

**PART A
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DEPARTMENT OF PUBLIC WORKS ROADS AND INFRASTRUCTURE

BID NUMBER:	LDPWRI-BM/20477	CLOSING DATE:	18 FEBRUARY 2025	CLOSING TIME:	11H00
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DESCRIPTION **APPOINTMENT OF FRAMEWORK CONTRACTOR FOR THE SUPPLY, DELIVERY, INSTALLATION, PREVENTATIVE MAINTENANCE, REPAIRS AND SERVICING OF STAND-BY DIESEL GENERATORS IN LIMPOPO PROVINCE FOR A PERIOD OF 36 MONTHS, VHEMBE DISTRICT: CIDB GRADING 3ME OR 3EB OR HIGHER.**

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)

CORNER BLAAUWBERG & RIVER STREET

LADANNA

0699

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO

TECHNICAL ENQUIRIES MAY BE DIRECTED TO:

CONTACT PERSON	MOTSOPYE NJ	CONTACT PERSON	SIGEBE F
TELEPHONE NUMBER	015 284 7126	TELEPHONE NUMBER	015 284 7714
E-MAIL ADDRESS	MotsopyeNJ@dpw.limpopo.gov.za	E-MAIL ADDRESS	SigebeF@dpw.limpopo.gov.za

SUPPLIER INFORMATION

NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE NUMBER	CODE	NUMBER	
CELLPHONE NUMBER			
E-MAIL ADDRESS			
VAT REGISTRATION NUMBER			
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:	OR	CENTRAL SUPPLIER DATABASE No: MAAA
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	<input type="checkbox"/> YES <input type="checkbox"/> NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED--(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:

(Proof of authority must be submitted e.g. company resolution)

.....

DATE:

.....



**LDPWR-B/....: APPOINTMENT OF FRAMEWORK CONTRACTOR FOR THE
SUPPLY, DELIVERY, INSTALLATION, PREVENTATIVE MAINTENANCE,
REPAIRS AND SERVICING OF STANDBY DIESEL GENERATORS IN LIMPOPO
PROVINCE FOR PERIOD OF 36 MONTHS_VHEMBE DISTRICT**

Issued by:

Limpopo Department of Public Works, Roads and Infrastructure
Works Towers Building
43 Church Street
Polokwane
0700

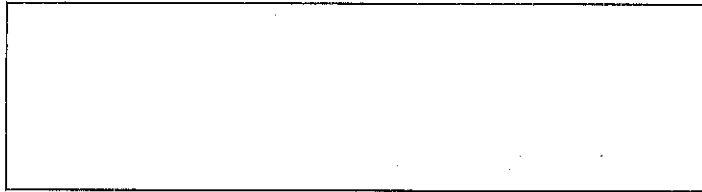
Contact Person: General Queries

Name : Mr NJ Motsopye
Tel No. : 015 284 7126
Email : MotsopyeNJ@dpw.limpopo.gov.za

Technical: Technical Queries

Name : Mr F Sigebe
Tel No. : 015 284 7714
Email : SigebeF@dpw.limpopo.gov.za

Name of the Bidder :



CONTENTS

THE TENDER

Part T1: Tendering procedures

- T1.1 Tender notice and invitation to tender
- T1.2 Tender data

Part T2: Returnable documents

- T2.1 List of returnable documents
- T2.2 Returnable schedules

THE CONTRACT

Part C1: Agreements and Contract data

- C1.1 Form of offer and acceptance
- C1.2 Contract data

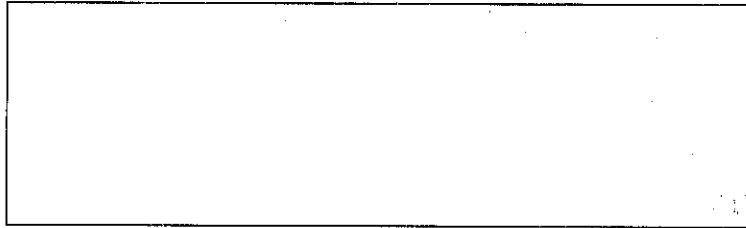
Part C2: Pricing data

- C2.1 Part 1 – Pricing Instructions
- C2.2 Part 2: Bills of Quantities

Part C3: Scope of works

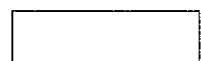
- C3.1 Scope of works
- C3.2 Specifications

Part C4: Site information



PART T1: TENDERING PROCEDURE

Bidder's initials



T1.1 Tender Notice and Invitation to Tender

Limpopo Department of Public Works, Roads and Infrastructure (LDPWR&I) invites tenders for the supply, delivery, installation, preventative maintenance, repairs and servicing of standby diesel generator sets in Limpopo Province for 36 months without a guarantee of the quantum of work. The bidders should be registered Construction Industry Development Board in grading designation of 3 EB or 3 ME or higher to be eligible to this bid.

The department have advertised four (4) bids for the following districts:

- Sekhukhune and Waterberg Districts (for the purpose of this tender, these two (2) districts are considered as one) (Instert bid no)
- Capricorn District (Instert bid no)
- Mopani District (Instert bid no)
- Vhembe District (Instert bid no)

The above bids are considered as a programme. Appointment will be limited to one service provider per district (bid). In the event that it is not possible to appoint one service provider per district (bid), one service provider can be appointed to a maximum of two (2) districts.

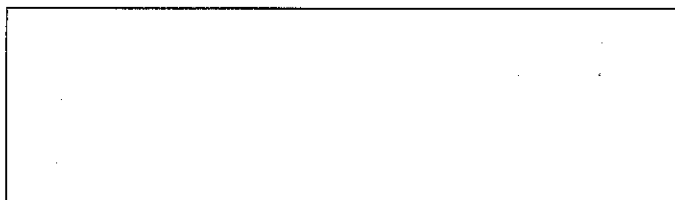
LDPWR&I or any client department or any organs of state including Municipalities and State Owned Entities, may make use this framework of contractor and issue Task Orders or Job cards, for work falling within the scope of the contained herein.

Project Name	Appointment of framework contractor for the supply, delivery, installation preventative maintenance, repairs and servicing of standby diesel generator sets in Limpopo Province for 36 months_Vhembe District
Tender Number	LDPWRI
Tender documents availability	Tender documents available on www.etenders.gov.za , CIDB website and www.dpw.limpopo.gov.za
Address for submission of tenders	DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE. Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699.
Closing date of the tender	
Closing time of the tender	11:00 am
Compulsory briefing meeting <i>(Tenderers must sign the attendance register in the name of the tendering entity)</i>	No compulsory briefing
Price of the tender document	Tender documents available on online
Evaluation criteria	<ol style="list-style-type: none"> 1. Compliance (mandatory or compulsory requirements) 2. Functionality 3. Price and Specific Goals 4. Negotiations
Mandatory or Compulsory Requirements <i>(failure to submit, complete or comply with these)</i>	Completed and signed Form of Offer

Bidder's initials

<i>requirements will lead to automatic disqualification)</i>	
Other Mandatory or Compulsory Requirements	<p>Completed and signed SBD 1, SBD 3.2, SBD 4, SBD 6.1</p> <p>Completed and signed Compulsory declaration and record of addendum (if applicable)</p>
Administrative documents <i>(failure to submit, complete or comply with these requirements will lead to failure in allocation of points as relevant during evaluation)</i>	<p>a. Letters of completed similar projector current work on an appropriate letterhead and signed off by client, must be attached. The letters must detail the scope of work undertaken, project value, date of award and completion, and location where work was carried out.</p> <p>b. Curriculum Vitae (not longer than 4 pages) of all key staff allocated to this project, indicating their experience and qualifications and professional registration with various councils.</p> <p>c. Certified copies (not older than 6 months) of all qualifications, professional registrations and training.</p> <p>d. List of plant as detailed in this bid document.</p> <p>e. Physical location of the bidder - Company office and established factory in Limpopo Province.</p> <p>f. Signed Preferencing Schedule, including submitting the supporting documents.</p> <ul style="list-style-type: none"> o Bidders must note that failure to complete the declaration and/or submitting the above-mentioned supporting documentation will lead to the rejection of a claim for a preference. <p>g. Annual financial statements that comply with the with the companies act and must not be older than 18 months.</p> <p>h. The tender document should be returned in printed and original form. It may not be re-typed or altered in any way. The documents must be completed in black ink (non-erasable) – in an eligible handwriting. Mistakes are to be corrected by drawing a line through it and writing the correct information above it. Tenderer to sign next to the correction. Use of correction fluid is prohibited and bidders shall automatically be disqualified</p>
Enquiries	<p>General:</p> <p>Name : Mr NJ Motsopye, Tel No. : 015 284 7126 Email : MotsopyeNJ@dpw.limpopo.gov.za</p> <p>Technical:</p> <p>Name : Mr F Sigebe Tel No. : 015 284 7714 Email : SigebeF@dpw.limpopo.gov.za</p>
	Telegraphic, telephonic, scanned documents, facsimile, e-mail and late tenders will not be accepted.

