

STANDARD BIDDING DOCUMENTS



GUYANA POWER AND LIGHT INC

Procurement of Goods

IFB # GPL- PD - 058 - 2020

Supply of Distribution Transformers

Lot 1: Single Phase Pole Mounted

Lot 2: Three Phase Pad Mounted

December 2020

Closing Date: January 25, 2021 @ 14:00 hrs or 2:00pm (GMT-4)

Bid Opening: January 25, 2021 @ 14:30 hrs or 2:30pm (GMT-4)

CONTENTS

Invitation For Bids (IFB)	.....	3
Instruction To Bidders (ITB)	.....	4
Bid Data Sheet (BDS)	.....	11
General Conditions of Contract (GCC)	.....	13
Special Conditions of Contract (SCC)	.....	17
Schedule of Requirements	.....	20
List of Goods & Price Schedule	.....	21
Lot 1 Technical Specifications – Single Phase Pole Mounted	.....	23
Lot 2 Technical Specifications – Three Phase Pad Mounted	.....	44
Qualification Information	.....	66
Suppliers Bid	.....	68
Contract	.....	69
Bid Security	.....	71
Bid Securing Declaration	.....	72
Manufacturer’s Authorization	.....	73
Performance Security	.....	74
Letter of Acceptance	.....	75
Power of Attorney for Signing the Bid	.....	76
Evaluation and Qualification Criteria	.....	77

Invitation for Bids (IFB)
Cooperative Republic of Guyana
IFB# GPL - PD - 058 - 2020

The Guyana Power and Light Incorporated (GPL) invite sealed bids from eligible bidders for the **Supply of Distribution Transformers.**

The bidding documents can be purchased for a non refundable fee of G\$5,0000 from the Supply Chain Manager – Procurement, Guyana Power and Light Incorporated, 40 Main Street Georgetown Guyana or an electronic copy can be downloaded free of cost from our website www.gplinc.com.

IMPORTANT: Bidders downloading the electronic copies are advised to forward a registration email to ajohnson@gplinc.com, kwilson@gplinc.com and proc_mng_sect@gplinc.com, stating the following: Bid Number, Name of Bidder, Address, Contact No. and Email address.

A bid Security of 2 % of the tendered amount must be submitted along with the bid.

Bids shall be valid for 90 days after the date of bid opening.

Bidders may bid for 1 or both lots.

Bids must be submitted via email to our electronic tender box: gpltenderbox@gplinc.com.

Deadline for submission of bids is 14:00 hrs (2.00 pm) GMT-4 on January 25, 2021.

Bid opening is scheduled for 14:30 hrs (2:30 pm) GMT -4 on January 25, 2021 at GPL's Board Room 91 Duke Street, Kingston, Georgetown, Guyana.

GPL reserves the right to reject any or all bids.

Note: Any bidder/representative who chooses to attend the opening of this bid will be subjected to entry protocols in keeping with the COVID-19 pandemic. Only one (1) representative is allowed per entity and the representative will be subject to body temperature test, hand sanitizing and mandatory use of face mask at all times. Failed body temperature test and/or resistance to comply with the aforementioned will prohibit your participation in the bid opening.

INSTRUCTIONS TO BIDDERS

A. Introduction

1. Description of the Procurement

The Procuring Entity is Guyana Power and Light, Inc who intends to procure the goods identified in the *Bid Data Sheet* and in the Schedule of Requirements.

2. Eligibility and qualifications of Bidders

2.1 In order to be awarded a procurement contract, Bidders should possess the technical and financial capacity needed to perform the contract, should fulfill their tax and social insurance fund liabilities in Guyana, and should not currently be subject to a debarment penalty, and must comply with the specific eligibility and qualification requirements referred to in the *Bid Data Sheet*. Bidders shall provide the information and any supporting documentation required by the Qualification Information Form.

2.2 The bidders should not have a conflict of interests, including involvement in more than one bid in this proceeding, should not be associated nor have been associated in the past, directly or indirectly, with any agency or any of its representative, affiliate, that have been engaged by the Procuring Entity to provide consulting services at the preparation stage of the bidding documents, technical specifications and other documentation that are subject to be used in the procurement of goods which must be purchased in accordance with the Invitation for Bids. In case when the indicated facts are discovered, the Bidder's bid shall be rejected.

B. Bidding Documents

3. Clarification and amendment of bidding Documents

3.1 The Procuring Entity, in not more than three (3) working days, will respond in writing (including by fax or electronic mail) to any request for clarification of the bidding documents to be received (in writing, including by fax or electronic mail) not later than 10 days before the expiry of a deadline for submission of bids. At the same time, the Procuring Entity's response shall without identifying its source of the request, be distributed to all bidders who have received the bidding documents from the Procuring Entity.

3.2 At any time before the deadline for submission of bids, the Procuring Entity may amend the bidding documents by issuing an Addendum and notifying it to the prospective bidders.

C. Preparation of Bid

4. Language of Bid

4.1 The bid prepared by the Bidder, as well as all correspondence and documents related to that bid and exchanged by the Bidder and the Procuring Entity shall be written in the language *specified in the Bid Data Sheet*.

5. Documents Included in Bid

5.1 The bid prepared by the Bidder should contain the Form of Bid, the Price Schedules and the other documents to be submitted in accordance with these Instructions to Bidders.

6. Bid Price

6.1. Subject to the choice of INCOTERMS as indicated in the Bid Data Sheet, the prices given in the Price Schedule shall include all transportation costs to the destination point indicated in the Contract, all taxes, duties, payments collected, in accordance with the laws of Guyana and delivery related and other costs on performing of contractual obligations.

6.2. The prices offered by the Bidders shall remain fixed during the whole period of Contract performance and shall not be modified in any circumstance.

7. Bid and Payment Currency

7.1 The prices shall be indicated in UK Pounds, US Dollars and Euros for Foreign Suppliers and Guyana Dollars for Domestic Suppliers, unless otherwise specified in the *Bid Data Sheet*.

8. Bid Security / Bid Securing Declaration

8.1 Unless otherwise provided in the *Bid Data Sheet*, the Bidder shall furnish, as part of his bid, a Bid Security, in the form, currency and amount specified in the *Bid Data Sheet* with a validity period for not less than 2 weeks upon the expiry of the bid validity period and in line with the form provided, or, if so indicated in the BDS, a Bid Securing Declaration in accordance with the form provided. **A Bid Securing Declaration is not required.**

8.2 The bid security may be forfeited, or the Bid Securing Declaration executed, if the Bidder:

- (a) withdraws his/her bid after it is opened during the period of validity specified in the bid; or,
- (b) having been awarded the contract fails:
 - (1) to sign the contract on the terms and conditions provided in his bid; or
 - (2) to furnish the Performance Security, if required to do so.

9. Period of Validity of Bid

9.1 Bids shall remain in force during the period specified in *the Bid Data Sheet* after the date of bid opening.

10. Format, Signing and submission of Bid

10.1 The Bidder shall prepare an original and one (1) copy of the bid, which shall be typed or written in indelible ink, and shall be signed by the Bidder, or by the person (persons) duly authorized to sign the bid in accordance with the power of attorney to be submitted with the bid. All pages of the bid where new information, modifications or erasures entered shall be initialed (signed) by the person or persons signing the bid. In the event of discrepancies between them, the original shall prevail.

- 10.2 The bid shall contain no interlineations, erasures or overwriting, except the cases when the Bidder needs to correct errors which must be initialed by the person or persons signing the bid.
- 10.3 The Bidder shall seal the original and each copy of the bid in different envelopes, marking them “**ORIGINAL**” and “**COPY**”, as appropriate. The envelopes shall then be sealed in an outer envelope.
- 10.4 The inner and outer envelopes shall:
- (a) be addressed to the Procuring Entity at the address specified in the Invitation for Bids.
 - (b) bear the Invitation for Bids (IFB) title and number and the words: “**DO NOT OPEN BEFORE,**” the date specified in the Bid Data Sheet.
 - (c) indicate the name and address of the Bidder. **Alternative bids are not permitted.**

11. Deadline for Submission of Bids

- 11.1 Bids must be received by the Procuring Entity at the address and within the periods specified in *the Bid Data Sheet*. All bids received by the Procuring Entity upon the expiry of a period established for submission of bids as indicated by the Procuring Entity shall be rejected and returned to the Bidder unopened.

12. Modification and Withdrawal of Bids

- 12.1 The Bidder may modify or withdraw his bid after the bid’s submission, provided that the Procuring Entity will receive a written notice of modification, including substitution or withdrawal of bid until the expiry of established period for submission of bids.
- 12.2 The Bidder’s modification or withdrawal notice shall be prepared, sealed, marked, and sent in accordance with the provisions of ITB Clause 10. In that case the outer and inner envelopes will be additionally marked as “**MODIFICATION**” or “**WITHDRAWAL**”, as appropriate. A withdrawal notice may also be sent as a telegram by telex or fax with a subsequent written confirmation by post-office not later than the deadline for submission of bids.

E. Opening and Evaluation of Bids

13. Opening of Bids

- 13.1 The Procuring Entity will open all bids in the presence of bidders’ representatives who wish to attend, at the time, on the date, and at the address specified in the *Bid Data Sheet*. The bidders’ representatives who are present shall sign a register evidencing their attendance.
- 13.2 The bidders’ names, bid prices, including alternatives (if alternatives permitted), information on the presence or absence of required bid security, or bid securing declaration, information on the presence (absence) of tax debts and debts of social insurance payments will be announced at the opening. No bid may be rejected at the opening, exclusive of late bids to be returned to the Bidder unopened.

13.3 Bids (and modifications sent pursuant to ITB Clause 12.2 that are not opened and read out during the bid opening shall not be accepted for further evaluation, regardless of circumstances.

14. Evaluation of Bids

14.1 During the evaluation of bids, the Procuring Entity may, at his discretion, request the Bidder to provide clarification of his bid. The request for clarification and the response thereto shall be made in writing, and in that case no change in price or substance of the bid shall be sought, offered, or permitted.

14.2 The Procuring Entity shall determine the responsiveness of each bid to requirements of the bidding documents. For the purposes of this Clause a substantially responsive bid is one which satisfies all the indicated provisions without a material deviation or reservation.

14.3 The Procuring Entity may waive any minor nonconformity, or small mistake or inaccuracy in the bid which are not a material deviation from the requirements of the bidding documents, and such non-conformity or inaccuracy will not affect the bid evaluation. To the extent feasible and appropriate, for the purposes of comparing bids, acceptable deviations shall be quantified in monetary terms, and reflected in adjustments to the bid price (for the purposes only of comparison of bids).

14.4 Arithmetical errors shall be rectified in the following manner. 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. If there is a discrepancy between words and figures, the amount in words shall be preferable. If the Bidder disagrees with such correction of errors, his bid shall be rejected.

14.5 The Procuring Entity shall evaluate and compare only the bids that are determined to be responsive to the bidding documents.

14.6 The methodology to adjust the price to reflect the price of the missing or non-conforming item or component is the average price of the item of all responsive bids.

15. Confidentiality and Contacting the Procuring Entity

15.1 No Bidder shall contact the Procuring Entity on any matter related to his bid from the date of bid opening until the date of contract award, except for requests related to clarification of the bid. Information concerning the evaluation of bids is confidential.

15.2 Any effort by the Bidder to influence the Procuring Entity's decision on bid evaluation and comparison, or contract award may result in the rejection of that Bidder's bid.

F. Award of Contract

16. Award Criteria

16.1 Subject to ITB Clause 18, the Procuring Entity will award the Contract to the Bidder whose bid is determined to be substantially responsive to the requirements of the bidding documents, and who offered **the Lowest Evaluated Bid**, provided that the Bidder has been

determined:

- (a) to be eligible pursuant to Clause 2;
- (b) to comply with qualification requirements, in accordance with Clause 2, and any technical requirements and technical evaluation criteria disclosed in the bidding documents.

17. Procuring Entity's Right to Vary Quantities at Time of Entering into a Contract

17.1 The Procuring Entity reserves the right, when entering into a contract, to increase or decrease the quantity of goods and related services specified in the Schedule of Requirements, by the percentage indicated in the *Bid Data Sheet*, no change in the unit price or other conditions shall be made (an increase of quantity not exceeding 10 percent variation).

18. Procuring Entity's Right to Accept Any Bid and to reject All Bids

18.1 The Procuring Entity reserves the right to accept or reject any bid or all bids, and to cancel the bidding process at any time prior to award of contract, without thereby incurring any liability to Bidders and without being required to inform the Bidder or Bidders of reasons of such actions.

19. Notification of Award

19.1. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period.

19.2. The notice of acceptance shall be equal to entering into a Contract, provided that the Bidder furnishes the performance security and the signed Contract.

