
	Manufacturer and Country of origin			
	Type		Digital	
	Current Range (300-200-100/5 Amp CT operated)	A		
	Accuracy Class		0.5	
	Scale			
	Type of scale			
	Range of indication (300-200-100/5 Amp CT operated)	A	0-100 0-200 0-300	
	Lineal/ Non linear			
	Overloaded range	%	1.5	
	VA burden			
	Catalog furnished	Yes/No	Yes	
	Transducer operated	Yes/No		
6	Voltmeter			
	Manufacturer and Country of origin			
	Type		Static	
	Accuracy class		0.5	
	Scale			
	Range of indication	kV	0-36	
	Linear/Non linear			
	Overscale range	%	1.1	
	VA burden	VA		
	Catalog furnished	Yes/No	Yes	
	Transducer operated	Yes/No	Yes	
7	Apparent power meter (kVA)			
	Manufacturer and Country of origin			
	Type		digital	
	Rated voltage	kV	$33/\sqrt{3}:0.11/\sqrt{3}$	
	Rated current	A	300-200-100/5	

	Current range (Transducer operated)	mA		
	Accuracy class		0.5	
	Scale	MVA		
	Type of scale			
	Range of indication		0-10	
	Linear/Non linear			
	VA burden			
	Current coil	VA		
	Voltage coil	VA		
	Catalog furnished	Yes/No	Yes	
	Transducer operated	Yes/No	Yes	
8	kWH Meter			
	Manufacturer and Country of origin			
	Type		TOD (static)	
	Applicable standard		IEC	
	Accuracy class		0.2	
	Import Export meter provided	Yes/No	Yes	
	Rated voltage	kV	33/√3:0.11/√3	
	Rated current	A	300-200-100/5	
	VA burden			
	Current coil	VA		
	Voltage coil	VA		
	Impulse contact provided 1pulse 100kW	Yes/No	Yes	

TECHNICAL DATA SHEET

33kV CONTROL AND RELAY PANEL

S. No	Description	Unit	NEA requirement	Bidder's Offer
	Reverse rotation locking mechanism provided	Yes/No	Yes	
9	Power factor meter			
	Manufacturer and Country of origin			
	Type		Digital	
	Accuracy class		0.5	
10	Annunciators			
	Manufacturer and Country of origin			
	Type			
	Manufacturer's type designation			
	Catalog furnished	Yes/No	Yes	
	Number of inputs (annunciator/event)			
	Number of active points	Nos	24	
	Number of rows		4	
	Number of column		6	
	Type of mounting		Flush	
	Replacement of individual inscription plates and lamps from front panel possible	Yes/No	Yes	
	Sequence of operation as per specification	Yes/No	Yes	
11	Protective Relays			
11.1	Phase Over Current Relay			
	Manufacturer and Country of origin			
	Type		Static Non directional	
	Manufacturer's type designation			
	Applicable standards		IEC	

	Triple pole or single pole		Single*3	
	Current setting range	% of rated current	20-200%	
	Operating time at 10 times current settings	msec	3	
	Reset time	ms		
	Characteristics		IDMT (Standard inverse)	
	Instantaneous unit provided	Yes/No	Yes	
	Current setting range	% of rated current	500-2000%	
	Operating range			
	No Conatcts			
	Insulation test as per IEC	Yes/ No	Yes	
	Indication			
	Hand reset flags provided	Yes/No	Yes	
	Light emitting diod provided	Yes/No	Yes	
	Auxilliary DC supply	V	110	
	Technical Literature submitted	Yes/No	Yes	
	Test Certificate submitted	Yes/No	Yes	
11.2	Earth fault relay			
	Manufacturer and Country of origin			
	Type		Static/Non directional	
	Manufacturer's type designation			
	Applicable standard		IEC	
	Triple pole or single pole		Single	
	Continuous overlload capacity	xIn		
	Current setting range	% of rated current	10-80%	
	operating time at 10 times current setting	msec	3	
	Characteristics		IDMT (Standard inverse)	
	Instantaneous unit provided	Yes/No	Yes	
	Current setting range	% of rated current	500-2000%	
	Operating range			
	No Conatcts			
	Insulation test as per IEC	Yes/ No	Yes	
	Indication			
	Hand reset flags provided	Yes/No	Yes	
	Light emitting diod provided	Yes/No	Yes	
	Auxilliary DC supply	V	110	
	Technical Literature submitted	Yes/No	Yes	
	Test certificate submitted	Yes/No	Yes	
11.3	Directional Overcurrent Relay		Not required	
	Manufacturer and Country of origin			
	Type		Static/ directional	
	Manufacturer's type designation			
	Applicable standard		IEC	
	Triple pole or single pole		Single*3	
	Current setting range	% of rated current	50-200%	

TECHNICAL DATA SHEET

33kV CONTROL AND RELAY PANEL

S. No	Description	Unit	NEA requirement	Bidder's Offer
	operating time at 10 times current setting	sec	3	
	Reset time	ms		
	Characteristics		IDMT (Standard inverse)	
	Instantaneous unit provided	Yes/No	Yes	
	Current setting range	% of rated current	200-1600%	
	Operating range			
	Insulation test as per IEC	Yes/ No	Yes	
	Indication			
	Hand reset flags provided	Yes/No	Yes	
	Light emitting diod provided	Yes/No	Yes	
	Auxilliary DC supply	V	110	
	Technical Literature submitted	Yes/No	Yes	
	Test certificate submitted	Yes/No	Yes	
11.4	Directional Earth Fault Relay			
	Manufacturer and Country of origin			
	Type		Static/ directional	
	Manufacturer's type designation			
	Applicable standard		IEC	
	Triple pole or single pole		Single	
	Continuous overload capacity	xIn		
	operating time at 10 times current setting	sec	3	
	Characteristics		IDMT (Standard inverse)	
	Instantaneous unit provided	Yes/No	Yes	
	Current setting range	% of rated current	200-1600%	
	Operating range			
	Insulation test as per IEC	Yes/ No	Yes	
	Indication			
	Hand reset flags provided	Yes/No	Yes	
	Light emitting diod provided	Yes/No	Yes	
	Auxilliary DC supply	V	110	
	Technical Literature submitted	Yes/No	Yes	
	Test certificate submitted	Yes/No	Yes	
11.5	Differential Relay			
	Manufacturer and Country of origin			
	Satndard reference			
	Type			
	Voltage rating	V	110	
	Type of Mounting		Flush	
	Operating time setting	ms	<30	
	Sensivity setting		20-50%xIn	
	Bias setting			
	CT ratio Compensating range			
	Burden for Current Circuit	VA		
	DC Burden	VA		
	Tripping	A		