Bidder's initials



1.4

T1.2 Tender Data

2.

Clause number	Tender Data
	<p>The conditions of tender are the Standard Conditions of Tender as contained in Annex C of Board Notice 423 of 2019 in Government Gazette No. 42622 of 08 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (See www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to this Tender Data.</p> <p>The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.</p> <p>The following variations, amendments and additions to the Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender. Add the following to clauses in Standard Conditions of Tender:</p>
C.1.1	The Employer is the Department of Public Works, Roads and Infrastructure

C.1.2	<p>The following documents form part of this tender:</p> <p>The General Condition of Contract for Goods and Services is applicable to this work.</p> <p>The Tender</p> <p>Part T1: Tendering procedures</p> <p>T1.1 Tender notice and invitation to tender</p> <p>T1.2 Tender data</p> <p>Part T2: Returnable documents</p> <p>T2.1 List of returnable documents</p> <p>T2.2 Returnable schedules</p> <p>The Contract Part C1: Agreements and contract data</p> <p>C1.1 Form of offer and acceptance</p> <p>C1.2 Contract data</p> <p>The Contract Part C2: Pricing data</p> <p>C2.1 Pricing instructions</p> <p>C2.2 Bills of Quantities</p> <p>Part 3: Scope of work</p> <p>C3.1 Scope of work</p> <p>C3.2 Drawings</p> <p>C3.3 Specifications</p>
C.1.4	<p>The employer's representatives are :</p> <p>General:</p> <p>Name : Mr NJ Motsopye,</p> <p>Tel No. : 015 284 7126</p> <p>Email : MotsopyeNJ@dpw.limpopo.gov.za</p> <p>Technical:</p> <p>Name : Mr F Sigebe</p> <p>Tel No. : 015 284 7714</p> <p>Email : SigebeF@dpw.limpopo.gov.za</p> <p>Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer.</p> <p>Only information issued formally by the Employer in writing to Tenderers will be regarded as amending the Tender Documents.</p>
C.1.5	The employer reserve the right to cancel the tender prior to the award of the tender.
C1.6.2	A competitive negotiation procedure will be followed.
C1.6.3	A two-stage system will not be followed.

Bidder's initials

C.2.1	<p>Eligibility Criteria</p> <p>Only tenderers who are registered with the Construction Industry Development Board (CIDB) with designation of 3 ME or 3 EB or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, are eligible to have their tenders evaluated.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <p>Every member of the joint venture is registered with the CIDB.</p> <p>The lead partner has a contractor grading designation of 3 ME or 3 EB or Higher for the maintenance, service and supply of new generators or not lower than one level below the required grading designation in the class of maintenance and service works and possess the required recognition status.</p> <p>The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an elevator maintenance and service – Infrastructure or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.</p> <p>The tenderer must also submit the compulsory returnable documentation listed in of this tender</p>
C.2.7	<p>Compulsory site briefing</p> <p>No compulsory briefing session</p>
C.2.11	<p>Alterations to the documents</p> <p>Bidders are required to not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations</p>
C.2.12	<p>Alternative tender offer</p> <p>No alternative tender offer is permitted in this tender.</p>
C.2.13.2	<p><i>Replace sub-clause C.2.13.2 with the following;</i></p> <p>Return all returnable documents to the employer after completing them in their entirety by writing in non-erasable black ink</p>
C.2.13.3	<p>Parts of each tender offer communicated on paper shall be submitted as an original, plus 0 copies.</p>
C.2.13.4	<p>The tender shall be signed by a person duly authorized to do so.</p>

Bidder's initials

C.2.13.5	<p>The sealed original tender must be submitted to the employer by no later than the closing date and time.</p> <p>Location of tender box: DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE.</p> <p>Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699</p> <p>Identification details: Sealed Tender with Tender reference number, Title of Tender and the closing date and time of the tender.</p>
C.2.15.1	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
C.2.16.1	The tender offer validity period is 120 days .
C.2.16.2	The tender accepts that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for the tenders that a tender is withdrawn or substituted, if the validity period stated in C.2.16. lapses before the employer evaluating tender, the contractor reserves the right to review the price based on the Consumer Price Index (CPI).
C.3.1	<p>The tenderer is required to indicate how they claim points for the preference point system and attached relevant supporting documents. The specific goals for claiming of preference points include the following:</p> <p>Persons who had no franchise in national elections prior to 1984 and 1994</p> <p>Women</p> <p>Disabled persons</p> <p>Enterprises located in Limpopo province</p> <p>Promotion of youth</p> <p>RDP GOAL: Promotion of South African owned enterprises.</p> <p><i>CIDB Grading Certificate</i></p> <p>Tenderers are required to provide proof of registration with the CIDB register of contractors indicating the category of registration, grading as well as the CRS number of the tenderer.</p> <p><i>Letter of Good Standing</i></p> <p>Tenderers are required to submit, bound with the tender submission, a letter of good standing from the compensation commissioner indicating that the bidder is in good standing.</p>
C3.2	Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.

Bidder's initials

C.3.11	<p>The tenderers will be evaluated in four (4) stages</p> <ul style="list-style-type: none">• Mandatory and administrative Compliance• Functionality• Price and Specific Goals• Negotiations																		
	<p>Stage 1: Administrative Compliance: The Compliance or compulsory documents and returnables are detailed in Section T.2.1 of this tender document. Failure to submit, complete or comply with these requirements will lead to automatic disqualification.</p> <p>Stage 2: Functionality: Functionality of responsive bids submitted will be evaluated according to the predetermined criteria described below. Bidders are required to score a minimum number of evaluation points of 70 for functionality in order to proceed to the next phase of evaluation.</p> <table><tr><th>CRITERIA</th><th>DESCRIPTION</th><th>POINTS</th></tr><tr><td>Bidders previous experience</td><td>Bidder's past experience (proof of supply, maintenance and repairs of diesel generators).</td><td>25</td></tr><tr><td>Key personnel</td><td>Background and experience of all key personnel proposed to undertake the services.</td><td>50</td></tr><tr><td>Plant</td><td>Bidder submit a list of plant</td><td>10</td></tr><tr><td>Physical location in the province</td><td>Company office and fully established factory established in Limpopo Province</td><td>15</td></tr><tr><td colspan="2">Maximum possible Score</td><td>100</td></tr></table>	CRITERIA	DESCRIPTION	POINTS	Bidders previous experience	Bidder's past experience (proof of supply, maintenance and repairs of diesel generators).	25	Key personnel	Background and experience of all key personnel proposed to undertake the services.	50	Plant	Bidder submit a list of plant	10	Physical location in the province	Company office and fully established factory established in Limpopo Province	15	Maximum possible Score		100
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Maximum possible Score		100																	

Refer to **EVALUATION SCHEDULE 1 and 2** for more details.

Bidder's initials

Stage 3: Ranking of bidders based on comparative price and specific goals: the 80/20 point system will be applicable for this bid.

The procedure for final evaluation and ranking of the bidders will be based on Method 2 (Financial offer and specific goals).