19.3. At the same time that the Procuring Entity notifies the successful Bidder in accordance with sub-clause (1), the Procuring Entity will notify all other Bidders of the name of successful Bidder, and his bid price.

19.4 The evaluation report and comparison of bids will not be sent to bidders.

20. Signing of Contract and performance security

20.1 At the same time with notification of award, the Procuring Entity will send the successful Bidder the Form of Contract contained in the bidding documents. The successful Bidder shall sign and date the Contract, and return it to the Procuring Entity during seven (7) days of receipt of notice of award.

20.2 Together with the signed Contract, the Bidder shall, if required to do so by the *Bid Data Sheet*, furnish the Procuring Entity with a Performance Security in the amount and form specified in the *Bid Data Sheet*.

20.3 If the successful Bidder fails to furnish the performance security, if required to do so, or during 14 (fourteen) days fails to return the Contract signed by him, then it shall be a sufficient ground to refuse the award of Contract, and to forfeit the bid security, or execute

the bid-securing declaration. In that case the Procuring Entity shall award the Contract to the next lowest evaluated Bidder, subject to the right of the Procuring Entity to reject all bids.

21. Settlement of disputes

21.1 To settle the disputes which may arise during the execution of Contract, the parties shall follow the procedure referred to in the *Bid Data Sheet*.

22. Corrupt and Fraudulent Practices

22.1 The Procuring Entity requires that Bidders observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Procuring Entity:

(a) will reject the bid if it establishes that the Bidder recommended for award has engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract in question;

(b) will declare the Supplier, for indefinite or specified period of time, to be ineligible to participate in state-financed biddings, in accordance with applicable debarment procedures.

23. Compliances

23.1 Bidder registered in Guyana must submit valid certificates of compliances from Guyana Revenue Authority (GRA), National Insurance Scheme (NIS), and (VAT registration is required only if item being supplied is Vatable).

24. Defects Liability:

24.1 The “Defects Liability Period” for the goods and related services is twelve (12) months from the date of taking over possession or such other period as may be specified in the Bid Data Sheet. During this period, the supplier will be responsible for replacing any defective item free of cost to the Procuring Entity.

25. Inspection and Testing

25.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all testing and/or inspections of the Goods and Related Services as are specified in the Technical Specification. 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.

- 25.2 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.
- 25.3 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.4 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.
- 26.5 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, shall release the Supplier from any warranties or other obligations under the Contract.

Bid Data Sheet (BDS)

The following specific data to clauses of the provisions of Instructions to Bidders which supplement, or amend the provisions of the Instructions to Bidders (ITB) whenever there is a conflict, the provisions herein shall prevail over those in ITB

Item No.	
ITB 1.1	Guyana Power and Light ,Inc of 40 Main Street Georgetown Guyana Telephone#592-226-9598 Email: gpltenderbox@gplinc.com <hr/> The subject of the procurement is: Supply of Distribution Transformers.
ITB 2.1	To qualify for award of the Contract, the bidders shall provide satisfactory evidence to the Purchaser of their capability and adequacy of resources to carry out the Contract effectively: <ul style="list-style-type: none"> (a) Copies of original documents defining the constitution or legal status, place of registration and principal place of business. (b) Experience as a supplier in carrying out of 2 (two) or more supplies of Similar items within the last 3 (three) years. (c) Average Turnover for the last three years should be a least US\$2,000,000.00. (d) Evidence of access to lines of credit and availability of other financial resources. (e) Evidence compliance with NIS, GRA, Vat registration if applicable (Only applies to local Supplier). (f) To be covered by an express warranty period of eighteen (18) months. (g) Manufacturers authorization form.
ITB 4.1	Language of Bid shall be English
ITB 5.1	Other documents to be submitted includes; GRA and NIS Compliances, (TIN Certificate and Vat Registration if the item/s being procured attracts Vat). Only applies to suppliers whose registered office is within Guyana
ITB 6.1	The price quoted by bidders shall be on the basis of CIF for goods delivered from abroad and for goods delivered from within Guyana Incoterms 2010 shall apply. Suppliers should quote with the understanding they can be awarded One or all Line items.
ITB 6.1(a)	For Goods and Related Services with origin in the Purchaser's country, the currency of the bid shall be Guyana Dollars (GY\$) (Supplier's with registered business in Guyana must submit their bid in Guyana Dollars (GY\$).
ITB 7.1	For Supplier's outside of the Purchaser country the currency of the bid can be US\$, GBP or a freely convertible currency. The currency that will be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is the US\$.

	<p>The source of exchange rate shall be the Bank of Guyana, and the selling rate shall be used.</p> <p>The date for exchange rate shall be ten days before the opening of tenders.</p>
ITB 8.1	A bid security of 2% of the tendered sum is required. A signed Bid Securing Declaration is not required.
ITB 9.1	The period of validity of bid is 90 Days.
ITB 11.1	Deadline for submission of bids: 14:00 hours (GMT-4) on Monday, January 25th, 2021.
ITB 13.1	Time and place for opening of bid: 14: 30 hours (GMT-4) on Monday, January 25th 2021, The Board Room, Guyana Power and Light, Inc, 91 Duke Street, Kingston, Georgetown, Guyana, South America.
ITB 17.1	When entering into a contract the Procuring Entity reserves the right to Increase or decrease quantities of goods by 10%.
ITB 20.2	The performance security shall be 10% of the Contract Price and in the form of a Bank Guarantee or Managers Cheque.
ITB 24.1	Disputes that may arise in the performance of the contract shall be settled in accordance with the Laws of Guyana.
ITB 25.1	In the event of the Supplier not being the original manufacturer of the equipment, the Supplier shall provide all relevant technical data to confirm that it meets industry standards

General Conditions of Contract (GCC)

The General Conditions are the Standard General Conditions of Contract. No alteration shall be made on the pages of these Conditions. The Procuring Entity, when amending or supplementing the General Conditions of Contract should do so only in the Special Conditions of Contract. Any amendment or addenda of the General Conditions of Contract shall conform to the legislation of Guyana.

1. Definitions and application

1.1 This Contract lists below the terms that have the following interpretation:

- (a) “**Contract**” means the agreement entered into between the Procuring Entity and the Supplier, as recorded in the Form of Contract signed by the parties, including all attachments and appendices thereto and all the documents referenced therein;
- (b) “**Contract Price**” means the price payable to the Supplier under the Contract for complete and proper performance of his contractual obligations;
- (c) “**Goods**” means the item(s) referred to in the SCC;
- (d) «**GCC**» - means the General Conditions of Contract contained in this Section;
- (e) “**SCC**» - means the Special Conditions of Contract;
- (f) “**Procuring Entity**” – means the Procuring entity carrying out the procurement of Goods, specified in the SCC;
- (g) “**Supplier**” – means an individual or legal entity, or a combination of any above mentioned forms which operate under the existing agreement as a joint venture and supply the Goods and Services under the Contract;
- (h) “**Day**” – means calendar day.

1.2 The General Conditions of Contract shall apply in the procurement of goods; the specific amendment, addition and alteration shall be indicated in the Special Conditions of Contract.

1.3 Warrant requirements are as may be specified in the special conditions of contract.

2. Contract Documents

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

3. Performance Security

3.1 If required by the SCC, during fourteen (14) days of receipt of notification of award, the successful Bidder shall furnish the Procuring Entity with the performance security the

amount and form of which are indicated in the SCC.

4. Packing

- 4.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to final destination specified in the Contract, and as may be required by the Special Conditions of Contract.

5. Delivery, Transportation, Mobilization Advance

- 5.1 The Supplier must deliver the Goods within the periods and to the Destination point indicated in the Schedule of Requirements and shall provide the documentation indicated in the SCC. Subject to the SCC, transportation of the Goods to the place specified by the Procuring Entity shall be carried out and paid by the Supplier, and related costs shall be included in the Contract Price.

6. Payment

- 6.1 The payment to the Supplier for the Goods delivered shall be made in accordance with the Contract in the form and within the periods specified in the SCC.

7. Prices

- 7.1 Prices established by the Supplier in the Contract for goods delivered shall not vary from the prices quoted by the Supplier in his bid.

8. Assignment

- 8.1 The Supplier shall not assign, in whole or in part, his obligations under the Contract to the third party for the execution without the Procuring Entity's prior written consent.

9. Delays in the Supplier's Performance and liquidated damages

- 9.1 Delivery of the Goods shall be carried out by the Supplier, in accordance with the schedule indicated by the Procuring Entity in the *Delivery Schedule*.
- 9.2 Except for provided under GCC Clause 13, the delay in the Supplier's performance of his delivery obligations shall render the Supplier liable for payment of liquidated damages in the amount specified in the SCC, unless an extension of time is agreed upon by the parties without application of liquidated damages. Once the maximum deduction specified in the SCC is reached, the Procuring Entity may consider termination of the Contract, in accordance with Clause 10 of the General Conditions of Contract.

10. Termination

- 10.1 The Procuring Entity, without detriment to any other sanctions of infringement of the provisions of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) if the Supplier fails to deliver the portion or all of the Goods within the periods provided for in the Contract, or within an extension period of that Contract, or to perform any of his obligations under the Contract;
 - (b) if bankruptcy procedures are applied to the Supplier, or it is declared insolvent.
 - (c) if the Supplier, in the Procuring Entity's opinion, has engaged in corrupt, fraudulent, collusive or coercive practices when entering into or executing the Contract;
 - (d) if the Procuring Entity deems that continued implementation of the contract would no longer be expedient from the standpoint of the public interest
- 10.2 The notice of termination shall specify the reason of termination, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 10.3 Notwithstanding clauses 9 and 10.1, the Supplier shall not forfeit his performance security, and shall not be liable for payment of liquidated damages, or termination for default, if delay in executing the Contract or failure to perform obligations under the Contract is the result of an event of force majeure. When force majeure arises, the Supplier shall promptly notify the Procuring Entity in writing of such circumstance and its causes.
- 10.4 When the contract is terminated in accordance with clause 10.1(d), the Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring Entity at the Contract terms and prices. For the remaining Goods, the Procuring Entity may elect:
- (a) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (b) 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.

11. Settlement of Disputes

- 11.1 If any dispute or disagreement arises between the Procuring Entity and the Supplier for the Contract or in connection with it, the parties shall make every effort to resolve the dispute or disagreement amicably by mutual consultation.
- 11.2 If during twenty one (21) days, the parties failed to resolve their dispute or disagreement by mutual consultation; either the Procuring Entity or the Supplier may send the other party the notice of intent to commence arbitration, if an arbitration is incorporated in the Contract in the Special Conditions of Contract or otherwise agreed by the parties, or in the Court of General Jurisdiction if no arbitration is envisaged, and no arbitration or litigation in respect of that matter may be commenced unless such notice is given.

Any dispute or disagreement in respect of which the notice of intent is sent to commence trial shall be heard by the [Court of General Jurisdiction].

- 11.3 Notwithstanding any reference to dispute settlement herein, the parties shall continue to

perform their obligations under the Contract, unless they agree otherwise.

12. Applicable Law

12.1 The Contract shall be interpreted in accordance with the laws of Guyana.

13. Formal Communication between the Procuring Entity and the Supplier

13.1 Any notice given by one party to the other pursuant to the Contract shall be in force if it is done in writing and sent at the address of other party in the SCC.

13.2 A notice shall be effective when delivered or on the specified date, whichever is later.

14. Taxes and Duties

14.1 The Supplier shall be fully responsible for all taxes, duties, license taxes, etc., levied in accordance with the legislation of Guyana, and subject to the application of INCOTERMS in accordance with the SCC.