	Making Current	A		
	Closing load (At 110V DC)	A		
	Ambient Temperature Range	Deg C		
	Auxilliary DC supply	V	110	
	Technical Literature submitted	Yes/No	Yes	
	Test certificate submitted	Yes/No	Yes	
11.6	Auxilliary Tripping and Lockout Relay			
	Manufacturer and Country of origin			
	Type			
	Manufacturer's type designation			
	Applicable standard		IEC	
	Operatring Time	ms	<15	
	Does the lockout relay reset by the manually operated or electrically operated reset device			
	Is the cut off contact provided to interrupt the operating coil	Yes/No	Yes	
	Contact rating at 125V DC	A		
	Auxilliary DC supply	V	110	
	Technical Literature submitted	Yes/No	Yes	
	Test certificate submitted	Yes/No	Yes	

TECHNICAL DATA SHEET

33kV CONTROL AND RELAY PANEL

S. No	Description	Unit	NEA requirement	Bidder's Offer
11.7	Break Fail Lockout Relay, 86K			
	DC Voltage Rating	V	110	
	Nos of electrically separate No and NC Contacts			
11.8	Break Failure Lockout Relay BF			
	DC Voltage Rating	V	110	
	Nos of electrically separate No and NC Contacts			
	Technical Literature submitted	Yes/No	Yes	
	Test certificate submitted	Yes/No	Yes	
12	Construction of Control and Relay Panel			
	Type		Simplex	
	Manufacturer's type designation			
	Applicable Standard			
	Control panel furnished as per specification	Yes/No	Yes	
	Enclosure protection calss	IP	IP54	
	Thickness of sheet metal used			
	Front and rear portion	mm	>3	
	Side top and bottom cover	mm	>2	
	All instruments, meters, relays and control switches flush or semi flush type		Flush	
	Ground Bus			
	Material		Copper	
	Size	mm x mm		
	Internal Wirring			
	Type of Insulation			
	Voltage Grade of Wires	V	600	

	Cross Section of Wires	sq.mm	2.5 min	
	Current Circuit			
	Voltage and auxilliary circuit			
	Over all dimension of control board	cu mm		
	Shipping data			
	Size of large package	mmxmmxmm		
	Weight of heaviest packge	kg		

INSPECTION, TESTING AND COMMISSIONING

1.1 SCOPE OF WORK

The whole of the Works supplied under the Contract shall be subject to inspections and tests by the Employer or their Representatives during manufacture, erection and after completion. The inspections and tests shall include, but not be limited to, the requirements of this section of the Specifications.

The Contractor shall provide all costs, appliances, apparatus, supervision, labor and services necessary to carry out all tests, unless specifically stated otherwise.

The Contractor shall furnish the detailed schedule of his commissioning plan at least one month prior to the scheduled date. The schedule shall include the commissioning procedures, testing sequences and details of special testing equipment, tests and commissioning record formats, information about relevant standards etc.

The scope of the commissioning program includes the site testing and putting into successful operation of all the equipment supplied under the Contract, for 33kV, 11kV, AC & DC plants and all secondary voltages systems. Testing of energy meters and certification of their accuracy shall also be included.

1.2 OBJECTIVES

The objectives of commissioning work, prior to the successful energization of Plant at full voltage and connection to the system, are the following:

Confirm the integrity (correctness) of installation.

Confirm the integrity of insulation, connections and phasing.

Ensure proof of equipment characteristics.

Review workmanship.

Confirm the correct implementation of the design.

Check equipment ratings.

Check settings and operation of protective relays.

Check and measure resistivity of earthing grid and earthing system.

Confirm the proper functioning of SCADA system.

1.3 QUALITY ASSURANCE, INSPECTION AND TESTING

To assure that the supply and services under the scope of this Contract whether manufactured or performed within the Contractor's works or at his subcontractor's premises or at the Site or at any other place of work, are in accordance with the Specifications, the Contractor shall adopt suitable quality assurance program to control such activities at all points necessary. Such program shall be outlined by the Contractor and shall be finally accepted by the Employer after discussions before the award of the Contract. A quality assurance program of the Contractor shall generally cover, but not be limited to the following:

(a) His organization structure for the management and implementation of the proposed quality assurance program.

(b) Documentation control system.
(c) Qualification data for bidder's key personnel.
(d) The procedure for purchases of materials, parts, components, and selection of sub-contractors' services including vendor analysis, source inspection, incoming raw materials inspection, and verification of materials purchases.
(e) System for shop manufacturing including process controls and fabrication and assembly controls.
(f) Control of non-conforming items and system for corrective actions.
(g) Control of calibration and testing of measuring and testing equipment.
(h) Inspection and test procedure for manufacture.
(i) System for indication and appraisal of inspection status.
(j) System for quality audits.
(k) System for authorizing release of manufactured products to the Employer.
(l) System for maintenance of records.
(m) System for handling storage and delivery.
(n) A quality plan detailing out the specific quality control procedure adopting for controlling the quality characteristics relevant to each item of supply.