The number of evaluation points awarded for financial offer will be calculated using this equation.

$$P = 80 * \left(1 - \frac{(P_o - P_m)}{P_m}\right)$$

Where:

P is the points awarded to the bid under consideration

P_m is the lowest acceptable bid price

P_o is the comparative price under consideration

The number of tender evaluation points awarded for specific goals claimed in accordance the following Table.

The department reserve the right to negotiate the rates with the successful service provider in line with the National Treasury Practice Notes.

Table 2: Specific goals for the tender and points claimed are indicated per the table below.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated. (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Persons who had no franchise in national elections prior to 1984 and 1994 (Attach certified copy of South African ID as proof)	6	
Women (Attach Director's certified copy of South African ID as proof + company registration documents)	3	
Disabled persons (Attach Health Professional as proof)	2	
Promotion of SMMEs (Attach financial statement as proof)	2	
Enterprises located in Limpopo Province (Attach proof of address/Lease agreement)	4	
Promotion of youth (Attach Director's certified copy of South African ID as proof)	1	
Promotion of South African owned enterprises (Attach Director's certified copy of South African ID as proof)	2	

Bidder's initials



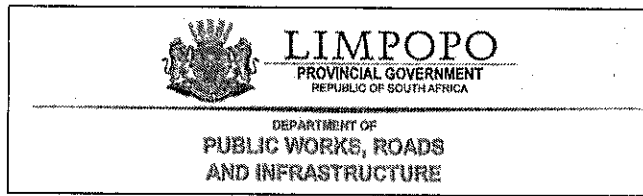
LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
PUBLIC WORKS, ROADS
AND INFRASTRUCTURE

PART T2: RETURNABLE DOCUMENTS

Bidder's initials



T2.1 : LIST OF RETURNABLE DOCUMENTS

1. The following returnable documents **are compulsory**, failure to comply will be considered non-responsive, and the bid will not be evaluated any further. All of these returnable documents are incorporated into the bid documents.
 - a. SBD 1: Invitation to bid
 - b. SBD 3.2: Pricing schedule – Non-firm prices (purchases)
 - c. SBD 4: Bidders' Disclosure
 - d. Completed and signed Form of offer
 - e. Record of Addenda (if applicable)
 - f. Compulsory declaration
 - g. SBD 6.1: Preference Points claim form in terms of the Preferential Procurement Regulations 2022 or amended. (fully completed and signed).
2. The following returnable documents are **required for tender evaluation purposes**
 - a. Letters of completion for previous or current work on an appropriate letterhead and signed off by client, must be attached. The letters must detail the scope of work undertaken, project value undertaken, date of award and completion, and location where work was carried out.
 - b. Curriculum Vitae (not longer than 4 pages) of all key staff allocated to this project, indicating their experience and qualifications and professional registration with various councils.
 - c. Certified copies (not older than 6 months) of all qualifications, professional registrations and training
 - d. Signed Preferencing Schedule, including submitting the supporting documents
 - o **Bidders must note that failure to complete the declaration and/or submitting the above-mentioned supporting documentation will lead to the rejection of a claim for a preference.**
 - e. Certified copy of the company's directors' identity documents not older than six (6) months. No copy of a certified copy will be accepted.
 - f. Not appearing on the National Treasury's list of black listed entities
 - g. A unique security Personal Identification number (PIN) issued by the South African Revenue Services.
 - h. CSD Report.
 - i. Submission of fully Completed and Priced Bill of Quantities.
 - j. Company office and fully established factory established in Limpopo Province.

T 2.2 : RETURNABLE SCHEDULE

	Document Name	Returnable document
1.	Record of Addenda to the tender	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.	Compulsory Declaration	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.	SBD 1: Invitation to Bid	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.	Proposed amendments and qualifications (if applicable)	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.	SBD 4: Bidders' Disclosure	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.	SBD 3.2: : Pricing schedule – Non-firm prices (purchases)	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.	SBD 6.1: Reference Points claim form in terms of the Preferential Procurement Regulations 2022 or amended	<input type="checkbox"/> Yes <input type="checkbox"/> No
8.	Form of offer	<input type="checkbox"/> Yes <input type="checkbox"/> No
9.	CSD report and tax pin	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.	Certified copy of Contractor Registration for Incorporation or of Company Registration Document	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.	Certificates or letters of completed or current similar projects, with Contactable references and on the Client's letterhead	<input type="checkbox"/> Yes <input type="checkbox"/> No
12.	Certified copy of directors' identity documents	<input type="checkbox"/> Yes <input type="checkbox"/> No
13.	Company office established in Limpopo Province	<input type="checkbox"/> Yes <input type="checkbox"/> No
14.	Curriculum Vitae (not longer than 4 pages) of all key staff	<input type="checkbox"/> Yes <input type="checkbox"/> No
15.	Certified copies (not older than 6 months) of all qualifications, professional registrations and training	<input type="checkbox"/> Yes <input type="checkbox"/> No

Record of Addenda to tender documents

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

Compulsory Declaration

The following particulars must be furnished. In the case of a joint venture, separate declaration in respect of each partner must be completed and submitted.

Section 1: Enterprise Details

Name of enterprise:	
Contact person:	
Email:	
Telephone:	
Cell no	
Fax:	
Physical address	
Postal address	

Section 2: Particulars of companies and close corporations

Company / Close Corporation registration number	
--	--

Section 3: SARS Information

Tax reference number	
VAT registration number:	<i>State Not Registered if not registered for VAT</i>

Section 4: CIDB registration number :

Section 5: National Treasury Central Supplier Database

Supplier number	
Unique registration reference number	

Section 6: Particulars of principals

principal: means a natural person who is a partner in a partnership, a sole proprietor, a director of a company established in terms of the Companies Act of 2008 (Act No. 71 of 2008) or a member of a close corporation registered in terms of the Close Corporation Act, 1984, (Act No. 69 of 1984).

Full name of principal	Identity number	Personal tax reference number

Attach separate page if necessary

Section 7: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any principal is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|--|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> an employee of any department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act of 1999 (Act No. 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature | |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> an employee of Parliament or a provincial legislature |

If any of the above boxes are marked, disclose the following:

Name of principal	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 8: Record of family member in the service of the state

family member: a person's spouse, whether in a marriage or in a customary union according to indigenous law, domestic partner in a civil union, or child, parent, brother, sister, whether such a relationship results from birth, marriage or adoption

Indicate by marking the relevant boxes with a cross, if any family member of a principal as defined in section 5 is currently or has been within the last 12 months been in the service of any of the following:

- | | |
|--|---|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature | |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | <input type="checkbox"/> an employee of Parliament or a provincial legislature |

☐ an official of any municipality or municipal entity

Name of family member	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 9: Record of termination of previous contracts with an organ of state

Was any contract between the tendering entity including any of its joint venture partners terminated during the past 5 years for reasons other than the employer no longer requiring such works or the employer failing to make payment in terms of the contract.

☐ Yes ☐ No (Tick appropriate box)

If yes, provide particulars (insert separate page if necessary)

Section 10: Declaration

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tendering entity confirms that the contents of this Declaration are within my personal knowledge, and save where stated otherwise in an attachment hereto, are to the best of my belief both true and correct, and:

- i) neither the name of the tendering entity or any of its principals appears on:
 - a) the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004)
 - b) National Treasury's Database of Restricted Suppliers (see www.treasury.gov.za)
- ii) neither the tendering entity or any of its principals has within the last five years been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa);
- iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);
- iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers
- v) has not engaged in any prohibited restrictive horizontal practices including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract etc) or intention to not win a tender;
- vi) has no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- vii) neither the tenderer or any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity and are not in arrears for more than 3 months;
- viii) SARS may, on an on-going basis during the term of the contract, disclose the tenderer's tax compliance status to the Employer and when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by the National Treasury, for SARS to do likewise.

Signed _____ Date _____

Name _____ Position _____

Enterprise _____

Proposed amendments and qualifications

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

Page	Clause or item	Proposal

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

PRICING SCHEDULE – NON-FIRM PRICES (PURCHASES)

NOTE: PRICE ADJUSTMENTS WILL BE ALLOWED AT THE PERIODS AND TIMES SPECIFIED IN THE BIDDING DOCUMENTS.