15. Retention

15.1 No retention shall be applied on consumables, but warranties, guarantees and expiry dates to apply.

Special Conditions of Contract (SCC)

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

GCC Clause No.	Special Conditions of Contract
<p>1</p> <p>1.1 (f)</p> <p>1.1 (g)</p> <p>1.1(c)</p>	<p>Definitions</p> <p>The Procuring Entity is Guyana Power and light of 40 Main Street Georgetown Guyana South America, Tele #592-226-9598, Fax#592 227-2180 Email: gpltenderbox@gplinc.com.</p> <p>The Supplier is: (indicate full name, legal address, phone, fax and e-mail of Supplier)</p> <p>List of Equipment.</p>
<p>4.1</p>	<p>Packing</p> <p>The packing, marking and documentation within and outside the packages shall be:</p> <p><u>Packing</u></p> <p>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. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.</p> <p><u>Marking</u></p> <p>Marking shall be in accordance with international practice and shall be agreed with the Purchaser. The Goods shall be addressed for delivery to Guyana Power & Light, 40 Main Street, Georgetown, Guyana, South America.</p>
<p>5.1</p>	<p>Delivery, Transportation</p> <p><u>Documentation</u></p> <p>(a) For Imported Goods.</p> <p>Within 24 hours of shipment, the Supplier shall notify the Purchaser and the Insurance Company by email or telex or fax, the full details of the shipment including Contract number, description of Goods, quantity, the vessel, the bill of lading number and date, port of loading, date of shipment, port of discharge, etc.</p> <p>The Supplier shall mail the following Original documents to the Purchaser with a copy to the insurance Company:</p> <p>(1) Supplier's invoice indicating a description, quantity, unit price of the</p>

	<p>Goods and sum total;</p> <p>(2) Shipping order, railway receipt or truck receipt;</p> <p>(3) Warranty certificate of Manufacturer or Supplier;</p> <p>(4) Inspection certificate issued by the authorized inspection service, and the supplier's factory inspection report (if any);</p> <p>(5) Certificate of origin;</p> <p>(6) Certificate of conformity;</p> <p>(7) Full set of ocean on-board bills of lading, of air waybills or courier/parcel post Certificates consigned to the Purchaser;</p> <p>(8) Packing list identifying contents of each package, and clearly showing Shipping marks and package numbers, kind of package, contents, dimensions and Gross weights of each package in pounds or kilos.</p> <p>The above documents shall be received by the Purchaser at least two (2) weeks before arrival of Goods at the port or place of arrival and, if not received, the Supplier will be responsible for any consequent expenses.</p>
<p>6.1</p>	<p>Payment</p> <p>The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:</p> <p>Payment for Goods supplied:</p> <p>Payment will be as follows:</p> <p>Advance Payment:</p> <p>Thirty (30) percent of the Contract Price shall be paid within thirty (30) days of signing of the Contract, and upon submission of claim and a bank guarantee for equivalent amount valid until the Goods are delivered and in the form provided in the bidding documents or another form acceptable to the Purchaser.</p> <p>On Delivery:</p> <p>Sixty (60) percent of the Contract Price of the Goods shipped shall be paid upon submission of claim and evidence that items are ready for shipment.</p> <p>On Acceptance:</p> <p>Ten (10) percent of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods supported by the acceptance certificate issued by the Purchaser.</p>

<p>9.2</p>	<p>Liquidated Damages The liquidated damage shall apply and they shall be equivalent to one percent (1%) of the delivered price of the delayed Goods or unperformed services per each day of delay or part thereof until actual delivery.</p> <p>The maximum amount of liquidated damages shall be: 10 percent (10 %) of the delayed Goods or services contract price.</p>
<p>11.2</p>	<p>Settlement of Disputes The rules of procedure for arbitration proceedings pursuant to GCC Sub-Clause 11.2 shall be as follows:</p> <p><i>(a) Contract with foreign Supplier:</i></p> <p>GCC 11.2 (a) Any dispute, controversy or claim arising out of or relating to this Contract, or breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force.</p> <p><i>(b) Contracts with Supplier national of the Purchaser's country:</i></p> <p>In the case of a dispute between the Purchaser and a Supplier who is a national of the Purchaser's country, the dispute shall be referred to adjudication or arbitration in accordance with the laws of Guyana</p> <p>(c) The Courts of Georgetown Guyana, shall have exclusive jurisdiction in all the matters arising in the contract including execution of Arbitration Awards</p>
<p>12.1</p>	<p>The governing law shall be the law of Guyana</p>

Schedule of Requirements

The delivery schedule expressed as days specifies hereafter the date of delivery to destination point. The delivery period for the transformers is Ninety (90) days after the award of contract. In column "the delivery schedule", the Procuring Entity shall indicate the date from which schedule starts. It should be either the date of award, or the date of signing of Contract, or the date of opening of letter of credit, or the date of confirming the letter of credit (subject to circumstances). The Form of Bid shall specify only reference to that schedule.

Item No.	Brief Description of Goods	Quantity	Place of Delivery	Delivery schedule _____ days as of ____ ____ 202__.

List of Goods & Price Schedule

Supply of Distribution Transformers – GPL-PD-058-2020

Lot 1- Single Phase Pole Mounted

Item	Description	Quantity	Unit Cost	Total Cost	Total Price including CIF delivered to Georgetown, Guyana	VAT (only applies to local bidders)	Country of Origin
1	Transformer,Pole Mount, Single Phase, 13.8KV, 120/240V, 60 HZ, 10 KVA	25					
2	Transformer,Pole Mount, Single Phase, 13.8KV, 120/240V, 60 HZ, 15 KVA	285					
3	Transformer,Pole Mount, Single Phase, 13.8KV, 120/240V, 60 HZ, 25 KVA	812					
4	Transformer,Pole Mount, Single Phase, 13.8KV, 120/240V, 60 HZ, 50 KVA	818					
5	Transformer,Pole Mount, Single Phase, 13.8KV, 120/240V, 60 HZ, 75 KVA	769					
6	Transformer,Pole Mount, Single Phase, 13.8KV, 120/240V, 60 HZ, 100 KVA	430					
7	Transformer,Pole Mount, Single Phase, 13.8KV, 120/240V, 60 HZ, 167 KVA	35					

Lot 2 - Three Phase Pad Mounted

Item	Description	Quantity	Unit Cost	Total Cost	Total Price including CIF delivered to Georgetown, Guyana	VAT (only applies to local bidders)	Country of Origin
1	Transformer, Pad Mount, Three Phase 13.8kV, 240/415V, 60Hz, 112.5 KVA	2					
2	Transformer, Pad Mount, Three Phase 13.8kV, 220/127V, 60Hz, 200 KVA	5					
3	Transformer, Pad Mount, Three Phase 13.8kV, 220/127V, 60Hz, 300 KVA	20					
4	Transformer, Pad Mount, Three Phase 13.8kV, 240/415V, 60Hz, 300 KVA	5					
5	Transformer, Pad Mount, Three Phase 13.8kV, 440/254V, 60Hz, 300 KVA	25					
6	Transformer, Pad Mount, Three Phase 13.8kV, 220/127V, 60Hz, 500 KVA	25					
7	Transformer, Pad Mount, Three Phase 13.8kV, 240/415V, 60Hz, 500 KVA	5					
8	Transformer, Pad Mount, Three Phase 13.8kV, 440/254V, 60Hz, 500 KVA	15					
9	Transformer, Pad Mount, Three Phase 13.8kV, 240/415V, 60Hz, 750 KVA	3					
10	Transformer, Pad Mount, Three Phase 13.8kV, 220/127V, 60Hz, 750 KVA	3					
11	Transformer, Pad Mount, Three Phase 13.8kV, 440/254V, 60Hz, 750 KVA	3					
12	Transformer, Pad Mount, Three Phase 13.8kV, 440/254, 60Hz, 1000 KVA	2					
13	Transformer, Pad Mount, Three Phase 13.8kV, 480/277, 60Hz, 500 KVA	2					
16	Transformer, Pad Mount, Three phase 13.8kV, 480/277, 60Hz, 750 KVA	2					
17	Transformer, Pole Mount, Three Phase, 13.8kV, 460/266, 60Hz, 30 KVA	3					

Lot 1 Technical Specifications – Single Phase Pole Mounted

1. SCOPE

This specification covers the design, engineering, manufacture, testing, supply and performance requirements of pole mounted distribution transformers for use in the primary distribution networks of Guyana Power & Light, Inc.

2. APPLICABLE STANDARDS

Except where modified by this specification, the transformers shall be designed, manufactured and tested in accordance with the latest editions of the following standards (Table 1). The Proponent may propose alternative standards, but shall demonstrated that they give a degree of quality and performance equivalent to or better than the referenced standards herein.

Acceptability of an alternative standard is at the discretion of the Purchaser.

The Proponent shall furnish a copy of the alternative standard proposed along with the bid. If the alternative standard is not written in the English Language, a certified English Language translated version of the original standard shall be submitted with the bid.

Table 1: Applicable Standards

Item No.	ANSI/IEC Standards	Title
1	ANSI C57.12.20	Standard For Overhead Type Distribution Transformers, 500 kVA and Smaller: High Voltage, 34500 Volts and Below; Low Voltage, 7970/13800Y Volts and Below
2	IEEE C57.12.31	Pole Mounted Equipment—Enclosure Integrity
3	IEEE C57.12.00	General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
4	ANSI/IEEE C57.92	Guide for Loading Mineral-oil-immersed Power Transformers
5	IEEE C57.12.90	Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers Corrigendum 1: Editorial and Technical Corrections
6	IEEE C57.12.70	Standard Terminal Markings and Connections for Distribution and Power Transformers
7	IEEE Std 519-2014	Recommended Practice and Requirements for Harmonic Control in Electric Power Systems
8	NEMA TR1	Transformers, Regulators, and Reactors
9	IEC 60076-10	Power transformers - Part 10: Determination of sound levels

10	IEC 60296	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear
----	-----------	---

In case of conflict, the order of precedence shall be:

- This Technical Specification for Single Phase Distribution Transformers ;
- Other Applicable and Recognised Standards for pole mounted distribution transformers.

3. INSTALLATION/SERVICE CONDITIONS

The installation conditions of the transformers shall be as follows:

1. Maximum altitude above mean sea level less than 1,000 m;
2. Maximum ambient air temperature 40⁰C;
3. Maximum daily average ambient air temperature 30⁰C;
4. Minimum ambient temperature 15⁰C; and
5. Maximum relative humidity 100%.

All outdoor materials, components and equipment shall be designed and protected for use in exposed, heavily polluted and salty, corrosive and humid tropical coastal atmospheric conditions.

4. ELECTRICAL SYSTEM CONDITIONS

The transformer shall be suitable to be installed in GPL’s primary distribution system, which has the following characteristics (Table 2).

Table 2: Characteristics of GPL’s Primary Distribution System

Nominal System Voltage, Frequency and Phase	High Voltage (HV) Side	13.8 kV, 60 Hz, 1φ-2-wire
	Low Voltage (LV) Side	120/240 V, 60 Hz, 1φ-3 wire
Voltage Class	15 kV	
Short circuit withstand Capability	As per IEEE C57.12.00, section 7.1.3	
Insulation Level		
Basic Insulation Level (BIL)	As per IEEE C57.12.00, Table 4	
Power Frequency withstand level – Dry 1 Minute	As per ANSI C57.12.00, Table 10	
Power Frequency withstand level – Wet 1 Seconds		

System Grounding		
Neutral Grounding	High Side	Primary distribution feeders from Distribution Substations are three phase delta and are grounded by a zig-zag transformer. Primary distribution feeders emanating from generator buses are wye and are grounded by the power plant neutral grounding system.
	Low Side	Solidly grounded.

NB: The Low Side (Low Voltage - LV) can also be 240V, 3 ϕ using three (3) transformers in a three-phase delta bank configuration or 208 V, 3 ϕ in a wye configuration. The aforementioned 3 ϕ transformer banks can also be open delta or open wye.

5. TYPE OF TRANSFORMER

The transformers shall be double wound, sealed type, oil immersed with natural oil and air-cooling (ONAN), single phase (1 ϕ) with ratings as specified herein.

The polarity of all transformers shall be subtractive and shall be clearly indicated on the tank of the transformers.

The transformers are required to be equipped with two (2) HV and four (4) LV bushing terminations and shall be suitable for pole mounting.

The four (4) LV bushings shall be provided with the transformer, and both legs/terminals of each secondary winding shall be brought out to the LV bushings, such that, the secondary windings can be paralleled externally to the tank, as required by the Purchaser. This will permit the transformer to be loaded at 120 V and at the full rating of each winding and will allow connection in for 120/208 V three-phase configuration.

The design of the tank, fittings, bushings, etc., shall be such that it will not be necessary to keep the transformer energised to prevent deterioration as the transformers may be held in reserve and outdoors conditions for many years.

Transformers up to and including the rating of 167 kVA shall be equipped with internally mounted low-voltage circuit breaker and high voltage protection fuse links.

All transformers shall be equipped with a pair of lightning arrester, with each arrester electrically connected to each HV bushings and mechanically secured onto the tank.

6. RATINGS

This specification covers the following single-phase transformers:

5 kVA, 10 kVA, 15 kVA, 25 kVA, 37.5 kVA, 50 kVA, 75 kVA, 100 kVA, and 167 kVA

All transformers shall be rated in accordance with ANSI C57.12.20, section 3.

All transformers, inclusive of tap changer and other current carrying components, shall accept emergency overloading as per ANSI/IEEE C57.92, section 4.

7. TAPS AND VOLTAGE REGULATION

Transformers shall have the following voltage transformation ratio and tapping range:

- the nominal primary voltage for single phase transformers shall be 13.8 kV and the secondary voltage shall be 120 V per winding, where the secondary shall have two (2) 120 V windings with subtractive polarity;
- tolerance on the voltage ratio shall be in accordance with IEEE C57.12.00, section 9.1;
- taps shall be provided in the high voltage winding (13.8 kV side), with steps of two (2) 2.5% taps above and below the primary voltage rating (13.8 kV); and
- The bidder shall state in the technical schedule, the percentage regulation at full load, power factor 1.0 and at full load power factor 0.8 lagging. The primary and secondary voltage variation shall be based on a winding temperature of 85°C.