The quality plan shall be mutually discussed and approved by the Employer after incorporating necessary corrections by the Contractor as may be required.

- Quality Assurance Documents

The Contractor shall be required to submit all the Quality Assurance Documents as stipulated in the Quality Plan at the time of Employer's inspection of material/equipment.

The Employer, through his duly authorized representatives, reserves the right to carry out Quality Audit and Quality Surveillance of the systems and the procedures of the Contractor's and the subcontractor's Quality Management and Control Activities.

- Inspection, Testing and Inspection Certificates

  The provisions of the clauses on Test and Inspection of the General Conditions of Contract and Special Conditions of Contract shall be applicable to the supply and erection portions of the Works. The Employer shall have the right to re-inspect at his expenses, any material though it would have been previously inspected and approved by him at the Contractor's works before, and if, after the same are inspected at Site

following the latter, material is found defective, then the Contractor shall bear the cost of this inspection and reinstatement according to specification.

1.4 TESTS AT MANUFACTURERS WORKS

1.4.1 General

Where no specific test is specified, then the various items of materials and equipment shall be tested in accordance with the relevant British, IEC, or American Standards. Where no appropriate standard is available, tests shall be carried out in accordance with the maker's standard practice, which shall be subject to the Employer's approval.

At least fourteen days' prior notice, in writing or by tele-fax, shall be given to the Employer of the readiness of the plant for test or inspection and every facility shall be provided by the Contractor and sub-Contractor (s) to enable the Employer or their Representative to carry out the inspections and witness the tests. This includes progress, test rig and packing inspections also.

Inspection of equipment will not be carried out unless the Employer has approved copies of the relevant sub-orders, drawings and test procedures. No equipment shall be packed, prepared for shipment, or dismantled for the purpose of packing for shipment, unless it has been satisfactorily inspected, or inspection has been waived by the Employer.

Functional electrical and mechanical tests shall be carried out on the completed plant after assembly in the Works. The extent and method of recording the results shall be agreed by the Employer in sufficient time to enable the tests to be satisfactorily witnessed or to make any changes to the proposed program of tests. All instruments and apparatus used in the performance of the tests shall be subject to the approval of the Employer and, if required by the Employer, shall be calibrated to an agreed standard at a laboratory of national standing to be nominated by the Contractor and approved by the Employer. The costs of carrying out such calibration shall be borne by the Contractor in all cases.

The costs of making/performing any test shall be borne by the Contractor. This shall apply to tests performed at the site or elsewhere.

After receiving the prior information about the completion of manufacturing at the factory, the Employer will depute his personnel to the Contractor's factory to witness the fabrication, assembly and testing of any or all parts of major equipment. The number of the Employer's personnel and equipment to be witnessed will be as listed later. The duration of such visits shall be as per inspection/testing requirements.

1.4.2 Test Certificates

Within 30 days of the completion of any test, triplicate sets of all principal test records, test certificates and performance curves shall be supplied to the Employer.

These test records, certificates and performance curves shall be supplied for all tests, whether or not they have been witnessed by the Employer or his representative. The information given on such test certificates and curves shall be sufficient to identify the

material or equipment to which the certificate refers and should also bear the Contract reference title. Specified requirements shall be shown on each certificate for comparison with actual test results.

When all equipment has been tested, test certificates of all factory and site tests shall be compiled by the Contractor into volumes and bound in an approved form complete with index. Two copies of each volume shall be supplied to the Consultant and five copies to the Employer.

1.4.3 Type Tests

Type tests are required to prove the general design of the equipment and the Contractor may submit certificates of such design tests, which have been carried out on identical equipment. Notwithstanding any provision in BS, IEC or ANSI Standards, the Employer shall have the right to accept such certificates in lieu of the specified type tests or to reject them.

The type tests prescribed shall be carried out at the Contractor's cost in all cases, where either such certificates are not available or are rejected by the Employer.

1.5 RESPONSIBILITIES

To ensure that the test jurisdiction and transfer of responsibilities is regulated by strict safety and handover procedures, the Contractor agrees the interface with the Employer to establish and implement handover procedures consistent with the terms of these Specifications.

The Employer shall retain full jurisdiction over all commissioning activities, which may affect the operation of the existing system. In these circumstances and when so requested, shall provide technical advices and assistances.

The Contractor shall be responsible for technical guidance and assistance in establishing the scope and method of tests, witnessing of the testing, assessment of results, and re-negotiation of the changes in test schedules which may be necessary as a result of other circumstances, such as delays in the delivery, possible equipment failures.

1.6 SAFETY PROCEDURES

The Contractor shall share the responsibility for safety procedures with the Employer. The Contractor shall establish and implement a work permit and tagging system and associated safety procedures (subject to the review of Employer) for all equipment, systems and areas not covered by the Employer's safety procedures.

The Employer will assume responsibility for the establishment and implementation of tagging, safety and work permit procedures for the protection of personnel and equipment, as soon as equipment and systems are connected to or are energizeable from the existing system.

1.7 TRAINING OF THE EMPLOYER'S STAFF

The Contractor shall plan for the Employer's staffs' participation, either continuously or on a regularly recurring basis, in the commissioning work and:

Allow the Employer's staffs to become familiar with the operating and maintenance aspects of the new equipment supplied by him,

Maintain a continuing assessment with the Employer of the precautions required in or possible consequences of, initial energization of equipment, Allow for the above two necessary objectives in the preparation of schedules.

The Contractor shall station at site, at least, one technical expert for a minimum of six months continuously after commissioning to rectify any problems, as well as train the Employer's attending staffs. If required, the length of his stay shall be extended as per requirement, which shall be at the Employer's discretion.

1.8 COMMISSIONING STAFF

The Contractor shall provide commissioning personnel including skilled and unskilled labor as required. Submit a list with names, experience and proposed duration of the stay of key personnel on site, consistent with the construction schedule, along with the commissioning program.