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder.....	Bid number.....
Closing Time 11:00	Closing date.....

OFFER TO BE VALID FOR 120 DAYS FROM THE CLOSING DATE OF BID.

ITEM NO.	QUANTITY	DESCRIPTION	BID PRICE IN RSA CURRENCY **(ALL APPLICABLE TAXES INCLUDED)
-------------	----------	-------------	--

- Required by:
- At:
- Brand and model:.....
- Country of origin:
- Does the offer comply with the specification(s)? *YES/NO
- If not to specification, indicate deviation(s):
- Period required for delivery:
- Delivery: *Firm/not firm

** "all applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

*Delete if not applicable

PRICE ADJUSTMENTS

A NON-FIRM PRICES SUBJECT TO ESCALATION

1. IN CASES OF PERIOD CONTRACTS, NON FIRM PRICES WILL BE ADJUSTED (LOADED) WITH THE ASSESSED CONTRACT PRICE ADJUSTMENTS IMPLICIT IN NON FIRM PRICES WHEN CALCULATING THE COMPARATIVE PRICES
2. IN THIS CATEGORY PRICE ESCALATIONS WILL ONLY BE CONSIDERED IN TERMS OF THE FOLLOWING FORMULA:

$$Pa = (1 - V)Pt \left(D1 \frac{R1t}{R1o} + D2 \frac{R2t}{R2o} + D3 \frac{R3t}{R3o} + D4 \frac{R4t}{R4o} \right) + VPt$$

Where:

Pa = The new escalated price to be calculated.
 = 85% of the original bid price. **Note that Pt must always be the original bid price and not an escalated price.**
 = Each factor of the bid price eg. labour, transport, clothing, footwear, etc.
 The total of the various factors D1, D2...etc. must add up to 100%.
 = Index figure obtained from new index (depends on the number of factors used).
 R1o, R2o = Index figure at time of bidding.
 = 15% of the original bid price. This portion of the bid price remains firm i.e. it is not subject to any price escalations.

3. The following index/indices must be used to calculate your bid price:

Index..... Dated.....	Index..... Dated.....	Index..... Dated.....
Index..... Dated.....	Index..... Dated.....	Index..... Dated.....

4. FURNISH A BREAKDOWN OF YOUR PRICE IN TERMS OF ABOVE-MENTIONED FORMULA. THE TOTAL OF THE VARIOUS FACTORS MUST ADD UP TO 100%.

FACTOR (D1, D2 etc. eg. Labour, transport etc.)	P PERCENTAGE OF BID PRICE

B PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS

1. Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RATE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

2. Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

¹ the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....

3 DECLARATION

I, _____ the _____ undersigned,
 (name)..... in submitting
 the accompanying bid, do hereby make the following statements that I certify to

be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature	Date
.....
Position	Name of bidder

**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL
PROCUREMENT REGULATIONS 2022**

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 To be completed by the organ of state

(delete whichever is not applicable for this tender).

- a) The applicable preference point system for this tender is the 90/10 preference point system.
- b) The applicable preference point system for this tender is the 80/20 preference point system.
- c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

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1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- d) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- e) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- f) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- g) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- h) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

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3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1 POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} 80/20 & \text{or} & 90/10 \\ P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) & \text{or} & P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) \end{array}$$

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

3.2 FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1 POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} 80/20 & \text{or} & 90/10 \\ P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) & \text{or} & P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) \end{array}$$

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{max} = Price of highest acceptable tender

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4. POINTS AWARDED FOR SPECIFIC GOALS

4.1 In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/documentation stated in the conditions of this tender:

4.2 In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.)

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Persons who had no franchise in national elections prior to 1984 and 1994(Attach certified copy of South African ID as proof)	6	
Women(Attach Director's certified copy of South African ID as proof + company registration documents)	3	
Disabled Persons(Attach letter from Health Professional as proof)	2	
Promotion of SMMEs(Attach financial statement as proof)	2	
Enterprise located in Limpopo Province and or District (Attach proof of address/Lease agreement)	4	
Promotion of youth(Attach Director's certified copy of South African ID as proof)	1	
RDP goal:Promotion of South African owned enterprise(Company registration documents)	2	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3 Name of company/firm.....

4.4 Company registration number:

4.5 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company

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- ☐ (Pty) Limited
- ☐ Non-Profit Company
- ☐ State Owned Company

4.6 I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

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.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:
.....
.....
.....

EVALUATION SCHEDULE 1: FUNCTIONALITY CRITERIA

Bidders are required to score a minimum number of evaluation points of 70 for functionality in order to proceed to the next phase of evaluation.

Technical Criteria	Sub-criteria	Points														
Bidder's previous experience for supply, delivery, repairs and servicing of standby diesel generators.	<p>Letter of completion for previous work and or current projects on design, supply, delivery, installation, repairs and maintenance of diesel generators on an appropriate letterhead and signed off by client, must be attached. Bidder should also complete Schedule 2.</p> <table><tr><th>Description</th><th>Points allocated</th></tr><tr><td>No letter</td><td>0</td></tr><tr><td>1 x Letter submitted</td><td>5</td></tr><tr><td>2 x Letters submitted</td><td>10</td></tr><tr><td>3 x Letters submitted</td><td>15</td></tr><tr><td>4 x Letters submitted</td><td>20</td></tr><tr><td>5 x Letters submitted</td><td>25</td></tr></table>	Description	Points allocated	No letter	0	1 x Letter submitted	5	2 x Letters submitted	10	3 x Letters submitted	15	4 x Letters submitted	20	5 x Letters submitted	25	25
Description	Points allocated															
No letter	0															
1 x Letter submitted	5															
2 x Letters submitted	10															
3 x Letters submitted	15															
4 x Letters submitted	20															
5 x Letters submitted	25															

Technical Criteria	Sub-criteria	Points													
Key Personnel Capacity (background and experience of all key personnel proposed to undertake the services)	Proposed project resource schedule Attached brief CVs (not longer than 4 pager) for all key staff who will be engaged in the delivery of the service to LDPWRI (indicating technical qualifications, copies of qualifications, previous projects, experience). Also attach copies of Professional Registration from the relevant Council (such as the Engineering Council of South Africa) Certified copies shall be less than 6 months. a) Allocation of Points for Electrician (Max = 20 points)	50													
	<table><tr><th>Category</th><th>Description</th><th>Points</th></tr><tr><td>(i) Qualifications</td><td>Registered Installation electrician for both single and three phase. NQF level 3 or above. (proof of certified copy is mandatory)</td><td>10</td></tr><tr><td rowspan="3">(ii) Experience (in the maintenance, repair or servicing of generators)</td><td>5 years or more relevant experience</td><td>10</td></tr><tr><td>1 to 4 years relevant experience.</td><td>6</td></tr><tr><td>Less than 1 year relevant experience</td><td>0</td></tr></table>		Category	Description	Points	(i) Qualifications	Registered Installation electrician for both single and three phase. NQF level 3 or above. (proof of certified copy is mandatory)	10	(ii) Experience (in the maintenance, repair or servicing of generators)	5 years or more relevant experience	10	1 to 4 years relevant experience.	6	Less than 1 year relevant experience	0
	Category		Description	Points											
	(i) Qualifications		Registered Installation electrician for both single and three phase. NQF level 3 or above. (proof of certified copy is mandatory)	10											
	(ii) Experience (in the maintenance, repair or servicing of generators)		5 years or more relevant experience	10											
			1 to 4 years relevant experience.	6											
			Less than 1 year relevant experience	0											
	b) Allocation of Points for an Artisan (Max = 20 points)														
	<table><tr><th>Category</th><th>Description</th><th>Points</th></tr><tr><td>(i) Qualifications</td><td>Diesel Mechanic Trade Test (proof of certified copy is mandatory)</td><td>10</td></tr><tr><td rowspan="2">(ii) Experience (in the maintenance,</td><td>5 years or more relevant experience.</td><td>10</td></tr><tr><td>1 to 4 years relevant experience</td><td>6</td></tr></table>		Category	Description	Points	(i) Qualifications	Diesel Mechanic Trade Test (proof of certified copy is mandatory)	10	(ii) Experience (in the maintenance,	5 years or more relevant experience.	10	1 to 4 years relevant experience	6		
	Category		Description	Points											
(i) Qualifications	Diesel Mechanic Trade Test (proof of certified copy is mandatory)	10													
(ii) Experience (in the maintenance,	5 years or more relevant experience.	10													
	1 to 4 years relevant experience	6													