8. PARALLELLING AND THREE PHASE BANKS

Transformers of different ratings shall be suitable for parallel operation with each other.

Transformers of the same and different ratings shall be suitable for operating as a three-phase bank connected in Delta-Y, Delta-Delta, Open Y and Open Delta.

Both legs of the secondary windings shall be brought out to LV bushings so that the secondary windings can be paralleled externally to the tank when required to give 120 V at the full rating of the transformer.

9. OVERCURRENT PROTECTION

Transformers up to and including the rating of 167 kVA shall be equipped with an internally mounted low-voltage circuit breaker and high voltage protection fuse links.

The operation of the LV breaker and HV protection fuse links shall be coordinated such that any short circuit and/or overloading on the secondary side of the transformer will first trip the LV breaker before the HV protective links operate, taking the load off the transformer before the core and/or coil is/are thermally and/or mechanically damaged.

The operation of the protection devices mentioned above shall be indicated externally on the tank, and the circuit breaker shall be made to be externally controlled, by a suitable switch mounted on the tank, using a linesman's hot stick.

The characteristics of the protection devices shall allow for full usage of the transformer's continuous rating and short-time overload capabilities for emergency loading condition (150% of nominal kVA rating).

The Proponent shall submit the characteristic curves of the internal protection devices with the bid. The characteristic curves shall also include the transformers' through-fault withstand capability curves or transformer damage curves.

10. IMPEDANCE

The guaranteed minimum value of impedance measured at 85⁰C, on the nominal tap and at the rated voltage of the transformer shall be:

- Between 2.1% and 1.9% for 5 kVA to 10 kVA; and
- 1.2 % for transformers between 15 kVA to 75 kVA; and
- 1.3 % for transformers from 100 kVA to 167 kVA.

Tolerance for transformers' impedances shall be in accordance with IEEE C57.12.00, section 9.2, for impedance less than 2.5%.

11. SHORT CIRCUIT RATINGS

Bidders must submit all short circuit test results for compliance with IEEE C57.12.00, section 7.1.3.

12. LOSSES

The acceptable range for iron (or core) and copper losses of the transformers at 65 °C are as follows:

Acceptable Transformer Losses						
Rating (kVA)	No Load Losses (W)	Load Losses (W)	Total Losses (W)	% of No Load Lost to Rated kVA	% of Load Lost to Rated kVA	% of Total Lost to Rated kVA
5	19	75	94	0.38%	1.50%	1.88%
10	36	120	156	0.36%	1.20%	1.56%
15	50	195	245	0.33%	1.30%	1.63%
25	80	290	370	0.32%	1.16%	1.48%
37.5	105	360	465	0.28%	0.96%	1.24%
50	135	500	635	0.27%	1.00%	1.27%
75	190	650	840	0.25%	0.87%	1.12%
100	210	850	1060	0.21%	0.85%	1.06%
167	350	1410	1760	0.21%	0.84%	1.05%

Bidders shall guarantee that each loss component, as mentioned above, should be not exceed by 10% and 15 % for total transformer losses at full load.

The losses proposed by the Bidders shall be measured during routine tests. If the results from the routine tests indicate that either the copper or iron loss is more significant than the proponents' guaranteed values, the Purchaser shall have the right to reject the transformer(s).

Transformer losses will be capitalised and added to the Bid Price for bid evaluation as indicated below:

a) **No-load Losses = US\$ 27.99 /kW**

b) **Load Losses = US\$ 9.19 /kW**

13. FLUX DENSITY

The flux density at any point of the magnetic circuit, core and winding, when the transformer is connected on the centre tap and operating at normal voltage and frequency, shall be stated in the bid and shall not exceed 1.7 Tesla. The transformer must be capable of operating at 10% overvoltage at 97% of rated frequency without resulting in magnetic saturation of the transformer's core or the flux density exceeding 1.9 Tesla.

14. NOISE LEVEL

The acceptable audible sound levels for all transformers shall comply with NEMA TR1, table 0-3.

Bidders shall confirm procedure for noise level measurement according to IEC 60076-10 or IEEE C57.12.90 and submit audible sound levels test results with the bid document.

15. RADIO INFLUENCE VOLTAGE

Radio influence voltage of all transformers, contained herein, shall comply with NEMA TRI, section 0.03.1.

16. TAP CHANGING CHARACTERISTICS

Tap positions shall be numbered as shown in Table 6 and in accordance with ANSI C57.12.20, section 6.2.1 and be made to operate externally to the tank.

Table 3: Transformer tap positions

Tap 1	+5%
Tap 2	+ 2.5%
Tap 3	0% (Principal Tap)
Tap 4	-2.5%
Tap 5	- 5.0 %

The operating handle shall have provision for padlocking and shall give a visual indication of the tap position without unlocking.

Each tap-changer position and the tap voltage or percentage associated with voltage shall be identifiable by reference to nameplate information. All positions of the tap changer shall be operative positions.

Tap changer handles shall be fitted with covers having gaskets, so that sealing of the transformer under normal conditions is independent of the switch shaft gland.

17. CORE AND WINDINGS

The core and windings shall be vacuum processed to ensure maximum penetration of insulating fluid into the coil insulation system. While under vacuum, the windings will be energized to heat the coils and drive out moisture, and the transformer will be filled with preheated filtered degassed insulating fluid.

The core and winding shall be capable of withstanding mechanical shocks during transport, installation and servicing.

17.1 CORE

The core shall be manufactured from burr-free, grain-oriented silicon steel laminations and shall be precisely stacked to eliminate gaps in the corner joints.

Provision to the design and construction of the transformer shall be made to prevent movement of the core and

windings, relative to the tank, during transport, installation and short-circuits.

The design shall avoid the presence of pockets, which can prevent complete emptying of the oil in the tank through its drain plug.

17.2 WINDINGS

The winding conductor shall be of electrolytic copper or aluminium, to give the optimum economic and technical results of the transformers.

The windings shall be insulated with B-stage, epoxy coated, diamond pattern, insulating paper, which shall be thermally cured under pressure to ensure proper bonding of conductor and paper, and shall be free from any other insulating compounds that are liable to soften, ooze out, shrink or collapse, and non-catalytic and chemically inert in the transformer oil during normal servicing. The windings shall be uniformly insulated, and the LV neutral points shall be insulated for full line-to-line voltage.

The stacks of windings shall receive adequate shrinkage treatment, and the windings and connections are to be braced to withstand mechanical shocks during transport, switching, short-circuit or other transient conditions.

18. BUSHINGS AND TERMINATIONS

18.1 Bushings

Bushings shall be of the outdoor type and easily replaceable. Porcelain bushings are required. The bushings shall be sufficiently robust (mechanically) to withstand normal transport and erection hazards.

All bushings shall have a minimum creepage distance of 25 mm/kV for maximum phase-to-phase system voltage, and shall have a continuous rating of 200 % of the transformer capacity rating.

High Voltage and Low Voltage bushings shall be sized in accordance with the applicable ANSI/IEEE and/or IEC standards such as ANSI C57-12.20 clause 6.1, and with the following characteristics:

- High voltage bushings shall have tinned bronze eyebolt type connectors.
- LV terminals shall be bi-metallic clamp type.

Approximately 10% of the transformer to be supplied may be with LV terminals protected with armoured anti-theft features, and is specifically meant for use in areas with high level of theft.

18.2 Bushing Labels

HV bushings shall be labelled H₁ and H₂.

LV bushings shall be labelled X₁ to X₄ in accordance with IEEE C57.12.70 standards.

Marking letters shall be at least 12 mm (or 1/2 inch) high. The means of marking shall conform to the requirements of the section on Labels in this specification (see page 31 for further details).

18.3 EARTHING TERMINALS

All transformers shall be provided with two earthing/grounding terminals comprising an M12 isometric bolt and nut, which shall be non-ferrous material. It shall include a spring washer and a lock washer.

External connecting strip(s) between earthing/grounding terminal and neutral bushing(s) **is/are** required.

18.4 LIGHTING ARRESTORS – HV SIDE OF TRANSFORMER

The lightning arrestors shall be capable of discharging lightning and switching surges and temporary power frequency over voltages, and shall be capable of discharging over voltages occurring during switching of unloaded transformers and long lines.

The Arrestors shall be capable of withstanding Maximum Continuous Operating Voltages (M.C.O.V) and rate for operation in 15 kV class distribution system. The reference current of the arrestors shall be of such value to eliminate the influence of grading and stray capacitance on the measured reference voltages.

These arrestors shall be of Heavy Duty, Station Class / Distribution Class and Gapless Zinc Oxide type and shall be hermetically sealed units suitable for outdoor installation and mounting on distribution transformers. Additionally, the arrestors shall be suitable for heavily polluted atmospheric conditions as mentioned in section 3 on page 9.

19. TANK FABRICATION

The tank shall be of sealed construction and fabricated using materials to withstand internal pressures as per ANSI C57.12.20, section 7.2.6.1. The Proponent shall state if other than bolted cover construction is used, and shall give full details of such construction.

The interior of the tank shall be sealed to comply with ANSI C57.12.20, section 6.4.2.

The Proponent shall state the top oil temperature that corresponds to the tank's internal pressure of 15 psi and steady load at rated capacity and emergency loading condition while considering an ambient temperature of 40°C.

Adequate space shall be provided at the bottom of the tank for collection of sediments.

Transformer tanks shall be designed to allow the unit to be lifted and transported with the weight of the transformer and oil at the required level, without permanent deformation or oil leakages. Lifting provisions shall consist of two lifting brackets welded to opposite sides of the tank.

The tank shall be fabricated of mild steel with a minimum thickness of 3 mm. Top and bottom covers of the tank shall have a minimum thickness of 5 mm. Thickness below this value will be considered only in exceptional cases with a written guarantee and/or warranty from the Proponent and must be submitted along with the bid.

The transformer tank and the top cover shall be designed to conform with IEEE C57.12.31.

All sealing washers/gaskets shall be made of oil and heat resistant nitrile rubber or neoprene bonded cork seals suitable for temperatures as stipulated in this specification. Surfaces, where joints have gaskets, shall be, such that, an even surface is presented to the gasket, thereby eliminating the necessity for the gasket to take up surface irregularities.

All pipes, radiators, stiffeners, or corrugations, which are welded to the tank wall, shall be welded externally and shall be double welded wherever possible. All welds shall be stress relieved.

19.1 Pressure Relief Device

The pressure relief valve specified in the standard shall be operable manually by hotstick and with venting and sealing characteristics that comply with ANSI C57.12.20, section 6.2.5.1.

Proponents shall submit all test results of the pressure relief device with the bid document.

19.2 Oil Level Indication

The oil level marker shall be comply with ANSI C57.12.20, sections 6.2.1, 6.2.3 and 6.2.5.1.

20. FITTINGS

The following standard fittings shall be provided:

- rating, diagram and terminal marking plate;
- tank grounding terminal;
- lifting lugs;
- manual pressure relief device; and
- drain/sampling valve with plug.

The fittings and accessories listed above are only indicative and any other fittings and accessories according to the applicable standards herein shall be provided for the transformers.

21. TRANSFORMER OIL

The transformers shall be supplied with Class 1 mineral oil that conforms to IEC 60296 or IEEE C57.12.00, section

6.6.1.

The dielectric strength of the oil shall not be less than 40 kV.

22. RATING AND CONNECTION PLATE

Each transformer shall be provided with anodized aluminium laser engraved nameplate, in accordance with IEEE C57.12, Table 9 - Nameplate C. Additionally, Proponents shall ensure that the following attributes are indicated on the aforementioned nameplate:

- standard to which it is manufactured and tested;
- identification of internal short-circuit and overload protection devices;
- type of cooling (ONAN);
- rated currents in A;
- chopped wave (short time) impulse voltage withstand level in kV;
- power frequency withstand voltage in kV;
- percentage impedance at 85⁰C;
- load loss in kW at rated current;
- no-load loss in kW at rated voltage and frequency;
- continuous ambient temperature at which ratings apply in ⁰C (40);
- top oil and winding temperature rise at rated load in ⁰C;
- winding connection diagram;
- total mass (core, windings and oil) in kg;
- mass of core and windings in kg;
- volume of oil in litres;
- Oil with less than 2ppm of PCB; and

- name of the purchaser (Property of Guyana Power & Light Inc.)

The nameplate shall meet Nameplate B per ANSI C57.12.00 and conform to the requirements of the section on Labels (see page 31) in this specification.