Ensure that only staffs assigned to commissioning fulfills that duty for the duration of the assignment.

Ensure that commissioning staffs have authorization, and the competence, to undertake minor repairs or to make temporary redesigns and to reconnect systems to meet the specified system performance to preclude delays in energization and putting into commercial service of any part of the works.

1.9 TEST EQUIPMENT

The Contractor shall ensure that all instruments, tools and other equipment required for testing and commissioning are available on site, ensure that the test equipment is of satisfactory quality and condition and, where necessary, is calibrated by an approved authority or standard.

Make arrangements for the provision of power supplies for testing with necessary vector configuration, voltage and current rating.

1.10 COMMISSIONING PROGRAM

Prepare a commissioning program for approval by the Employer and for incorporation into the Project master construction program. Allocate adequate time in this program to permit full commissioning of all components.

Carry out all testing during normal working hours as far as practicable. Tests, which involve existing apparatus and system outages, may be carried out outside normal working hours. Give the Employer sufficient notice to allow for the necessary outage arrangements to be made in conformity with the testing program.

Note that no tests listed in the agreed program will be waived except upon the instructions or consent of the Employer in writing.

1.10.1 Test Procedures

The following basic tests, in addition to others, shall be carried out:

- Measurement of insulation resistance.
- AC withstand voltage test

1.10.2 Requirements for Field Tests

The field tests shall be carried out in presence of Employer under the following conditions:

AC withstand test voltages for conductors and outdoor equipment shall be normal operation voltage of the transmission line and, withstand voltage test shall be carried out for ten (10) minutes by the normal voltage mentioned above. The field tests shall be carried out by the Contractor after adjustment of all the equipment have been completed.

Expandable and lead wires and other materials required for the field tests shall be arranged by the Contractor. The Contractor shall be responsible for providing all measuring instruments, test equipment and tools required for the tests.

Preparation of the test record sheets and test reports shall be the responsibility of the Contractor and the results of the field tests shall be submitted by the Contractor for Employer's approval.

Measurement of insulation resistance of the equipment shall be performed by at least 1000 V meggar.

After completion of the measurement of insulation resistance mentioned above, ac withstand voltage test shall be performed by the normal operation voltage of the existing power system in accordance with the following procedure:

- 11 and 33 kV Main Circuit: The 11 kV and 33 kV circuit breakers and disconnecting switches, except for circuit breakers receiving power for the test from the existing power system through a transmission line, shall be closed, succeeding, normal operation voltage shall be charged on the equipment and bus conductors for ten (10) minutes for ac withstand voltage test. The indication value of meters mounted on the board during the ac withstand voltage test shall be recorded on the test record sheets prepared by the Contractor.

Submit test procedures, consisting of detailed test methods and samples of the related test record forms, for all equipment to be tested, to the Employer for approval along with the commissioning program. Strictly adhere to these procedures for the commissioning tests.

1.10.3 Records

Maintain an up-to-date record of all commissioning activities on site.

Record the results of the tests clearly on forms and formats approved by the Employer and with clear references to the equipment and items tested, so that the record can be used as the basis for maintenance tests, in future. Submit the required number of site test records to the Employer as soon as possible after completion of the tests.

Record the details of the test equipment and instruments used in the test sheets, in those cases where the instrument or equipment characteristics can have a bearing on the test results.

1.10.4 "As-Built" Drawings

Keep an ongoing record of all changes on a master set of drawings. Produce and supply a minimum of five complete sets of marked-up "As Constructed/As-Built" drawings before leaving the Site. Correct and re-issue the original drawings as soon as possible as per this specification.

1.10.5 Test Methods

Carry out all necessary tests for commissioning the substations. The following clauses detail the tests which are considered to represent the minimum required in addition to those specified under the appropriate IEC Publications, other approved standards and the manufacturer's instructions for each item of equipment.
Strictly adhere to the methods of testing approved by the Employer.

A) Site and Commissioning Tests for Main and Auxiliary Equipment

General Checks:

Make a general check of all main and auxiliary equipment. Include a check of the completeness, correctness and condition of ground connections, labeling, arcing ring, paint surfaces, cables, wiring, pipe-work, valves, blanking plates and all other auxiliary and ancillary items.
Check for oil and gas leaks and that insulators are clean and free from external damage. Check that loose items, which are to be handed over to the Employer, e.g., blanking plates, tools, spares, etc. are in order and are correctly stored or handed over.

Circuit Breaker Tests

Check and set pressure switches settings when required. Also test mechanical operating systems.
Carry out contact resistance tests. In the case of multi-interrupter circuit breakers, perform resistance tests at each interrupter or pair of interrupters as well as through the series of interrupters on each pole.
Test local and remote trip/close operation and perform circuit breaker and auxiliary contact timing tests on all circuit breakers.

Control/ Relay Panels, energy meters and Switchboards

Carry out general testing and inspection, as referred to above. The Contractor shall also carry following tests: a) Carrier signal testing b) protective relay testing c) Instrument transformers testing c) Phase correcting testing. Functionally test and perform the timing tests on circuit breakers and AC and DC circuits, associated with stand-by auxiliary supplies and stand-by generating sets, particularly where automatic operation is defined.
Carry out insulation measurement tests of secondary circuits with a 1000 V DC meggar before and after high voltage testing.
Check shutters, interlocking, earth procedures and the inter-changeability of components.
Carry out a high voltage 50 Hz dielectric test on each bus at 75% of the specified value for the equivalent factory test.

Test conductivity on selected connections and joints.

Perform high voltage DC tests on all HV cables and isolated phase bus bars at 75% of the specified value for the equivalent factory test. Carry out with at least 1000 V DC meggar the insulation measurement test, before and after high voltage tests.

Section VI. General Conditions of Contract

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Section VI. General Conditions of Contract

1. Definitions

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

(a) "Contract" means the Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.