Technical Criteria	Sub-criteria			Points		
	repair or servicing and installation of generators)	Less than 1 year relevant experience in the maintenance, repair or servicing of generators.	0			
	c) Allocation of points for Safety Officer (Max Points = 10 points)					
	Category	Description	Points			
	(i) Registration with Council and relevant body	Legal appointment for a Site Safety Officer appointed in terms of the Occupational, Health and Safety Act (OHS Act) with registration with the professional council as a Safety Officer	5			
		No registration with the professional council as a Safety Officer	0			
	(ii) Experience	5 years' experience or more as a safety officer	5			
		1 to 4 years of experience as safety officer	2			
		Less than 1 year experience	0			
	Plant and equipment	Description			Points	10
		The bidder submit proof of ownership or lease of the 1 Ton bakkie (NB: provide proof of ownership and/or rental contract to claim the points)			10	
2 x bakkies = 10						
1 x bakkie = 5						
	No bakkie = 0					

Technical Criteria	Sub-criteria	Points						
Company office established in Limpopo Province	The bidder should submit proof of established office in the Province. This should be in the form of Municipal bill, rental or lease contract, proof of ownership or proof of occupation from Traditional authority.	15						
	<table><tr><th>Description</th><th>Points</th></tr><tr><td>Company office established in Limpopo Province</td><td>15</td></tr><tr><td>No Office or factory established in province</td><td>0</td></tr></table>		Description	Points	Company office established in Limpopo Province	15	No Office or factory established in province	0
	Description		Points					
	Company office established in Limpopo Province		15					
No Office or factory established in province	0							
NB: The department reserves the right to inspect the offices before or after the award of the bid.								
TOTAL		100						

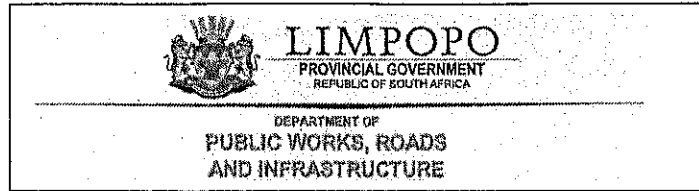
EVALUATION SCHEDULE 2: BIDDER'S EXPERIENCE

Relevant Experience in Similar Projects completed on time and Include the following:

NB: Completion of this table is mandatory for points to be allocated. Site Handover Certificate or similar, Practical completion certificate (if any) must be attached as proof of completion on time for full points to be allocated.

Client Name	Project Description	Project Value	Project Duration	Final/Practical Completion Certificate Attached? (Yes/No)	Signed Letter Of Current Projects Attached? (Yes/No)	Contact (Cell/Tel.)	Person

PART C1: AGREEMENT AND CONTRACT DATA



C1.1. FORM OF OFFER AND ACCEPTANCE

Offer

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

APPOINTMENT OF FRAMEWORK CONTRACTOR FOR THE SUPPLY, DELIVERY, INSTALLATION, PREVENTATIVE MAINTENANCE, REPAIRS AND SERVICING OF STANDBY DIESEL GENERATORS IN LIMPOPO PROVINCE FOR PERIOD OF 36 MONTHS - VHEMBE DISTRICT

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the tender schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, signing this part of the Form of Offer and Acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICE INCLUSIVE OF VALUE ADDED TAX IS (CONTRACT PRICE)

.....
Rand (in words); R.....

.....

(in figures) R.....

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s)..... Name (s)

Capacity Date

Name &
address of
the bidder
For the
tenderer:

.....
.....

Name &
signature of
witness

Date

.....
.....

Acceptance (To be completed by the employer – not the bidder)

By signing this part of this Form of Offer and Acceptance, the *Employer* identified below accepts the tenderer's Offer. In consideration thereof, the *Employer* shall pay the Consultant the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the *Employer* and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the *Employer* during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the *Employer's* agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the tenderer (now *Consultant*) within five working days of the date of such receipt notifies the *Employer* in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

For the Employer

Signature
Name
Capacity

Name and address of organization

Signature and Name of Witness

Signature
Name
Capacity

Schedule of Deviations

1 Subject

Details
.....
.....
.....

2 Subject
Details
.....
.....
.....

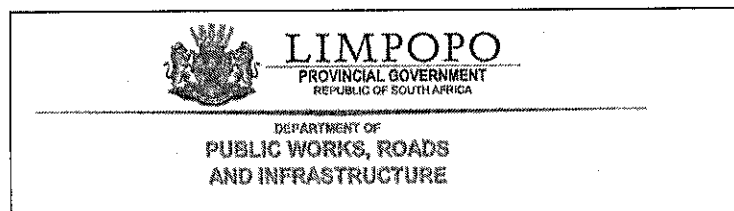
3 Subject
Details
.....
.....
.....

4 Subject
Details
.....
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.....

By the duly authorised representatives signing this agreement, the *Employer* and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the *Employer* during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

.....



C2.1 CONTRACT DATA

CONTRACT DATA FOR: APPOINTMENT OF FRAMEWORK CONTRACTOR FOR THE SUPPLY, DELIVERY, INSTALLATION, PREVENTATIVE MAINTENANCE, REPAIRS AND SERVICING OF STANDBY DIESEL GENERATORS IN LIMPOPO PROVINCE FOR PERIOD OF 36 MONTHS_VHEMBE DISTRICT	
1.	CONDITIONS OF CONTRACT The General Conditions of Contract (GCC) for Procurement of Goods and Services, published by National Department of Treasury is applicable
2.	CONTRACT SPECIFIC DATA The GCC contract is applicable in its entirety, with the following amendments:
	Clause 1.22: The name of the Employer is: Limpopo Department of Public Works, Roads and Infrastructure
	Clause 8: Inspection 8.1. All pre-bidding testing will be for the account of the bidder. 8.2. If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspections tests and analysis, the bidder or contractor's premises shall be open, at all reasonable hours, for inspection by a representative of the employer or an organization acting on behalf of the employer. 8.3. If there are no inspection requirements indicated in the bidding documents and no mention is

	<p>made in the contract, but during the contract period it is decided that inspections shall be carried out, the employer shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.</p> <p>8.4. If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the goods to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the employer.</p>
	<p>Clause 9: Packaging</p> <p>9.1. The bidder 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>Clause 10: Delivery</p> <p>Delivery of the goods shall be made by the bidder in accordance with the documents and terms specified in the contract. The details of shipping and/or other documents shall be furnished by the employer during the execution of the contract.</p>
	<p>Clause 11: Insurance</p> <p>The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified</p>
	<p>Clause 12: Transportation</p> <p>The bidder is to transport the goods in its entirety. The prices provided should be inclusive of the cost of transportation.</p>
	<p>Clause 13: Incidental</p> <p>13.1. The bidder may be required to provide any or all of the following services, including additional services, if any:</p> <ul style="list-style-type: none"> 13.1.1. performance or supervision of on-site assembly and/or commissioning of the supplied goods; 13.1.2. furnishing of tools required for assembly and/or maintenance of the supplied goods; 13.1.3. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods; 13.1.4. performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and 13.1.5. training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, startup, operation, maintenance, and/or repair of the supplied goods. <p>13.2. Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services</p>
	<p>Clause 14: Spare parts</p> <p>The bidder may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:</p>