23. MOUNTING ARRANGEMENT

The tank shall include an upper and lower support lug for direct pole mounting in accordance with ANSI C57.12.20 Type B or equivalent.

24. SURFACE TREATMENT

The transformer tank and all accessories shall be treated in accordance with IEEE C57.12.31 to ensure enclosure and equipment integrity. The transformer shall have a grey color finish.

25. SUPPRESSION OF HARMONICS

Each transformer's core shall be designed with attention to the suppression of harmonic voltages and currents, as per IEEE Std 519-2014 in Table 1 for bus voltage between 1 kV and 69 kV and Table 2 for current distortion limits for systems rated 120 V through 69 kV.

Proponents shall submit results for harmonic suppression tests for voltage and current distortions.

26. TESTS

In addition to the routine tests required in IEEE C57.12.00, as per section 8 and Table 18, the following additional tests shall be carried out on all transformers. The following routine measurements and tests shall be carried out and results shall be submitted to the Purchaser upon delivery:

- a) Measurement of winding resistance at the nominal and extreme tap positions for each transformer provided;
- b) Measurement of impedance;
- c) Measurement of no-load loss and no-load currents at full, 90% and 110% voltages;
- d) Induced overvoltage withstand test;
- e) Separate source voltage withstand tests on HV and LV windings;
- f) Magnetic balance test;

- g) Polarization Index Test. The index shall be not less than 1.5;
- h) Oil leakage test: The criterion of leakage shall be discolouration by oil of whitewash applied externally to suspected parts at an oil temperature of 90⁰C or other method approved by the Purchaser;
- i) Bushings and oil shall be subject to the following routine tests.
 - a. bushing routine tests
 - b. oil dielectric and moisture content test.

Routine test certificates shall include in addition to the test results, the Purchaser's order number, the transformers' serial numbers, outline drawing number and transformer kVA rating.

Upon acceptance of Tender, the Manufacturer/Proponent shall provide results of standard design type tests required in Table 18 of IEEE C57.12.00.

27. COMPLIANCE WITH SPECIFICATION

The transformers shall comply in all respects with the requirements of this specification. However, any minor departure from the provisions of the specification shall be disclosed at the time of tendering in the Non-Compliance Schedule in this document (see page 61).

28. COMPLIANCE WITH REGULATIONS

All the transformers/equipment shall comply in all respects with the Laws of Guyana Governing the Importation of Commercial Items and/or Goods.

The equipment and connections shall be designed and arranged to minimize the risk of fire and any damage that might be caused in the event of a fire.

29. QUALITY ASSURANCE, INSPECTION AND TESTING

29.1 General

To ensure that the supply and services are in accordance with the Specification herein, with the regulations of Guyana and with relevant authorized international standards, the Proponent shall have in place suitable Quality Assurance Programmes and Procedures to ensure that all activities are being controlled and documented as necessary.

The quality assurance arrangements shall conform to the relevant requirements of ISO 9001 or ISO 9002, as deemed appropriate by the Purchaser and the Proponent.

The systems and procedures that the Proponent will use to ensure that the supply complies with the specified requirements, shall be defined in the Proponent's Quality Plan.

The Proponent shall operate systems that implement the following:

Hold Point "A stage in the material procurement or workmanship process beyond which work shall not proceed without the documented approval of designated individuals or organisations."

The Purchaser's written approval is required to authorise work to progress beyond the Hold Points indicated in approved Quality Plans.

Notification Point "A stage in material procurement or workmanship process for which advance notice of the activity is required to facilitate witness."

If the Purchaser's representative does not attend after receiving documented notification in accordance with the agreed procedures and with the correct period of notice then work may proceed.

29.2 Quality Assurance System

Unless the Proponent's Quality Assurance System has been audited and approved by the Purchaser, a Quality Assurance System shall be submitted to the Purchaser for approval within a minimum of One (1) month from the placement of order, or such other period as shall be agreed with the Purchaser. The Quality Assurance System shall provide a description of the Quality Control System for the supply and shall, unless advised otherwise, shall include, but not limited to the following details:

1. The structure of the organisation;
2. The duties and responsibilities assigned to staff to ensure quality of work;
3. The system for purchasing, taking delivery and verification of the specifications of raw materials;
4. The system for ensuring the quality of workmanship
5. The system for control of documentation;
6. The system for the retention of records; and
7. The arrangement for the Proponent's internal auditing.

29.3 Quality Plans

The Quality Plans shall set out the activities in a logical sequence and, unless advised otherwise, shall include, but limited to the following:

1. An outline of the proposed programme sequence;
2. The duties and responsibilities assigned to staff ensuring the quality of work;
3. Hold and notification points;
4. Submission of engineering documents required by the specification;
5. The inspection of materials and components on receipt;
6. Reference to the Supplier's procedures appropriate to each activity;
7. Inspection during fabrication and assembly; and
8. Final inspection and test.

29.4 Inspection and Testing

The Purchaser shall have free entry at all times, while work on the order is being performed, to all parts of the manufacturer's working area which are in relation to the processing of the transformers ordered. The Manufacturer/Proponent shall afford the Purchaser without charge, all reasonable facilities to assure that the transformers being furnished are in accordance with the specifications herein.

The equipment shall have successfully passed all tests as described in Section 26 (see page 34).

The Purchaser reserves the right to reject an item of the transformer if the test results do not comply with the values specified herein.

Tests, including any retests required, shall be carried out by the Supplier at no extra charge, at the manufacturer's works.

Full details of the proposed methods of testing, including connection diagrams, shall be submitted to the Purchaser by the Supplier for approval, at least one month before testing.

All costs in connection with the testing, including any necessary re-testing, shall be borne by the Manufacturer/Proponent.

Any cost incurred by the Purchaser in connection with inspection and re-testing as a result of the failure of the transformer or any of its components under test or damage during transport or offloading shall be to the account of the Proponent.

The Proponent shall submit to the Purchaser three signed copies of the test certificates, giving the results of the tests as

required. No materials shall be dispatched until the test certificates have been received by the Purchaser and the Proponent has been informed that they are acceptable.

The test certificates must show the actual values obtained from the tests, in the units used in this specification, and **not** merely confirm that the requirements have been met.

No inspection or lack of inspection or approval by the Purchaser's Representative of equipment or materials whether supplied by the Proponent or a Sub-Proponent, shall relieve the Proponent from his/her liability to complete the contracted works in accordance with the contract would exonerate him/her from any of his/her guarantees.

29.5 Guarantee

The Proponent shall guarantee the following:

- Quality and strength of materials used;
- Satisfactory operation during the guarantee period of one (1) year from the date of commissioning, or 18 months from the date of acceptance of the equipment by the Purchaser following delivery, whichever is the earlier. The Purchaser shall advise the Proponent of the date of commissioning;
- Performance figures as supplied by the Proponent in the Technical Data Schedule, the guaranteed copper and iron losses and other particulars;
- The offered surface treatment shall protect the treated metal from corrosion for a period of not less than ten (10) years from the date of delivery.

30. SPARE PARTS AND SPECIAL TOOLS

The Proponent shall provide a list of recommended spare parts and their individual prices and shall include HV and LV bushings and bi-metallic connectors for HV and LV bushings. This list shall identify all essential spares and consumable items for any recommended maintenance for a period of five (5) years after commissioning.

The Purchaser may order all or any of the spares parts listed at the time of placement of order.

A spare parts catalogue with price list shall be provided and this shall form part of the drawings and literature to be supplied with the bid.

The Proponent shall give an assurance that spare parts and consumables will continue to be available through the life span of the equipment/transformers, which shall be 25 years minimum. However, the Proponent shall give a minimum of 12 months notice to the Purchaser, in the event that the Proponent or any Sub-supplier, plan to

discontinue manufacturing of any component used in the transformers.

Any spare apparatus, parts or tools shall be subjected to the same specification herein, tests and conditions as similar main material supplied. They shall be strictly interchangeable and suitable for use in place of the corresponding parts supplied with the transformer and must be suitably marked and numbered for identification.

Spare parts shall be delivered suitably packaged and treated for long periods in storage. Each package shall be clearly and indelibly marked with its contents, including a designation number corresponding to the spare parts lists in the operation and maintenance instructions.

31. LABELS

All apparatus shall be clearly labelled indicating, where necessary, its purpose and service positions.

The material of all labels and plates, their dimensions, legend and the method of printing shall be subject to the approval of the Purchaser.

Colours shall be permanent and free from fading. All labels and plates for outdoor use shall be of non-corrosive material.

They shall be engraved in English. Nameplates shall carry all the applicable information specified in the applicable items of the Standards and other details as required in this specification. No scratching, corrections or changes will be allowed on nameplates.

Wherever possible the equipment shall carry the markings "**THIS EQUIPMENT IS PROPERTY OF GPL Inc.**".

32. SUBMITTALS REQUIRED WITH THE BID

The following shall be required in duplicate of three (3) copies:

1. completed technical data schedule for each type and rating of the transformer;
2. descriptive literature giving full technical details of equipment offered;
3. Outline dimension drawings for each major component, general arrangement drawing showing component layout and general schematic diagrams;
4. type test certificates, where available, and sample routine test reports for each type and rating of the transformer;
5. summary reference list of customers already using equipment offered during the last 5 years with particular emphasis on units of similar design and rating;

6. details of manufacturer's quality assurance standards and programme and ISO 9000 series or equivalent national certification;
7. deviations from this specification. Only deviations approved in writing before placement of order shall be accepted; and
8. list of recommended spare parts and consumable items for five years of operation with prices and spare parts catalogue with price list for future requirements.

33. NON-COMPLIANCE SCHEDULE

On this schedule, the Proponent shall provide a list of non-compliance with this specification, documenting the effects that such non-compliance is likely to have on the transformer/equipment/component life span and operating characteristics. Each non-compliance shall be referred to the relevant specification clause.

Clause No.	Non-Compliance

34. TEST CERTIFICATE SCHEDULE

On this schedule, a list of the test certificates shall be included with the bid. This list shall include the certificates for the type tests (see page **Error! Bookmark not defined.**) and sample routine test reports. Each certificate listed shall be referred to the relevant specification clause.

Clause No.	Type Test Certificate or Routine Test Report

35. SHIPPING

The Manufacturer/Proponent shall prepare the transformers for shipping in such a manner as to protect from them from damage or deterioration during shipping and storage, and shall be responsible for, and make good, any and all damage due to improper preparation for loading, shipment and storage.

All transformers shall be shipped on open sided trucks or trailers, in such a manner as to facilitate off-loading, handling and storage.

The transformers shall be shipped securely banded with a steel strap or approved synthetic strap to a pallet. The pallet shall be constructed to accept two fixed 195 mm forks spaced either 65mm or 320 mm apart. At least 90 mm clearance shall be provided under each transformer pallet and the bottom of the pallet must not be fully covered in order to facilitate the use of pallet jacks.

Lot 2 Technical Specifications – Three Phase Pad Mounted

1. SCOPE

The design, manufacture, test, supply, delivery and warranty of three-phase live front pad-mounted distribution transformers with separable insulated high voltage connectors, rated up to 1000 kVA, generally conforming to IEEE C57.12.34 except as specified otherwise herein.

This specification is intended to supplement IEEE C57.12.34, Additional or modifying statements made in this document shall override applicable sections. Where no reference is made in this specification, IEEE C57.12.34 shall apply.

Materials will be evaluated to ensure conformance with submitted manufacturer’s drawings/documentation and relevant standards as listed within this specification.

2. APPLICABLE STANDARDS

Except where modified by this specification, the transformers shall be designed, manufactured and tested in accordance with the latest editions of the following standards (Table 4). The proponent may propose alternative standards, but shall demonstrate that they give a degree of quality and performance equivalent to or better than the referenced standards herein.

Acceptability of an alternative standard is at the discretion of the Purchaser.

The Proponent shall furnish a copy of the alternative standard proposed along with the bid. If the alternative standard is not written in the English Language, a certified English Language translated version of the original standard shall be submitted with the bid.

Table 4: Applicable Standards

Item No.	ANSI/IEC Standards	Title
1	IEEE C57.12.34	IEEE Standard for Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers, 5MVA and Smaller; High Voltage 34.5 kV Nominal System Voltage and Below; Low Voltage, 15 kV Nominal System Voltage and Below”
2	IEEE C57.12.00	Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
3	IEEE C57.12.28;	“IEEE Standard for Pad-Mounted Equipment – Enclosure Integrity
4	IEEE C57.12.70	IEEE Standard Terminal Markings and Connections for Distribution and

		Power Transformers
5	IEEE C57.12.90	Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers Corrigendum 1: Editorial and Technical Corrections
6	IEEE C57.147	Guide for Acceptance and Maintenance of Natural Ester Fluids in Transformers
7	IEEE 386-2006	IEEE Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600 V
8	ASTM D3487	Standard Specification for Mineral Insulating Oil Used in Electrical Apparatus
9	NEMA TR 1	Transformers, Regulators, and Reactors
	IEC 60076	Power Transformers

In case of conflict, the order of precedence shall be:

- This Technical Specification
- IEEE standards
- Other Applicable and Recognised Standards for pad mounted distribution transformers.