(b) "Contract Documents" means the documents listed in the Agreement, including any amendments thereto.

(c) "Contract Price" means the price payable to the Supplier as specified in the Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.

(d) "Day" means calendar day.

(e) "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.

(f) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.

(g) "GCC" means the General Conditions of Contract.

(h) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.

(i) "Purchaser's Country" is the country specified in the Special Conditions of Contract (SCC).

(j) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the SCC.

(k) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other similar obligations of the Supplier under the Contract.

(l) "SCC" means the Special Conditions of Contract.

(m) "Subcontractor" means any natural person, private or government entity, or a combination of the above, including its legal successors or 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.

(n) "Supplier" means the natural person, private or government

entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Supplier.

(o) "GoN" means the Government of Nepal.

(p) "The Site," where applicable, means the place named in the SCC.

2. Contract Documents

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

3. Fraud and Corruption

3.1 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 14 days notice to the Supplier, terminate the Supplier's employment under the Contract and the provisions of Clause 34.1 shall apply.

3.2 Without prejudice to any other rights of the Purchaser under this Contract, GoN may blacklist the Bidder/Supplier for its conduct up to three (3) years on the following grounds and seriousness of the act committed by the Bidder/Supplier:

(a) if it is established that the Supplier has committed substantial defect in implementation of the Contract or has or has not substantially fulfilled its obligations under the Contract

For the purposes of this Sub-Clause:

(i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) "fraudulent practice"1 is any 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;

(iii) "collusive practice"2 is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) "coercive practice"3 is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property

[1] a "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

[2] "parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

of the party to influence improperly the actions of a party;

(v) "obstructive practice" is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a GoN/DP 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

(bb) acts intended to materially impede the exercise of the GoN/DP's inspection and audit rights provided for under ITB Clause 3.5 and GCC Clause 25.

3.3 Without prejudice to any other rights of the Purchaser under this Contract, GoN may **blacklist** a Bidder/Supplier for its conduct for a period of one (1) to three (3) years on the following grounds and seriousness of the act committed by the bidder:

(a) if it is established that the Supplier committed acts specified in ITB 3.2,

(b) if it is established later that the Bidder has committed substantial defect in implementation of the contract or has not substantially fulfilled its obligations under the contract or the completed work is not of the specified quality as per the contract.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

(a) The meaning of any trade term and the rights and obligations of parties there under shall be as prescribed by Incoterms.

(b) EXW shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce at the date of the Invitation for Bids or as specified in the SCC.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of parties

[3] a "party" refers to a participant in the procurement process or contract execution.

with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

(a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

(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.

4.6 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.

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, this 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.

6. Joint Venture, Consortium or Association

6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. A bidder can submit only one bid either as a partner of the joint venture or individually. The composition or the constitution of the joint

venture, consortium, or association 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 with proof of receipt.

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 Nepal.

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 Any dispute between the Parties as to matters arising pursuant to this Contract which cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be referred to Arbitration within 30 days after the expiration of amicable settlement period.

10. Scope of Supply

10.1 Subject to the SCC, the Goods and Related Services to be supplied shall be as specified in Section V, Schedule of Requirements.

10.2 Unless otherwise stipulated in the Contract, the Scope of 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 and Completion of the Goods and Related Services as if such items were expressly mentioned in the Contract.

11. Delivery

11.1 Subject to GCC Sub-Clause 31.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Section V, Schedule of Requirements. The details of documents to be furnished by the Supplier are specified in the SCC.

12. Supplier's Responsibilities

12.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 10, and the Delivery and Completion Schedule, as per GCC Clause 11.

13. Purchaser's

13.1 Whenever the supply of Goods and Related Services requires

Responsibilities

that the Supplier obtain permits, approvals, and import and other licenses from public authorities in Nepal, the Purchaser shall, if so required by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.

13.2 The Purchaser shall pay all costs involved in the performance of its responsibilities, in accordance with GCC Sub-Clause 13.1.

14. Contract Price

14.1 The Contract Price shall be as specified in the Agreement subject to any additions and adjustments thereto, or deductions there from, as may be made pursuant to the Contract.

14.2 Prices charged by the Supplier for the Goods delivered 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.

15. Terms of Payment

15.1 The Contract Price shall be paid in Nepalese Currency.

15.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 11 and upon fulfillment of all the obligations stipulated in the Contract.

15.3 Payments shall be made promptly by the Purchaser, no later than thirty (30) days after submission of an invoice or request for payment by the Supplier, and the Purchaser has accepted it.

16. Taxes and Duties

16.1 For goods supplied, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser

17. Performance Security

17.1 The Supplier shall, within fifteen (15) days of the receipt of notification of Contract award, provide a Performance Security for the due performance of the Contract in the amounts and currencies specified in the SCC.

17.2 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.

17.3 The Performance Security shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms stipulated by the Purchaser in the SCC, or in another form acceptable to the Purchaser.

17.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than thirty (30) days

following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.

18. Copyright

18.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein 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.

19. Confidential Information

19.1 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 Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 19.

19.2 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, or other work and services required for the performance of the Contract.

19.3 The obligation of a party under GCC Sub-Clauses 19.1 and 19.2 above, however, shall not apply to information that:

(a) the Purchaser or Supplier need to share with the Donor for Donor funded project or other institutions participating in the financing of the Contract;

(b) now or hereafter enters the public domain through no fault of that party;

(c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or

(d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

19.4 The above provisions of GCC Clause 19 shall not in any way

modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

19.5 The provisions of GCC Clause 19 shall survive completion or termination, for whatever reason, of the Contract.

20. Subcontracting

20.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Subcontracting shall in no event relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

20.2 Subcontracts shall comply with the provisions of GCC Clauses 3.

21. Specifications and Standards

21.1 Technical Specifications and Drawings

(a) The Supplier shall ensure that the Goods and Related Services comply with the technical specifications and other provisions of the Contract.