	<p>14.1.1. such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and;</p> <p>14.1.2. in the event of termination of production of the spare parts:</p> <p>14.1.2.1. advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and</p> <p>14.1.2.2. following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested</p>
	<p>Clause 15: Warranty</p> <p>15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. Where applicable, the goods should be from the OEM or supported thereof.</p> <p>The bidder further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.</p> <p>15.2. This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract.</p> <p>15.3. The employer shall promptly notify the bidder in writing of any claims arising under this warranty.</p> <p>15.4. Upon receipt of such notice, the bidder shall, within the period and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.</p> <p>15.5. If the supplier, having been notified, fails to remedy the defect(s) within the period specified, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.</p>
	<p>Clause 16:</p> <p>16.1 For the supply and delivery of new generator sets, the bidders shall be paid once-off after the delivery and commissioning of the unit(s).</p> <p>16.2 The invoices for repairs and maintenance shall be accompanied by a completed Job card attached herein. The Job card should be duly signed by the employer's agent.</p> <p>16.3. Invoices may be submitted weekly, monthly or quarterly, depending on the nature of works conducted. Payments shall be made by the employer <i>no later than thirty (30) days</i> after submission of an invoice, statement or claim by the bidder.</p>
	<p>Clause 17:</p> <p>Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized or in the purchaser's request for bid validity extension, as the case may be.</p>

	No variation orders shall be accepted.
	<p>Clause 21: Delays in the bidder's performance</p> <p>21.1 Delivery of the goods, repairs or maintenance and performance of services shall be made by the supplier in accordance with the time schedule prescribed and agreed with the employer in the contract. Repairs of the generator units are expected to be undertaken within 24 hours from the time the call is made by the employer's agent.</p> <p>21.2. If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the employer in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the employer shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.</p> <p>21.3. The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.</p> <p>21.4. Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 22 without the application of penalties.</p> <p>21.5. Upon any delay beyond the delivery period in the case of a supplies contract, the employer shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.</p>
	<p>Clause 22: Penalties</p> <p>Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the employer shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services as follows:</p> <p>The penalty per calendar day shall be: 0.05% of the Contract Price, rounded to the nearest R10, for each day of the delay until actual delivery or performance.</p> <p>The employer may also consider termination of the contract pursuant to GCC Clause 23.</p>
	<p>Clause 23: Termination for default</p> <p>The employer is entitled to terminate the contract in term of Clause 23 of GCC contract.</p>
	<p>Clause 26: Termination for insolvency</p>

	<p>The employer may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.</p>
	<p>Clause 27: Settlement of disputes</p> <p>27.1. If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.</p> <p>27.2. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.</p> <p>27.3. Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.</p> <p>27.4. Notwithstanding any reference to mediation and/or court proceedings herein,</p> <p>27.4.1. the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and</p> <p>27.4.2. the employer shall pay the supplier any monies due for goods delivered and / or services rendered according to the prescripts of the contract.</p>
	<p>Clause 29</p> <p>The contract and communication be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.</p>
	<p>Clause 30: Applicable law</p> <p>The contract shall be interpreted in accordance with South African laws</p>
	<p>Clause 34: Amendments of the Contract</p> <p>No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.</p>



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
PUBLIC WORKS, ROADS
AND INFRASTRUCTURE

PART C2: PRICING DATA

C2.1 Pricing instruction

The bidder is required to provide rates provided in the Bills of Quantities in C2.1.

The rates provided will be negotiated as contract rates during the execution of the contract with the successful bidder. The rates and the financial offer provided are by no means a contracted amount.



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PART C2.2: BILLS OF QUANTITIES

SCHEDULE 1: RATES FOR SUPPLY AND INSTALLATION OF NEW GENERATORS (INDOOR UNITS)

- These are the rates for supply and installation of new diesel generators.
- For pricing purposes
 - a. The rate provided should be inclusive of the complete unit, complete with the auxiliary system, exhaust, cooling system.
 - b. Refer to generic specification of generators in Section C3 of this document.
- This Bill list is not exhaustive and may not include all the sizes of generators in the market.
- The below power rates refer to the standby power, at 420 V (three phase) or 220 V (single phase)

Item	Description (generator size)	Quantity	Unit (VAT (A)	Price excl.)	Installation per unit (B)	Total Cost (A+B)
1.1.	25 kVA, 3 phase	1				
1.2.	50 kVA, 3 phase	1				
1.3.	80 kVA, 3 phase	1				
1.4.	100 kVA, 3 phase	1				
1.5.	125 kVA, 3 phase	1				
1.6.	150 kVA, 3 phase	1				
1.7.	200 kVA, 3 phase	1				
1.8.	250 kVA, 3 phase	1				
1.9.	300 kVA, 3 phase	1				
1.10.	315 kVA, 3 phase	1				
1.11.	350 kVA, 3 phase	1				
1.12.	400 kVA, 3 phase	1				
1.13.	415 kVA, 3 phase	1				
1.14.	450 kVA, 3 phase	1				
1.15.	500 kVA, 3 phase	1				
1.16.	550 kVA, 3 phase	1				
1.17.	600 kVA, 3 phase	1				
1.18.	650 kVA, 3 phase	1				
1.19.	700 kVA, 3 phase	1				
1.20.	750 kVA, 3 phase	1				
1.21.	800 kVA, 3 phase	1				
1.22.	850 kVA, 3 phase	1				
1.23.	900 kVA, 3 phase	1				
1.24.	950 kVA, 3 phase	1				

Item	Description (generator size)	Quantity	Unit (VAT (A)	Price excl.)	Installation per unit (B)	Total Cost (A+B)
1.25.	1000 kVA, 3 phase	1				
1.26.	1125 kVA, 3 phase	1				
1.27.	1250 kVA, 3 phase	1				
1.28.	1500 kVA, 3 phase	1				
TOTAL R	CARRIED	TO	SUMMARY			

SCHEDULE 2: RATES FOR SUPPLY AND INSTALLATION OF NEW GENERATORS (OUTDOOR UNITS)

- These are the rates for supply and installation of new outdoor diesel generators, complete with a weather and soundproof container.
- For pricing purposes
 - c. The rate provided should be inclusive of the complete unit, complete with the auxiliary system, exhaust, cooling system.
 - d. Refer to generic specification of generators in Section C3 of this document.
 - e. The canopy shall be weather resistant and made of mild steel. The canopy should be provided with a soundproof to limit the noise level to 75 dB within 7 m radius.
 - f. The generator should come with a standard base tank
- This Bill list is not exhaustive and may not include all the sizes of generators in the market.
- The below power rates refer to the standby power, at 420 V (three phase) or 220 V (single phase)

Item	Description (generator size)	Quantity	Unit Price (VAT excl.) (A)	Installation per unit (B)	Total Cost (A+B)
2.1.	25 kVA, 3 phase	1			
2.2.	50 kVA, 3 phase	1			
2.3.	80 kVA, 3 phase	1			
2.4.	100 kVA, 3 phase	1			
2.5.	125 kVA, 3 phase	1			
2.6.	150 kVA, 3 phase	1			
2.7.	200 kVA, 3 phase	1			
2.8.	250 kVA, 3 phase	1			
2.9.	300 kVA, 3 phase	1			
2.10.	315 kVA, 3 phase	1			
2.11.	350 kVA, 3 phase	1			
2.12.	400 kVA, 3 phase	1			
2.13.	415 kVA, 3 phase	1			
2.14.	450 kVA, 3 phase	1			
2.15.	500 kVA, 3 phase	1			
2.16.	550 kVA, 3 phase	1			
2.17.	600 kVA, 3 phase	1			
2.18.	650 kVA, 3 phase	1			
2.19.	700 kVA, 3 phase	1			
2.20.	750 kVA, 3 phase	1			
2.21.	800 kVA, 3 phase	1			
2.22.	850 kVA, 3 phase	1			

Item	Description (generator size)	Quantity	Unit Price (VAT excl.) (A)	Installation per unit (B)	Total Cost (A+B)
2.23.	900 kVA, 3 phase	1			
2.24.	950 kVA, 3 phase	1			
2.25.	1000 kVA, 3 phase	1			
2.26.	1125 kVA, 3 phase	1			
2.27.	1250 kVA, 3 phase	1			
2.28.	1500 kVA, 3 phase	1			
TOTAL CARRIED TO SUMMARY R					