3. INSTALLATION/SERVICE CONDITIONS

The installation conditions of the transformers shall be as follows:

6. Maximum altitude above mean sea level less than 1,000 m;
7. Maximum ambient air temperature 40⁰C;
8. Maximum daily average ambient air temperature 30⁰C;
9. Minimum ambient temperature 15⁰C; and
10. Maximum relative humidity 100%.

All outdoor materials, components and equipment shall be designed and protected for use in exposed, heavily polluted and salty, corrosive and humid tropical coastal atmospheric conditions.

4. ELECTRICAL SYSTEM CONDITIONS

The transformer shall be suitable to be installed in GPL's primary distribution system, which has the following characteristics (Table 5).

Table 5: Characteristics of GPL’s Primary Distribution System

Nominal System Voltage, Frequency and Phase	High Voltage (HV) Side	13.8 kV, 60 Hz, 3φ-3-wire
	Low Voltage (LV) Side	220/127, 415/240, 440/254, 240/120, 60 Hz, 3φ-4 wire
Voltage Class	15 kV	
Short circuit withstand Capability	As per IEEE C57.12.00, section 7.1.3	
Insulation Level		
Basic Insulation Level (BIL)	As per IEEE C57.12.00, Table 3	
Power Frequency withstand level – Dry 1 Minute	As per ANSI C57.12.00, Table 10	
Power Frequency withstand level – Wet 10 Seconds		
System Grounding		
Neutral Grounding	High Side	Primary distribution feeders from Distribution Substations are three phase delta and are grounded by a zig-zag transformer. Primary distribution feeders emanating from generator buses are wye and are grounded by the power plant neutral grounding system.
	Low Side	Solidly grounded.

5. TRANSFORMER RATING

The transformers shall be double wound, sealed type, oil immersed with natural oil and air-cooling (ONAN), three phase (3φ), pad-mounted with typical ratings from 45 kVA to 1000 kVA.

The polarity of all transformers shall be subtractive and shall be clearly indicated on the tank of the transformers.

The transformers are required to be equipped with three (3) HV and four (4) LV bushing terminations.

The design of the tank, fittings, bushings, etc., shall be such that it will not be necessary to keep the transformer energised to prevent deterioration as the transformers may be held in reserve and outdoors conditions for many years.

All transformers shall be rated in accordance with ANSI C57.12.20, section 3.

All transformers, inclusive of tap changer and other current carrying components, shall accept emergency overloading as per ANSI/IEEE C57.92, section 4.

6. TAPS AND VOLTAGE REGULATION

Transformers shall have the following voltage transformation ratio and tapping range:

- Voltage ratings shall be specified on the purchase order typically:
13800 delta – 220Y/127 Volts or
13800 delta – 415Y/240 Volts or
13800 delta – 440Y/254 Volts or
13800 delta – delta 240/120 Volts
- tolerance on the voltage ratio shall be in accordance with IEEE C57.12.00, section 9.1;
- taps shall be provided in the high voltage winding (13.8 kV side), with steps of two (2), 2.5% taps above and below the primary voltage rating (13.8 kV); and
- The bidder shall state in the technical schedule, the percentage regulation at full load, power factor 1.0 and at full load power factor 0.8 lagging. The primary and secondary voltage variation shall be based on a winding temperature of 85°C.

7. OVERCURRENT PROTECTION

Transformers up to and including the rating of 1000 kVA shall be equipped with an internally mounted low-voltage circuit breaker.

The operation of the LV breaker shall be coordinated such that any short circuit and/or overloading on the secondary side of the transformer will first trip the LV breaker before the externally mounted HV protective links operate, taking the load off the transformer before the core and/or coil is/are thermally and/or mechanically damaged.

The operation of the protection devices mentioned above shall be indicated externally on the tank/cabinet, and the circuit breaker shall be made to be externally controlled.

The characteristics of the protection device shall allow for full usage of the transformer's continuous rating and short-time overload capabilities for emergency loading condition (120% of nominal kVA rating).

The Bidder shall submit the characteristic curves of the internal protection device with the bid. The characteristic curve shall also include the transformers' through-fault withstand capability curves or transformer damage curves.

8. BIL RATING

The transformer shall be rated minimum 95 kV BIL.

9. IMPEDANCE

The guaranteed minimum value of impedance measured at 65⁰C, on the nominal tap and at the rated voltage of the transformer shall be:

- 2.4 % for transformers between 25 kVA to 50 kVA; and
- 3.7 % for transformers from 50 kVA to 167 kVA.
- 5.2% for transformers from 167 kVA to 1000 kVA.

Tolerance for transformers' impedances shall be in accordance with IEEE C57.12.00, section 9.2.

10. SHORT CIRCUIT RATINGS

Bidders must submit all short circuit test results for compliance with IEEE C57.12.00, section 7.1.3.

11. LOSSES

11.1 Transformer Losses

The Bidder shall state the guaranteed losses. However, no positive tolerance is allowable on the guaranteed values. If transformers are supplied with losses exceeding the guaranteed values, the purchaser reserves the right to reject the transformer(s).

The Bidder shall also state the value of guaranteed magnetizing current, subject to the tolerance specified in IEC 60076.

11.2 Loss Evaluation

For the purpose of evaluation, the transformer(s) shall be evaluated according to the total price plus the capitalized value of losses. The formula to be used in evaluation will be:

$$\text{Capitalized Bid Price (US\$)} = \text{Initial Bid Price (US\$)} + (\text{NLL} \times \text{US\$ } 27.99) + (\text{LL} \times \text{US\$ } 9.19)$$

Where:

NLL = No load loss in kW; and

LL = Load loss in kW at full rated load and maximum operating temperature.

The losses proposed by the Bidders shall be measured during routine tests with tolerances guided by

IEC 60076. If the results from the routine tests indicate that either the copper or iron loss is more significant than the proponents' guaranteed values, the Purchaser shall have the right to reject the transformer(s)

12. FLUX DENSITY

The flux density at any point of the magnetic circuit, core and winding, when the transformer is connected on the centre tap and operating at normal voltage and frequency, shall be stated in the bid and shall not exceed 1.7 Tesla. The transformer must be capable of operating at 10% overvoltage at 97% of rated frequency without resulting in magnetic saturation of the transformer's core or the flux density exceeding 1.9 Tesla.

13. NOISE LEVEL

The acceptable audible sound levels for all transformers shall comply with NEMA TR1, table 0-3.

Bidders shall confirm procedure for noise level measurement according to IEEE C57.12.90 and submit audible sound levels test results with the bid document.

14. RADIO INFLUENCE VOLTAGE

Radio influence voltage of all transformers, contained herein, shall comply with NEMA TRI, section 0.03.1.

15. TAP CHANGING CHARACTERISTICS

Tap positions shall be numbered as shown in Table 6.

Table 6: Transformer tap positions

Tap 1	+5%
Tap 2	+ 2.5%
Tap 3	0% (Principal Tap)
Tap 4	-2.5%
Tap 5	- 5.0 %

The operating handle shall have provision for padlocking and shall give a visual indication of the tap position without unlocking.

Each tap-changer position and the tap voltage or percentage associated with voltage shall be identifiable by reference to nameplate information. All positions of the tap changer shall be operative positions.

Tap changer handles shall be fitted with covers having gaskets, so that sealing of the transformer under normal conditions is independent of the switch shaft gland.

16. CORE AND WINDINGS

The core and windings shall be vacuum processed to ensure maximum penetration of insulating fluid into the coil insulation system. While under vacuum, the windings will be energized to heat the coils and drive out moisture, and the transformer will be filled with preheated filtered degassed insulating fluid.

The core and winding shall be capable of withstanding mechanical shocks during transport, installation and servicing.

16.1 CORE

The core shall be manufactured from burr-free, grain-oriented silicon steel laminations and shall be precisely stacked to eliminate gaps in the corner joints.

Provision to the design and construction of the transformer shall be made to prevent movement of the core and windings, relative to the tank, during transport, installation and short-circuits.

The design shall avoid the presence of pockets, which can prevent complete emptying of the oil in the tank through its drain plug.

16.2 WINDINGS

The winding conductor shall be of electrolytic copper or aluminium, to give the optimum economic and technical results of the transformers.

The windings shall be insulated with B-stage, epoxy coated, diamond pattern, insulating paper, which shall be thermally cured under pressure to ensure proper bonding of conductor and paper, and shall be free from any other insulating compounds that are liable to soften, ooze out, shrink or collapse, and non-catalytic and chemically inert in the transformer oil during normal servicing. The windings shall be uniformly insulated, and the LV neutral points shall be insulated for full line-to-line voltage.

The stacks of windings shall receive adequate shrinkage treatment, and the windings and connections are to be braced to withstand mechanical shocks during transport, switching, short-circuit or other transient conditions.

17. BUSHINGS AND TERMINATIONS

17.1 BUSHINGS

Bushings shall be of the outdoor type and easily replaceable. Porcelain type bushings are required. The bushings shall be sufficiently robust (mechanically) to withstand normal transport and erection hazards.

All bushings shall have a minimum creepage distance of 25 mm/kV for maximum phase-to-phase system voltage, and shall have a continuous rating of 200 % of the transformer capacity rating.

17.2 BUSHING LABELS

HV bushings shall be labelled H1, H2 and H3.

LV bushings shall be labelled X1 to X4 in accordance with IEEE C57.12.70 standards.

Marking letters shall be at least 12 mm (or 1/2 inch) high. The means of marking shall conform to the requirements of the section on Labels in this specification.

Transformers shall be constructed with either a 5-legged core or a triplex core to mitigate ferro-resonant tank heating.

The core shall be constructed from high grade, non-aging, cold rolled grain oriented silicon steel laminations or superior material.

17.3 HIGH VOLTAGE BUSHING WELLS

High voltage bushing wells and bushing well inserts shall be provided.

18. EARTHING TERMINALS

All transformers shall be provided with two earthing/grounding terminals comprising an M12 isometric bolt and nut, which shall be non-ferrous material. It shall include a spring washer and a lock washer.

External connecting strip(s) between earthing/grounding terminal and neutral bushing(s) **is/are** required.

19. HIGH AND LOW VOLTAGE TERMINAL CONFIGURATION

Transformers shall comply with C57.12.34 Figure 4(a) (staggered arrangement), Figure 1 and Figure 2 for radial-feed transformers.

20. LOW-VOLTAGE TERMINALS

Terminals shall be constructed per IEEE C57.12.34, Section 8.7.3 with an additional ground pad near the low-voltage.

21. LIGHTING ARRESTORS – HV SIDE OF TRANSFORMER

The lightning arrestors shall be capable of discharging lightning and switching surges and temporary power frequency over voltages, and shall be capable of discharging over voltages occurring during switching of unloaded transformers and long lines.

The Arrestors shall be capable of withstanding Maximum Continuous Operating Voltages (M.C.O.V) and rate for operation in 15 kV class distribution system. The reference current of the arrestors shall be of such value to eliminate the influence of grading and stray capacitance on the measured reference voltages.

These arrestors shall be of Heavy Duty, Station Class / Distribution Class and Gapless Zinc Oxide type and shall be hermetically sealed units suitable for outdoor installation and mounting on distribution transformers. Additionally, the arrestors shall be suitable for heavily polluted atmospheric conditions as mentioned in section 3 on page 45.

22. PRESSURE RELIEF VALVE

The pressure relief valve provided as per C57.12.34, 8.9.2, shall include an orange or red indicator that becomes visible only after the valve has vented. The valve shall be covered by a cap with a pull ring which will separate from the assembly during venting, revealing the orange or red indicator.

23. TRANSFORMER OIL

The transformers shall be supplied filled with class 1 mineral oil conforming to ASTM D3487. The complete first filling shall be of new oil free from inhibitors and additives. The dielectric strength of the oil shall not be less than 40kV. If an anti-oxidant inhibitor is recommended, its use shall be subject to the Purchaser's approval.

24. TANK COVER

The bidder shall state if other than bolted construction is used.

25. TRANSFORMER ANCHOR TABS

Four tabs shall be provided on the tank for mounting the transformer to the pad.

26. HANDHOLE

The tank shall include a handhole to access internal components for testing. The handhole shall have a cover that can be unbolted from within the terminal compartments to prevent unauthorized access.

27. FITTINGS

The following standard fittings shall be provided:

- rating, diagram and terminal marking plate;
- tank grounding terminal;
- lifting lugs;
- oil level indicator;

- manual pressure relief device; and
- drain/sampling valve with plug.