(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) The Goods and Related Services supplied under this Contract shall conform to the standards mentioned in Section V, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the Goods.

21.2 Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Section V, Schedule of Requirements Requirements. 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 Clause 32.

22. Packing and Documents

22.1 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 size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the Goods and the absence of heavy handling facilities at all points in transit.

22.2 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.

23. Insurance

23.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured, in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in the manner specified in the SCC.

24. Transportation

24.1 Unless otherwise specified in the SCC, obligations for transportation of the Goods shall be in accordance with the Incoterms specified in Sections V, Schedule of Requirements.

25. Inspections and Tests

25.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in Sections V, Schedule of Requirements.

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 final destination of the Goods, or in another place in Nepal as specified in the SCC. Subject to GCC Sub-Clause 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 Sub-Clause 25.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

25.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a 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 impede 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 Sub-Clause 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 Sub-Clause 25.6, shall release the Supplier from any warranties or other obligations under the Contract.

26. Liquidated Damages

26.1 Except as provided under GCC Clause 31, if the Supplier fails to deliver any or all of the Goods or 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 Contract Price for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 34.

27. Warranty

27.1 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.

27.2 Subject to GCC Sub-Clause 21.1, 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 Nepal.

27.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC.

27.4 The Purchaser shall give Notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

27.5 Upon receipt of such Notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

27.6 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.

28. Patent Indemnity

28.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 28.2, 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 the country where the Site is located; and

(b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably 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.

28.2 If any proceedings are brought or any claim is made against

the Purchaser arising out of the matters referred to in GCC Sub-Clause 28.1, the Purchaser shall promptly give the Supplier a 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.

28.3 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.

28.4 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.

28.5 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.

29. Limitation of Liability

29.1 Except in cases of gross negligence or willful misconduct :

(a) neither party shall be liable to the other party 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.

30. Change in Laws and Regulations

30.1 Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or bylaw

having the force of law is enacted, promulgated, abrogated, or changed in Nepal where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date 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 Clause 14.

31. Force Majeure

31.1 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 delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

31.2 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.

31.3 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.

32. Change Orders and Contract Amendments

32.1 The Purchaser may at any time order the Supplier through Notice in accordance GCC Clause 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 are to be specifically manufactured for the Purchaser;

(b) the method of shipment or packing;

(c) the place of delivery; and

(d) the Related Services to be provided by the Supplier.

32.2 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 and 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.

32.3 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.

33. Extensions of Time

33.1 If at any time during performance of the Contract, the Supplier or its Subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 11, the Supplier shall promptly, and at least seven (7) days before the expiry of procurement contract, notify the Purchaser in writing of the delay, its 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.

33.2 Except in case of Force Majeure, as provided under GCC Clause 31, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

34. Termination

34.1 Termination for Default

(a) The Purchaser, without prejudice to any other remedy for breach of Contract, by 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 Clause 33; or

(ii) if the Supplier fails to perform any other obligation under the Contract.

(b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 34.1(a), 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. However, the Supplier shall continue performance of the Contract to the extent not terminated.

(c) if the Supplier, in the judgment of the Purchaser has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, as defined in GCC Clause 3, in competing for or in executing the Contract.

34.2 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 will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

34.3 Termination for Convenience

(a) The Purchaser, by written 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 seven (7) days after the Supplier's receipt of the 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.

35. Assignment

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

Section VII. Special Conditions of Contract

Section VII. Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(i)	The Purchaser's country is: Nepal
GCC 1.1(j)	The Purchaser is: **Nepalgunj Regional Office** **Distribution and Consumer Service Directorate** **Nepal Electricity Authority** **Nepalgunj, Banke** **Nepal**
GCC 1.1 (p)	The Site is: NEA Store
GCC 4.2 (b)	The version of Incoterms shall be: Incoterm 2016
GCC 5.1	The language shall be: English
GCC 7.1	For **notices**, the Purchaser's address shall be: **Nepalgunj Regional Office** **Distribution and Consumer Service Directorate** **Nepal Electricity Authority** **Nepalgunj, Banke** **Nepal** Telephone number: **081-523419/526783** Facsimile number: **081-523508**
	For **notices**, the Suppliers's address shall be: Name and Address of the Supplier: Telephone number: Facsimile number: e-mail Address:
GCC 10.1	The Scope of Supply shall be defined in: [**"Section V, Schedule of Requirements" or indicate where the Scope of Supply shall be defined. At the time of awarding the Contract, the Purchaser shall specify any change in the Scope of Supply with respect to Section V, Schedule of Requirements included in the Bidding Document. Such changes may be due, for instance, if the quantities of Goods and Related Services are increased or decreased at the time of award.]**

GCC 11.1	**Upon delivery of the Goods to the transporter, the Supplier shall notify the Purchaser and send the following documents to the Purchaser:** **a) Copies of the Supplier's invoice showing the description of the Goods, quantity, unit price, and total amount;** **b) Copy of packing list indentifying the contents of each package;** **c) Delivery note, railway receipt, or truck receipt;** **d) Manufacturer's or Supplier's warranty certificate;** **e) Certificate of origin; and** **f) Inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report;** **The Purchaser shall receive the above documents before the arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.**
GCC 14.2	**The prices charged for the Goods delivered and the Related Services to be performed shall be fixed for the duration of the contract. or** **The prices charged for the Goods delivered and Related Services to be performed shall be subject to adjustment during performance of the Contract to reflect changes in the cost of labor and material components in accordance with the formula:** $$\Delta P = P_0\left(a + b\frac{L_1}{L_0} + c\frac{M_1}{M_0}\right) - P_0$$ **in which:** **ΔP = adjustment amount payable to the Supplier.** **P0 = Contract Price (base price).** **a = fixed element representing profits and overheads included in the Contract Price and generally in the range of five (5) to fifteen (15) percent.** **b = estimated percentage of labor component in the Contract Price.** **c = estimated percentage of material component in the Contract Price.** **L0, L1 = labor indices applicable to the appropriate industry in the country of origin on the base date and date for adjustment, respectively.**