SCHEDULE 3: RATES FOR SERVICING OF GENERATORS

Item	Description (generator size)	Quantity	Minor Service per unit	Major Service per unit	Total Cost
3.1.	25 kVA, 1 phase	1			
3.2.	25 kVA, 3 phase	1			
3.3.	50 kVA, 3 phase	1			
3.4.	80 kVA, 3 phase	1			
3.5.	100 kVA, 3 phase	1			
3.6.	125 kVA, 3 phase	1			
3.7.	150 kVA, 3 phase	1			
3.8.	200 kVA, 3 phase	1			
3.9.	250 kVA, 3 phase	1			
3.10.	300 kVA, 3 phase	1			
3.11.	315 kVA, 3 phase	1			
3.12.	350 kVA, 3 phase	1			
3.13.	400 kVA, 3 phase	1			
3.14.	450 kVA, 3 phase	1			
3.15.	500 kVA, 3 phase	1			
3.16.	550 kVA, 3 phase	1			
3.17.	600 kVA, 3 phase	1			
3.18.	650 kVA, 3 phase	1			
3.19.	700 kVA, 3 phase	1			
3.20.	750 kVA, 3 phase	1			
3.21.	800 kVA, 3 phase	1			
3.22.	850 kVA, 3 phase	1			
3.23.	900 kVA, 3 phase	1			
3.24.	950 kVA, 3 phase	1			
3.25.	1000 kVA, 3 phase	1			
3.26.	1125 kVA, 3 phase	1			
3.27.	1250 kVA, 3 phase	1			
3.28.	1500 kVA, 3 phase	1			
TOTAL	CARRIED	TO	SUMMARY		
R					

SCHEDULE 4: RATES FOR SUPPLY AND INSTALLATION OF MATERIAL

Unit rates inclusive of material, profit and labour. Travelling distance and time will be determined execution of the works.

4.1. 25 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.1.1.	Oil Filter Set	1	
4.1.2.	Engine Oil	Ltr	
4.1.3.	Air Filter	1	
4.1.4.	Diesel Filter	1	
4.1.5.	Coolant Refill	Ltr	
4.1.6.	Voltage Drop Test	1	
4.1.7.	Charge Rate Test	1	
4.1.8.	V-Belts	1	
4.1.9.	Mains failure Test (on load)	1	
4.1.10.	Valves	1	
4.1.11.	Flexible Hoses	1	
4.1.12.	Battery Charger	1	
4.1.13.	Transformer (instrument)	1	
4.1.14.	Automatic Change-over relays	1	
4.1.15.	Water Drain	1	
4.1.16.	Water Jacket	1	
4.1.17.	Ammeter	1	
4.1.18.	Fuses	1	
4.1.19.	Main Circuit Breaker	1	
4.1.20.	Heater	1	
4.1.21.	Starter	1	
4.1.22.	Bulk Tank Pump	1	
4.1.23.	Set of Bearings	1	
TOTAL CARRIED TO SUMMARY			
R			

4.2. 50 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.2.1.	Oil Filter Set	1	
4.2.2.	Engine Oil	Ltr	
4.2.3.	Air Filter	1	
4.2.4.	Diesel Filter	1	
4.2.5.	Coolant Refill	Ltr	
4.2.6.	Voltage Drop Test	1	
4.2.7.	Charge Rate Test	1	
4.2.8.	V-Belts	1	
4.2.9.	Mains failure Test (on load)	1	
4.2.10.	Valves	1	
4.2.11.	Flexible Hoses	1	
4.2.12.	Battery Charger	1	
4.2.13.	Transformer (instrument)	1	
4.2.14.	Automatic Change-over relays	1	
4.2.15.	Water Drain	1	
4.2.16.	Water Jacket	1	
4.2.17.	Ammeter	1	
4.2.18.	Fuses	1	
4.2.19.	Main Circuit Breaker	1	
4.2.20.	Heater	1	
4.2.21.	Starter	1	
4.2.22.	Bulk Tank Pump	1	
4.2.23.	Set of Bearings	1	
4.2.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.3. 80 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.3.1.	Oil Filter Set	1	
4.3.2.	Engine Oil	Ltr	
4.3.3.	Air Filter	1	
4.3.4.	Diesel Filter	1	
4.3.5.	Coolant Refill	Ltr	
4.3.6.	Voltage Drop Test	1	
4.3.7.	Charge Rate Test	1	
4.3.8.	V-Belts	1	
4.3.9.	Mains failure Test (on load)	1	
4.3.10.	Valves	1	
4.3.11.	Flexible Hoses	1	
4.3.12.	Battery Charger	1	
4.3.13.	Transformer (instrument)	1	
4.3.14.	Automatic Change-over relays	1	
4.3.15.	Water Drain	1	
4.3.16.	Water Jacket	1	
4.3.17.	Ammeter	1	
4.3.18.	Fuses	1	
4.3.19.	Main Circuit Breaker	1	
4.3.20.	Heater	1	
4.3.21.	Starter	1	
4.3.22.	Bulk Tank Pump	1	
4.3.23.	Set of Bearings	1	
4.3.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)		
TOTAL CARRIED TO SUMMARY R			