The fittings and accessories listed above are only indicative and any other fittings and accessories according to the applicable standards herein shall be provided for the transformers.

28. RATING AND CONNECTION PLATE

Each transformer shall be provided with anodized aluminium laser engraved nameplate, in accordance with IEEE C57.12 - Nameplate A and C as necessary. Additionally, Proponents shall ensure that the following attributes are indicated on the aforementioned nameplate and conform to the requirements of the section on Labels in this specification:

- standard to which it is manufactured and tested;
- identification of internal short-circuit and overload protection devices;
- type of cooling (ONAN);
- rated currents in A;
- chopped wave (short time) impulse voltage withstand level in kV;
- power frequency withstand voltage in kV;
- percentage impedance at 85⁰C;
- load loss in kW at rated current;
- no-load loss in kW at rated voltage and frequency;
- continuous ambient temperature at which ratings apply in ⁰C (40);
- top oil and winding temperature rise at rated load in ⁰C;
- winding connection diagram;
- total mass (core, windings and oil) in kg;
- mass of core and windings in kg;

- volume of oil in litres;
- Oil with less than 2ppm of PCB; and
- name of the purchaser (Property of Guyana Power & Light Inc.)

29. SURFACE TREATMENT

The transformer tank and all accessories shall be treated in accordance with IEEE C57.31 to ensure enclosure and equipment integrity.

30. SUPPRESSION OF HARMONICS

Each transformer's core shall be designed with attention to the suppression of harmonic voltages and currents, as per IEEE Std 519-2014 in Table 1 for bus voltage between 1 kV and 69 kV and Table 2 for current distortion limits for systems rated 120 V through 69 kV.

Proponents shall submit results for harmonic suppression tests for voltage and current distortions.

31. TESTS

In addition to the routine tests required in IEEE C57.12.00, as per section 8 and Table 18, the following additional tests shall be carried out on all transformers. The following routine measurements and tests shall be carried out and results shall be submitted to the Purchaser upon delivery:

- j) Measurement of winding resistance at the nominal and extreme tap positions for each transformer provided;
- k) Measurement of impedance;
- l) Measurement of no-load loss and no-load currents at full, 90% and 110% voltages;
- m) Induced overvoltage withstand test;
- n) Separate source voltage withstand tests on HV and LV windings;
- o) Magnetic balance test;
- p) Polarization Index Test. The index shall be not less than 1.5;

- q) Oil leakage test: The criterion of leakage shall be discolouration by oil of whitewash applied externally to suspected parts at an oil temperature of 90⁰C or other method approved by the Purchaser;
- r) Bushings and oil shall be subject to the following routine tests.
 - a. bushing routine tests
 - b. oil dielectric and moisture content test.

Routine test certificates shall include in addition to the test results, the Purchaser's order number, the transformers' serial numbers, outline drawing number and transformer kVA rating.

Upon acceptance of Tender, the Manufacturer/Proponent shall provide results of standard design type tests required in Table 18 of IEEE C57.12.00.

32. COMPLIANCE WITH SPECIFICATION

The transformers shall comply in all respects with the requirements of this specification. However, any minor departure from the provisions of the specification shall be disclosed at the time of tendering in the Non-Compliance Schedule in this document (see page 61).

33. COMPLIANCE WITH REGULATIONS

All the transformers/equipment shall comply in all respects with the Laws of Guyana Governing the Importation of Commercial Items and/or Goods.

The equipment and connections shall be designed and arranged to minimize the risk of fire and any damage that might be caused in the event of a fire.

34. QUALITY ASSURANCE, INSPECTION AND TESTING

34.1 GENERAL

To ensure that the supply and services are in accordance with the Specification herein, with the regulations of Guyana and with relevant authorized international standards, the Proponent shall have in place suitable Quality Assurance Programmes and Procedures to ensure that all activities are being controlled and documented as necessary.

The quality assurance arrangements shall conform to the relevant requirements of ISO 9001 or ISO 9002, as deemed appropriate by the Purchaser and the Proponent.

The systems and procedures that the Proponent will use to ensure that the supply complies with the specified requirements, shall be defined in the Proponent's Quality Plan.

The Proponent shall operate systems that implement the following:

Hold Point "A stage in the material procurement or workmanship process beyond which work shall not proceed without the documented approval of designated individuals or organisations."

The Purchaser's written approval is required to authorise work to progress beyond the Hold Points indicated in approved Quality Plans.

Notification Point "A stage in material procurement or workmanship process for which advance notice of the activity is required to facilitate witness."

If the Purchaser's representative does not attend after receiving documented notification in accordance with the agreed procedures and with the correct period of notice then work may proceed.

34.2 QUALITY ASSURANCE SYSTEM

Unless the Proponent's Quality Assurance System has been audited and approved by the Purchaser, a Quality Assurance System shall be submitted to the Purchaser for approval within a minimum of One (1) month from the placement of order, or such other period as shall be agreed with the Purchaser. The Quality Assurance System shall provide a description of the Quality Control System for the supply and shall, unless advised otherwise, shall include, but not limited to the following details:

8. The structure of the organisation;
9. The duties and responsibilities assigned to staff to ensure quality of work;
10. The system for purchasing, taking delivery and verification of the specifications of raw materials;
11. The system for ensuring the quality of workmanship
12. The system for control of documentation;
13. The system for the retention of records; and
14. The arrangement for the Proponent's internal auditing.

34.3 QUALITY PLANS

The Quality Plans shall set out the activities in a logical sequence and, unless advised otherwise, shall include, but limited to the following:

9. An outline of the proposed programme sequence;
10. The duties and responsibilities assigned to staff ensuring the quality of work;
11. Hold and notification points;
12. Submission of engineering documents required by the specification;
13. The inspection of materials and components on receipt;
14. Reference to the Supplier's procedures appropriate to each activity;
15. Inspection during fabrication and assembly; and
16. Final inspection and test.

34.4 INSPECTION AND TESTING

The Purchaser shall have free entry at all times, while work on the order is being performed, to all parts of the manufacturer's working area which are in relation to the processing of the transformers ordered. The Manufacturer/Proponent shall afford the Purchaser without charge, all reasonable facilities to assure that the transformers being furnished are in accordance with the specifications herein.

The equipment shall have successfully passed all tests as described in Section 26 (see page 34).

The Purchaser reserves the right to reject an item of the transformer if the test results do not comply with the values specified herein.

Tests, including any retests required, shall be carried out by the Supplier at no extra charge, at the manufacturer's works.

Full details of the proposed methods of testing, including connection diagrams, shall be submitted to the Purchaser by the Supplier for approval, at least one month before testing.

All costs in connection with the testing, including any necessary re-testing, shall be borne by the Manufacturer/Proponent.

Any cost incurred by the Purchaser in connection with inspection and re-testing as a result of the failure of the transformer or any of its components under test or damage during transport or offloading shall be to the account of the Proponent.

The Proponent shall submit to the Purchaser three signed copies of the test certificates, giving the results of the tests as required. No materials shall be dispatched until the test certificates have been received by the Purchaser and the Proponent has been informed that they are acceptable.

The test certificates must show the actual values obtained from the tests, in the units used in this specification, and **not** merely

confirm that the requirements have been met.

No inspection or lack of inspection or approval by the Purchaser's Representative of equipment or materials whether supplied by the Proponent or a Sub-Proponent, shall relieve the Proponent from his/her liability to complete the contracted works in accordance with the contract would exonerate him/her from any of his/her guarantees.

34.5 GUARANTEE

The Proponent shall guarantee the following:

- Quality and strength of materials used;
- Satisfactory operation during the guarantee period of one (1) year from the date of commissioning, or 18 months from the date of acceptance of the equipment by the Purchaser following delivery, whichever is the earlier. The Purchaser shall advise the Proponent of the date of commissioning;
- Performance figures as supplied by the Proponent in the Technical Data Schedule, the guaranteed copper and iron losses and other particulars;
- The offered surface treatment shall protect the treated metal from corrosion for a period of not less than ten (10) years from the date of delivery.
-

35. SPARE PARTS AND SPECIAL TOOLS

The Proponent shall provide a list of recommended spare parts and their individual prices and shall include HV and LV bushings and bi-metallic connectors for HV and LV bushings. This list shall identify all essential spares and consumable items for any recommended maintenance for a period of five (5) years after commissioning.

The Purchaser may order all or any of the spares parts listed at the time of placement of order.

A spare parts catalogue with price list shall be provided and this shall form part of the drawings and literature to be supplied with the bid.

The Proponent shall give an assurance that spare parts and consumables will continue to be available through the life span of the equipment/transformers, which shall be 25 years minimum. However, the Proponent shall give a minimum of 12 months notice to the Purchaser, in the event that the Proponent or any Sub-supplier, plan to discontinue manufacturing of any component used in the transformers.

Any spare apparatus, parts or tools shall be subjected to the same specification herein, tests and conditions as similar main material supplied. They shall be strictly interchangeable and suitable for use in place of the corresponding parts supplied with the transformer and must be suitably marked and numbered for identification.

Spare parts shall be delivered suitably packaged and treated for long periods in storage. Each package shall be clearly and indelibly marked with its contents, including a designation number corresponding to the spare parts lists in the operation and maintenance instructions.

36. LABELS

All apparatus shall be clearly labelled indicating, where necessary, its purpose and service positions.

The material of all labels and plates, their dimensions, legend and the method of printing shall be subject to the approval of the Purchaser.

Colours shall be permanent and free from fading. All labels and plates for outdoor use shall be of non-corrosive material.

They shall be engraved in English. Nameplates shall carry all the applicable information specified in the applicable items of the Standards and other details as required in this specification. No scratching, corrections or changes will be allowed on nameplates.

Wherever possible the equipment shall carry the markings "**THIS EQUIPMENT IS PROPERTY OF GPL Inc.**".

37. DECALS

“Danger do not open” decal on exterior transformer doors

“Danger do not touch” decal on interior transformer doors

Typical decals shown in Appendix A.

38. SUBMITTALS REQUIRED WITH THE BID

The following shall be required in duplicate of three (3) copies:

9. completed technical data schedule for each type and rating of the transformer;
10. descriptive literature giving full technical details of equipment offered;
11. Outline dimension drawings for each major component, general arrangement drawing showing component layout and general schematic diagrams;

12. type test certificates, where available, and sample routine test reports for each type and rating of the transformer;
13. summary reference list of customers already using equipment offered during the last 5 years with particular emphasis on units of similar design and rating;
14. details of manufacturer's quality assurance standards and programme and ISO 9000 series or equivalent national certification;
15. deviations from this specification. Only deviations approved in writing before placement of order shall be accepted; and
16. list of recommended spare parts and consumable items for five years of operation with prices and spare parts catalogue with price list for future requirements.

39. NON-COMPLIANCE SCHEDULE

On this schedule, the Proponent shall provide a list of non-compliance with this specification, documenting the effects that such non-compliance is likely to have on the transformer/equipment/component life span and operating characteristics. Each non-compliance shall be referred to the relevant specification clause.

Clause No.	Non-Compliance

40. TEST CERTIFICATE SCHEDULE

On this schedule, a list of the test certificates shall be included with the bid. This list shall include the certificates for the type tests (see page **Error! Bookmark not defined.**) and sample routine test reports. Each certificate listed shall be referred to the relevant specification clause.

Clause No.	Type Test Certificate or Routine Test Report

41. SHIPPING

The Manufacturer/Proponent shall prepare the transformers for shipping in such a manner as to protect from them from damage or deterioration during shipping and storage, and shall be responsible for, and make good, any and all damage due to improper preparation for loading, shipment and storage.

All transformers shall be shipped on open sided trucks or trailers, in such a manner as to facilitate off-loading, handling and storage.

The transformers shall be shipped securely banded with a steel strap or approved synthetic strap to a pallet. The pallet shall be constructed to accept two fixed 195 mm forks spaced either 65mm or 320 mm apart. At least 90 mm clearance shall be provided under each transformer pallet and the bottom of the pallet must not be fully covered in order to facilitate the use of pallet jacks.