	M0, M1 = material indices for the major raw material on the base date and date for adjustment, respectively, in the country of origin. **The coefficients a, b, and c shall be specified by the Purchaser in the bidding document. The sum of the three coefficients should be one (1) in every application of the formula.** **The Bidder shall indicate in its Bid, the source of the indices and the base dates for such indices.** **Base date = thirty (30) days prior to the deadline for submission of the Bids.** **Date of adjustment = ……weeks prior to date of shipment (representing the mid-point of the period of manufacture).** **The above price adjustment formula shall be invoked by either party subject to the following further conditions:** **a) Price adjustment will be applied only if the resulting increase or decrease is more than ____ percent of the Contract Price. (2 percent would be an acceptable percentage.)** **b) No price adjustment shall be allowed beyond the original delivery dates unless specifically stated in the extension letter. As a rule, no price adjustment shall be allowed for periods of delay for which the Supplier is entirely responsible. The Purchaser will, however, be entitled to any decrease in the prices of the Goods and Related Services subject to adjustment.** **c) If the currency in which the Contract Price (P0) is expressed is different from the currency of origin of the labor and material indices, a correction factor will be applied to avoid incorrect adjustments of the Contract Price. The correction factor shall correspond to the ratio of exchange rates between the two currencies on the base date and the date for adjustment as defined above.** **d) No price adjustment shall be payable on the portion of the Contract Price paid to the Supplier as advance payment.]** **e) [The maximum amount of price adjustment to be made pursuant to this clause shall not generally be more than twenty five (25) percent of the initial contract prices.]**
GCC 15.1	The terms of payment to be made to the Supplier under the contract shall be as follows: **1. The payment shall be made:** **(a) through accounts division/unit of the Purchaser or**

GCC 15.1	**2. Payments shall be made in Nepalese Rupees in the following manner:** **a) On Delivery and acceptance: Ninety three and half (93.5) percent. of the Contract Price of the Goods delivered shall be paid within thirty (30) days of receipt of the Goods and upon submission of a claim supported by the documents specified in GCC 11.1** **b) One and half (1.5) percent of the Contract Price of the Goods and related services delivered shall be paid within thirty (30) days upon submission of claim supported by the acceptance certificate issued by the Purchaser or its authorized person/s**
GCC 17.1	The Supplier shall provide a Performance Security as per ITB 41. **The amount of the Performance Security shall be in Nepalese Rupees, and shall be valid for the period of 120 days beyond the expiration of warranty period.**
GCC 17.3	The types of acceptable Performance Securities are: **A bank guarantee issued by "A" class commercial bank located in Nepal or reputable bank located abroad, acceptable to the Purchaser, in the format included in Section VIII, Contract Forms, Performance Security issued by foreign Bank must be counter – guaranteed by "A" class commercial Bank in Nepal.**
GCC 17.4	Discharge of the Performance Security shall take place: The per Performance Security shall be discharged by the Purchaser and retured to the supplier not latter than **Ninety (90) days** following the date of completion of the Supplier's performance obligations under the contract

GCC 22.2	A complete packing list indicating the content of each package shall be enclosed in a water proof envelope and shall be secured to the outside of the packing case. In addition, each package shall be marked with indelible ink/paint in bold letters, as follows: a. Contract number : b. Name and address of the Purchaser: c. Country of origin, d. Gross weight e. Net weight f. Package number of total number of packages g. Brief description of content h. [Insert any other additional marking] Upright markings, where appropriate, shall be placed on all four vertical sides of the package. All materials used for packing shall be environmentally neutral.
GCC 23.1	The insurance coverage shall be in an amount equal to 110 percent of the EXW price of the Goods from "warehouse" to "warehouse" on "All Risks" basis, including War Risks, riots and/or Strikes.
GCC 24.1	Obligations for transportation of the Goods shall be in accordance with: ***The supplier is required under the contract to transport the Goods to a specified place of final destination, defined as the project site, transport to such place of destination including insurance and storage, as shall be specified in the contract, shall be arranged by the supplier, and related costs shall be included in the contract price.***

GCC 25.2	Tests and Inspections specified in Section V, Schedule of Requirements, shall be carried out at the following times or milestones, and places: a. The inspection and testing of goods shall be in accordance with the provision of technical specification. b. Whenever the Supplier is ready to carry out any such test and inspection, it shall give a 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. Upon Supplier's such notification, the Purchaser shall notify the supplier in writing of the identity of any representatives retained for these purposes. The Purchaser shall bear all its own costs and expenses incurred in connection with such attendance including, but not limited to, travelling and board and loging expenses. c. The Purchaser may inspect and test the Goods through independent third party or in combine with the representative of third party & NEA representative or NEA representatives only. d.The inspection and testing of goods shall be carried out in three (3) lot as specified in section V, schedule of requirements.
GCC 26.1	The applicable rate of liquidated damages shall be: One twentieth of one (0.05) percent of the total contract price per calendar day of delay.
GCC 26.1	The maximum amount of liquidated damages shall be: ***ten (10) percent of the Contract Price.***
GCC 27.3	The period of validity of the Warranty shall be: Twelve (12) months after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination.
GCC 27.5	The Supplier shall correct any defects covered by the Warranty within: **60 Days** of being notified by the Purchaser of the occurrence of such defects.

Section VIII. Contract Forms

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Letter of Intent

[on letterhead paper of the Employer]

. . . . . ***date***. . . . . .