42. TECHNICAL SCHEDULE

Description	Unit	Data
Rated Power	kVA	
Rated Frequency	Hz	
Rated Primary Voltage	kV	
Rated Secondary Voltage	V	
No. of Tap Positions/Steps	No.	
Max Tap Position	%	
Min Tap Position	%	
Magnetic Flux Density	Tesla	
No Load Current	A	
No-load Loss at Nominal Tap Position and Rated Primary Voltage	kW	
Load Loss at Nominal Tap Position and Rated Load Current	kW	
Voltage Regulation at Full Load and Power Factor of 1	%	
Voltage Regulation at Full Load and Power Factor of 85%	%	
Rated Short-circuit Current	kA	
Rated Short-circuit Current withstand duration	s	
Impedance measured at 65 °C and nominal tap position	%	
X/R Ratio	%	
Overloading		
Duration of 25% Overload	minutes	
Duration of 50% Overload	minutes	
Temperature Rise		
Design maximum outdoor temperature	°C	
Design continuous ambient temperature	°C	
Average Winding Temperature Rise	°C	
Maximum Winding Temperature Rise	°C	
Maximum Hot Spot Temperature Rise	°C	
Hot Spot to Top oil Temperature Gradient	°C	
General Transformer Data		
Manufacturer	...	
Type and Grade	...	
Operating flux density	Tesla	
Losses kW/kg at operating flux density	kW/kg	
Manufacturer's data sheet supplied	YES/NO	
Windings/Coils		
Conductor for HV Winding - Manufacturer/Supplier and Type		
Conductor Material for HV Winding		
Conductor for LV Winding - Manufacturer/Supplier and Type		
Conductor Material for LV Winding		
Bushings & Terminals		

HV Bushing Manufacturer/Supplier		
HV Busing Type and Grade		
HV Bushing Catalogue Number		
LV Bushing Manufacturer/Supplier		
HV Bushing BIL	kV	
HV Busing Power Frequency withstand Voltage	kV	
Type and Mental used in HV Terminal		
LV Busing Type and Grade		
LV Bushing Catalogue Number		
LV Busing Power Frequency withstand Voltage	kV	
Type and Mental used in LV Terminal		
Type and Mental used in Earth Terminal		
Bushing Clearance		
Minimum phase to phase clearance	mm	
Minimum earth to phase clearance	mm	
Spring and lock washer included	YES/NO	
Tap Changer		
Tap Changer Manufacturer/Supplier		
Tap Changer Type		
Tap Changer Catalogue Details Attached	YES/NO	
Can the Tap Changer switch be Locked	YES/NO	
Tank		
Tank material		
Thickness of the metal sheet		
Painting method details attached	YES/NO	
Tank Width	mm	
Tank Height	mm	
Tank Dept	mm	
Weight of Core and Windings	kg	
Weight of Tank	kg	
Weight of Oil at 20 °C	kg	
Total weight of Transformer without oil	kg	
Shipping weight of Transformer	kg	

Affix Company Seal
Below

Name:.....

Signature:.....

Date:.....

QUALIFICATION INFORMATION

1. For individual bidders or individual members of a joint venture

1.1 Legal status of Bidder (*attach copy*).

Place of registration: _____

Principal kind of business: _____

Power of attorney for signing the Bid (*attach*).

1.2 Total volume of supplies executed for the last three (3) years in Guyana dollars or currency of bid:

_____ in 20__.

_____ in 20__.

_____ in 20__.

1.3 Supplies of a similar nature executed by the Supplier during the last two years (*not less than three (3) supplies*)

№	Name of Goods	Name of Clients, address and telephone	Contract Price

1.4 Copies of financial reports for the last three years (*balance sheets, loss and profit statements, auditors' reports, etc.*). *List below and attach copies.*

3.5 Evidence of access to financial resources (*cash in hand, lines of credit, overdraft facility etc.*). *List below and attach copies of supporting documents.*

3.6 Evidence of compliance with NIS, IRD and TIN Certificate and VAT Registration for Vatable item/s. (*attach supporting documents*).

3.7 Information on all claims, arbitration or other legal proceedings currently being examined or already settled.

 -

 -

2.0 Any other information required by the Procuring Entity to execute the Contract

2.1 The Supplier certifies that he meets all the qualification criteria and requirements, in accordance with normative legal documents.

I certify the authenticity of all the above information.

(Full name)

(Title)

(Signature and seal)

Dated on: _____ day of _____ 20____.
(Date)

SUPPLIER'S BID

Date: _____

IFB No: _____

TO: _____
(Name and address of Procuring Entity)

Dear Sir / Madam,

Having examined the bidding documents, including the Annexes and Addenda No _____ [specify number], the receipt of which is hereby acknowledged, we, the undersigned, offer to supply and provide _____ [description of goods and related services] in accordance with the requirements of the bidding documents to the total sum of _____ [Total Amount of Bid in Words and Figures], confirmed by the attached Price Schedule which is a part of this Bid.

- (a) We, including all subcontractors, regarding any part of the Contract, in accordance with the bidding documents, have no conflict of interests pursuant to sub clause 2 (i) of the Instructions to Bidders;
- (b) We, including all subcontractors, regarding any part of the Contract, in accordance with the bidding documents, have not been declared by the [authorized State body] [National Board] on procurement to be ineligible, or are not ineligible, in accordance with the legislation of Guyana.

We undertake, if our Bid is accepted, to supply the Goods, in accordance with a delivery schedule given in the Schedule of Requirements.

If our Bid is accepted, we undertake to furnish the Performance security in the form of _____ to the amount of _____, comprising _____% of the Contract Price in order to execute the Contract properly and within the time period(s) specified in the Bidding Documents.

We hereby confirm that this bid shall be valid during _____ days starting from the date established for bid opening, and it shall be binding until the expiry of the indicated period.

Prior to the preparation and execution of a formal Contract, this Bid together with your written confirmation of its acceptance shall form a binding Contract on the parties.

We understand that you are not bound to accept the lowest or any bid you receive.

Dated _____.

Duly authorized to sign the Bid _____
(Name of Supplier)

CONTRACT

THIS CONTRACT made the _____ day of _____ 20__

Between _____ [name of Procuring Entity] (hereinafter referred to as "the Procuring Entity"), on the one hand, and _____ [name of Supplier] from _____ [city and country of Supplier] (hereinafter referred to as "the Supplier"), on the other hand have come to an Agreement on the following:

The Procuring Entity has announced bid for procurement of goods and services, namely _____ [brief description of goods and related services] and has accepted the Supplier's bid for the supply of indicated goods and services to the sum of _____ [Contract Price in words and figures] (hereinafter referred to as "the Contract Price").

THIS CONTRACT WITNESSES AS FOLLOWS:

1. In this Contract, the terms and expressions have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
4. The following documents shall form the Contract and shall be deemed its integral part, viz.:
 - (a) Procuring Entity's Notification of Award;
 - (b) Bid and Price Schedule submitted by Bidder;
 - (c) Schedule of Requirements;
 - (d) Technical Specifications;
 - (e) General Conditions of Contract;
 - (f) Special Conditions of Contract;
 - (g) Other documents included in the Contract documents;
5. 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.
6. In consideration of the payments to be made by the Procuring Entity to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring Entity to provide the Goods and Services, and remedy defects therein in conformity in all respects with the provisions of the Contract.
7. The Procuring Entity hereby agrees to pay the Supplier in consideration of the delivery of the Goods and 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 of the foresaid, the parties hereto have caused this Contract to be executed in accordance with the legislation of Guyana the day and year first above written in the beginning of the document.

For and on behalf of the Procuring Entity:

Signed by _____

Witnesses:

1. _____

2. _____

For and on behalf of the Contractor:

Signed by _____

Witnesses:

1. _____

2. _____

BID SECURITY
(Bank Guarantee)

Whereas _____ *[name of Bidder]* (hereinafter referred as "the Bidder") is ready to submit his bid dated _____ *[date of bid submission]* for the supply _____ *[name and/or description of goods]* (hereinafter referred as "the Bid"),

KNOW ALL PEOPLE, that WE _____ *[name of Bank]* from _____ *[name of country]*, having our registered office at the address _____ *[address of Bank]*, (hereinafter referred as "the Bank"), are bound to _____ *[name of Procuring Entity]* to the sum of _____, by which payment to the indicated Procuring Entity shall be made in whole and in a timely manner; the Bank is bound on behalf of its name, its successors and authorized persons. This is to confirm that the license issued to the Bank shall provide for activity on issuance of the guarantee, and the person(s) signing that guarantee is entitled to act on behalf of the Bank, and if the approval of Board of Directors, or of General Stockholders Meeting is required, it is already received and there is no other approval required.

THE CONDITIONS of this obligation are as follows:

1. If the Bidder:
 - (a) Withdraws his Bid during the period of bid validity specified by the Bidder on the Form of Bid; or
2. If the Bidder having received notice from the Procuring Entity that his bid is accepted within the period of bid's validity:
 - (a) fails or rejects to sign the Contract at the request of; or
 - (b) fails or rejects to furnish the performance security in accordance with the Instructions to Bidders;

We undertake to pay the Procuring Entity the above sum upon receipt of his first written request, without needing the Procuring Entity to show grounds or reasons of that request, provided that the sum requested by the Procuring Entity is due to him because of the occurrence of one or two or both conditions, specifying the condition or conditions occurred.

This guarantee shall remain in force during _____ days inclusive following the expiry of the bid validity period, and any request in respect thereof should reach the Bank not later than the abovementioned date.

(Full name of Bank's representative)

(Title)

(Signature and seal)

Dated on « ____ » day of _____ 20 ____.

Bid-Securing Declaration

[The Bidder shall fill in this Form if applicable pursuant to BDS.]

Date: _____

IFB No.: _____

Alternative No.: _____

To: _____

We, the undersigned, declare that:

1. We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.
2. We accept that we will automatically be suspended from being eligible for bidding in any contract with the Purchaser for the period of time of _____ [insert number of months or years] starting on _____ [insert date], if we are in breach of our obligation(s) under the bid conditions, because we:
 - (a) have withdrawn our Bid during the period of bid validity specified by us in the Bidding Data Sheet; or
 - (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the ITB.
3. We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.
4. We understand that if we are a Joint Venture, the Bid Securing Declaration must be in the name of the Joint Venture that submits the bid. If the Joint Venture has not been legally constituted at the time of bidding, the Bid Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed: _____ [insert signature of person whose name and capacity are shown] In the capacity of _____ [insert legal capacity of person signing the Bid Securing Declaration]

Name: _____ [insert complete name of person signing the Bid Securing Declaration]

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

Dated on _____ day of _____, _____ [insert date of signing]

Manufacturer's Authorization

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

Date of Bid Submission(<i>day/ month/ year</i>):
IFB No: <i>[insert number of bidding process]</i>
Alternative No.: <i>[insert identification No if this is a Bid for an alternative]</i>

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

WHEREAS

We _____ *[insert complete name of Manufacturer]*, who are official manufacturers of _____ *[insert type of goods manufactured]*, having factories at _____ *[insert full address of Manufacturer's factories]*, do hereby authorize _____ *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us _____ *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 1.3 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

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

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

Title: _____ *[insert title]*

Duly authorized to sign this Authorization on behalf of: _____ *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Letter of Acceptance
(Letterhead paper of Procuring Entity)

Date: _____

To: _____
(Name of Supplier)

(Address of Supplier)

We hereby notify you that your bid dated the _____ day of _____ 20____, for the supply of goods _____ (*description of goods*) up to a total of _____
(*Amount in figures and words*)

as amended and modified in accordance with the Instructions to Bidders is hereby accepted by our agency.

Simultaneously, we send you the Form of Contract and request you, pursuant to Clause 20.1 of the Instructions to Bidders, during seven (7) days to sign and date the Form of Contract, and return it at our address. Jointly with the signed Contract, we request you to furnish the performance security, in accordance with ITB Clause 20.2.

You hereby entrusted to start supply of the Goods, in accordance with the terms and conditions of a Contract.

Name of agency _____

Full name and Title _____

Signature of Authorized Representative _____

Power of Attorney

TO: _____ [*name of Procuring Entity*]

WHEREAS _____ [*name of Supplier*],
who is the Supplier _____ [*name and/or description of goods*].

do hereby authorize _____ [*name and address of Supplier's Representative*] to submit the Bid, and sign the Contract based on *Invitation for Bids* for the abovementioned goods to be supplied by us, and

[*Full name, title, signature for and on behalf of Supplier*]

Dated on « _____ » day of _____ 20____ (Seal)
(Date)

Note: The power of attorney must be drafted on a letterhead paper of the Supplier, and signed by a competent person authorized by the Supplier. The Bidder shall include this power of attorney in his Bid.

Evaluation and Qualification Criteria

1. Evaluation Criteria

The Purchaser's evaluation of a bid will take the following into account:-

(a) Mandatory Administrative Requirements :

1	Warranty/Guarantee	18 months
2	Proof of Performance	Within five years
3	Validity of Quotation	90 Days
4	All Technical Schedules completed and submitted	Required
5	Manufacture Authorization	Required
6	Country of Origin	Required

(b) Compliance with all Technical Requirements.

(c) Points allocation and ranking as follows:

1	Delivery Time	10
2	Payment Terms	20
3	Total Owning Cost (Bid Price + Losses Capitalised)	70

The Criteria provided for the contract to be awarded to the bidder whose bid is determined to be substantially technically responsive to the bid document and who (Scores the highest Points) offers the lowest evaluated price.