Notes on Letter of Intent

The issuance of Letter of Intent is the information of the selection of the bid of the successful bidder by the Employer and for providing information to other unsuccessful bidders who participated in the bid as regards to the outcome of the procurement process. This standard form of Letter of Intent to Award should be filled in and sent to the successful Bidder only after evaluation and selection of substantially responsible lowest evaluated bid.

To: . . . . . ***name and address of the Contractor*** . . . . . .

Subject: . . . . . ***Issuance of letter of intent to award the contract*** . . . . . .

This is to notify you that, it is our intention to award the contract ……. ***dated*** …….. for execution of the . . . . . ***.name of the contract and identification number, as given in the Contract Data/SCC*** to you as your bid price . . . . . ***.amount in figures and words in Nepalese Rupees*** ……. as corrected and modified in accordance with the Instructions to Bidders is hereby selected as substantially responsive lowest evaluated bid.

Authorized Signature: .....

Name: .....

Title: .....

CC:
[Insert name and address of all other Bidders, who submitted the bid]

Letter of Acceptance

[on letterhead paper of the Employer]

. . . . . ***date***. . . . . .

To: . . . . . ***name and address of the Contractor*** . . . . . .

Subject: . . . . . ***Notification of Award***

This is to notify that your Bid dated . . . . ***date*** . . . . for execution of the . . . . . ***.name of the contract and identification number, as given in the Contract Data/SCC*** . . . . . for the Contract price of Nepalese Rupees ***[insert amount in figures and words in Nepalese Rupees]***, as corrected in accordance with the Instructions to Bidders is hereby accepted in accordance with the Instruction to Bidders.

You are hereby instructed to contract this office to sign the formal contract agreement within 15 days. As per the Conditions of Contract, you are also required to submit Performance Security, as specified in SCC, consisting of a Bank Guarantee in the format included in Section VIII (Contract Forms) of the Bidding Document.

The Employer shall forfeit the bid security, in case you fail to furnish the Performance Security and to sign the contract within specified period.

Authorized Signature: .....

Name and Title of Signatory:

Agreement Form

THIS AGREEMENT made on the [**insert number**] day of [**insert month**], [**insert year**], between [**insert complete name of Purchaser**] of [**insert complete address of Purchaser**] (hereinafter "the Purchaser"), of the one part, and [**insert complete name of Supplier**] of [**insert complete address of Supplier**] (hereinafter "the Supplier"), of the other part:

WHEREAS the Purchaser invited Bids for certain Goods and Related Services, viz., [**insert brief description of the Goods and Related Services**] and has accepted a Bid by the Supplier for the supply of those Goods and Related Services in the sum of NRs ……..[**insert amount of contract price in words and figures including taxes**] (hereinafter "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 be deemed to form and be read and construed as part of this Agreement, viz.:
   (a) the Purchaser's Notification to the Supplier of Award of Contract;
   (b) the Bid Submission Form and the Price Schedules submitted by the Supplier;
   (c) the Special Conditions of Contract;
   (d) the General Conditions of Contract;
   (e) the Schedule of Requirements; and
   (f) [**indicate other documents required**]

   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.
3. In consideration of the payments to be made by the Purchaser to the Supplier as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Related Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. 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 **"Nepal"** on the day, month, and year indicated above.

Signed by [**insert authorized signature for the Purchaser**] (for the Purchaser)

Signed by [**insert authorized signature for the Supplier**] (for the Supplier)

Performance Security

[**insert complete name and number of Contract**]

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

WHEREAS [**insert complete name of Supplier**] (hereinafter "the Supplier") has received the notification of award for the execution of **[insert identification number and name of contract]** (hereinafter "the Contract").

AND WHEREAS it has been stipulated by you in the aforementioned Contract that the Supplier shall furnish you with a security [**insert type of security**] issued by a reputable guarantor for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS the undersigned [**insert complete name of Guarantor**], legally domiciled in [**insert complete address of Guarantor**], (hereinafter the "Guarantor"), have agreed to give the Supplier a security:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of [**insert currency and amount of guarantee in words and figures**] and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract, without cavil or argument, any sum or sums within the limits of [**insert currency and amount of guarantee in words and figures**] as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This security is valid until the [**insert day, month, year**].

Name: [**insert complete name of person signing the Security**]

In the capacity of: [**insert legal capacity of person signing the Security**]

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

Duly authorized to sign the security for and on behalf of: **[insert seal and complete name of Guarantor]**

Date: [**insert date of signing**]

Nepal Electricity Authority
Declaration Form (for E-bidding)

S.No	Description		Status			
			Issued to (as applicable)	**Issued by (as applicable)**	**Date of Issue**	**No. of Pages**
1	Notarized Power of Attorney from the Company to Sign on Company's behalf (For Single Bidder)					
2	Joint Venture Agreement; ***If any***					
3	Notarized Power of Attorney to Sign the Bid on Company's behalf (Each Partner in case of JV)					
4	Notarized Power of Attorney to Sign the Bid (On Behalf of JV)					
5	Registration Certificate of the Bidder (and each partners in case of JV)					
6	Bid Bond					
7	Price Schedule					
8	Bid Forms					
9	Qualification Forms					
10	Complete Certified Audited Report of the Bidder (and each partner in case of JV)	First Year				
		Second Year				
		Last Year				
11	Performance(or user) Certificate/s (Bidder)	1				
		2				
		3				
		4				
12	Manufacturer's Authorization/s	1				
		2				
		3				

		4			
13	Power of Attorney from the Company to Issue the Manufacturers Authorization on Company's behalf				
14	Business License of Manufacturer/s	1			
		2			
		3			
		4			
15	User Certificate/s (Manufacturer)	1			
		2			
		3			
		4			
16	ISO Certificate/s	1			
		2			
		3			
		4			
17	Type Test Report/s (if required as per specification)	1			
		2			
		3			
		4			
18	Technical Data Sheet	1			
		2			
		3			
		4			
19	Other Certification (as per requirements)	1			
		2			
		3			
		4			