4.4. 100 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.4.1.	Oil Filter Set	1	
4.4.2.	Engine Oil	Ltr	
4.4.3.	Air Filter	1	
4.4.4.	Diesel Filter	1	
4.4.5.	Coolant Refill	Ltr	
4.4.6.	Voltage Drop Test	1	
4.4.7.	Charge Rate Test	1	
4.4.8.	V-Belts	1	
4.4.9.	Mains failure Test (on load)	1	
4.4.10.	Valves	1	
4.4.11.	Flexible Hoses	1	
4.4.12.	Battery Charger	1	
4.4.13.	Transformer (instrument)	1	
4.4.14.	Automatic Change-over relays	1	
4.4.15.	Water Drain	1	
4.4.16.	Water Jacket	1	
4.4.17.	Ammeter	1	
4.4.18.	Fuses	1	
4.4.19.	Main Circuit Breaker	1	
4.4.20.	Heater	1	
4.4.21.	Starter	1	
4.4.22.	Bulk Tank Pump	1	
4.4.23.	Set of Bearings	1	
4.4.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.5. 125 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.5.1.	Oil Filter Set	1	
4.5.2.	Engine Oil	Ltr	
4.5.3.	Air Filter	1	
4.5.4.	Diesel Filter	1	
4.5.5.	Coolant Refill	Ltr	
4.5.6.	Voltage Drop Test	1	
4.5.7.	Charge Rate Test	1	
4.5.8.	V-Belts	1	
4.5.9.	Mains failure Test (on load)	1	
4.5.10.	Valves	1	
4.5.11.	Flexible Hoses	1	
4.5.12.	Battery Charger	1	
4.5.13.	Transformer (instrument)	1	
4.5.14.	Automatic Change-over relays	1	
4.5.15.	Water Drain	1	
4.5.16.	Water Jacket	1	
4.5.17.	Ammeter	1	
4.5.18.	Fuses	1	
4.5.19.	Main Circuit Breaker	1	
4.5.20.	Heater	1	
4.5.21.	Starter	1	
4.5.22.	Bulk Tank Pump	1	
4.5.23.	Set of Bearings	1	
4.5.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.6. 150 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.6.1.	Oil Filter Set	1	
4.6.2.	Engine Oil	Ltr	
4.6.3.	Air Filter	1	
4.6.4.	Diesel Filter	1	
4.6.5.	Coolant Refill	Ltr	
4.6.6.	Voltage Drop Test	1	
4.6.7.	Charge Rate Test	1	
4.6.8.	V-Belts	1	
4.6.9.	Mains failure Test (on load)	1	
4.6.10.	Valves	1	
4.6.11.	Flexible Hoses	1	
4.6.12.	Battery Charger	1	
4.6.13.	Transformer (instrument)	1	
4.6.14.	Automatic Change-over relays	1	
4.6.15.	Water Drain	1	
4.6.16.	Water Jacket	1	
4.6.17.	Ammeter	1	
4.6.18.	Fuses	1	
4.6.19.	Main Circuit Breaker	1	
4.6.20.	Heater	1	
4.6.21.	Starter	1	
4.6.22.	Bulk Tank Pump	1	
4.6.23.	Set of Bearings	1	
4.6.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.7. 200 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.7.1.	Oil Filter Set	1	
4.7.2.	Engine Oil	Ltr	
4.7.3.	Air Filter	1	
4.7.4.	Diesel Filter	1	
4.7.5.	Coolant Refill	Ltr	
4.7.6.	Voltage Drop Test	1	
4.7.7.	Charge Rate Test	1	
4.7.8.	V-Belts	1	
4.7.9.	Mains failure Test (on load)	1	
4.7.10.	Valves	1	
4.7.11.	Flexible Hoses	1	
4.7.12.	Battery Charger	1	
4.7.13.	Transformer (instrument)	1	
4.7.14.	Automatic Change-over relays	1	
4.7.15.	Water Drain	1	
4.7.16.	Water Jacket	1	
4.7.17.	Ammeter	1	
4.7.18.	Fuses	1	
4.7.19.	Main Circuit Breaker	1	
4.7.20.	Heater	1	
4.7.21.	Starter	1	
4.7.22.	Bulk Tank Pump	1	
4.7.23.	Set of Bearings	1	
4.7.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.8. 250 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.8.1.	Oil Filter Set	1	
4.8.2.	Engine Oil	Ltr	
4.8.3.	Air Filter	1	
4.8.4.	Diesel Filter	1	
4.8.5.	Coolant Refill	Ltr	
4.8.6.	Voltage Drop Test	1	
4.8.7.	Charge Rate Test	1	
4.8.8.	V-Belts	1	
4.8.9.	Mains failure Test (on load)	1	
4.8.10.	Valves	1	
4.8.11.	Flexible Hoses	1	
4.8.12.	Battery Charger	1	
4.8.13.	Transformer (instrument)	1	
4.8.14.	Automatic Change-over relays	1	
4.8.15.	Water Drain	1	
4.8.16.	Water Jacket	1	
4.8.17.	Ammeter	1	
4.8.18.	Fuses	1	
4.8.19.	Main Circuit Breaker	1	
4.8.20.	Heater	1	
4.8.21.	Starter	1	
4.8.22.	Bulk Tank Pump	1	
4.8.23.	Set of Bearings	1	
4.8.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.9. 300 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.9.1.	Oil Filter Set	1	
4.9.2.	Engine Oil	Ltr	
4.9.3.	Air Filter	1	
4.9.4.	Diesel Filter	1	
4.9.5.	Coolant Refill	Ltr	
4.9.6.	Voltage Drop Test	1	
4.9.7.	Charge Rate Test	1	
4.9.8.	V-Belts	1	
4.9.9.	Mains failure Test (on load)	1	
4.9.10.	Valves	1	
4.9.11.	Flexible Hoses	1	
4.9.12.	Battery Charger	1	
4.9.13.	Transformer (instrument)	1	
4.9.14.	Automatic Change-over relays	1	
4.9.15.	Water Drain	1	
4.9.16.	Water Jacket	1	
4.9.17.	Ammeter	1	
4.9.18.	Fuses	1	
4.9.19.	Main Circuit Breaker	1	
4.9.20.	Heater	1	
4.9.21.	Starter	1	
4.9.22.	Bulk Tank Pump	1	
4.9.23.	Set of Bearings	1	
4.9.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.10. 300 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.10.1.	Oil Filter Set	1	
4.10.2.	Engine Oil	Ltr	
4.10.3.	Air Filter	1	
4.10.4.	Diesel Filter	1	
4.10.5.	Coolant Refill	Ltr	
4.10.6.	Voltage Drop Test	1	
4.10.7.	Charge Rate Test	1	
4.10.8.	V-Belts	1	
4.10.9.	Mains failure Test (on load)	1	
4.10.10.	Valves	1	
4.10.11.	Flexible Hoses	1	
4.10.12.	Battery Charger	1	
4.10.13.	Transformer (instrument)	1	
4.10.14.	Automatic Change-over relays	1	
4.10.15.	Water Drain	1	
4.10.16.	Water Jacket	1	
4.10.17.	Ammeter	1	
4.10.18.	Fuses	1	
4.10.19.	Main Circuit Breaker	1	
4.10.20.	Heater	1	
4.10.21.	Starter	1	
4.10.22.	Bulk Tank Pump	1	
4.10.23.	Set of Bearings	1	
4.10.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.11. 350 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.11.1.	Oil Filter Set	1	
4.11.2.	Engine Oil	Ltr	
4.11.3.	Air Filter	1	
4.11.4.	Diesel Filter	1	
4.11.5.	Coolant Refill	Ltr	
4.11.6.	Voltage Drop Test	1	
4.11.7.	Charge Rate Test	1	
4.11.8.	V-Belts	1	
4.11.9.	Mains failure Test (on load)	1	
4.11.10.	Valves	1	
4.11.11.	Flexible Hoses	1	
4.11.12.	Battery Charger	1	
4.11.13.	Transformer (instrument)	1	
4.11.14.	Automatic Change-over relays	1	
4.11.15.	Water Drain	1	
4.11.16.	Water Jacket	1	
4.11.17.	Ammeter	1	
4.11.18.	Fuses	1	
4.11.19.	Main Circuit Breaker	1	
4.11.20.	Heater	1	
4.11.21.	Starter	1	
4.11.22.	Bulk Tank Pump	1	
4.11.23.	Set of Bearings	1	
4.11.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.12. 400 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.12.1.	Oil Filter Set	1	
4.12.2.	Engine Oil	Ltr	
4.12.3.	Air Filter	1	
4.12.4.	Diesel Filter	1	
4.12.5.	Coolant Refill	Ltr	
4.12.6.	Voltage Drop Test	1	
4.12.7.	Charge Rate Test	1	
4.12.8.	V-Belts	1	
4.12.9.	Mains failure Test (on load)	1	
4.12.10.	Valves	1	
4.12.11.	Flexible Hoses	1	
4.12.12.	Battery Charger	1	
4.12.13.	Transformer (instrument)	1	
4.12.14.	Automatic Change-over relays	1	
4.12.15.	Water Drain	1	
4.12.16.	Water Jacket	1	
4.12.17.	Ammeter	1	
4.12.18.	Fuses	1	
4.12.19.	Main Circuit Breaker	1	
4.12.20.	Heater	1	
4.12.21.	Starter	1	
4.12.22.	Bulk Tank Pump	1	
4.12.23.	Set of Bearings	1	
TOTAL CARRIED TO SUMMARY R			

4.13. 415 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.13.1.	Oil Filter Set	1	
4.13.2.	Engine Oil	Ltr	
4.13.3.	Air Filter	1	
4.13.4.	Diesel Filter	1	
4.13.5.	Coolant Refill	Ltr	
4.13.6.	Voltage Drop Test	1	
4.13.7.	Charge Rate Test	1	
4.13.8.	V-Belts	1	
4.13.9.	Mains failure Test (on load)	1	
4.13.10.	Valves	1	
4.13.11.	Flexible Hoses	1	
4.13.12.	Battery Charger	1	
4.13.13.	Transformer (instrument)	1	
4.13.14.	Automatic Change-over relays	1	
4.13.15.	Water Drain	1	
4.13.16.	Water Jacket	1	
4.13.17.	Ammeter	1	
4.13.18.	Fuses	1	
4.13.19.	Main Circuit Breaker	1	
4.13.20.	Heater	1	
4.13.21.	Starter	1	
4.13.22.	Bulk Tank Pump	1	
4.13.23.	Set of Bearings	1	
4.13.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.14. 450 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.14.1.	Oil Filter Set	1	
4.14.2.	Engine Oil	Ltr	
4.14.3.	Air Filter	1	
4.14.4.	Diesel Filter	1	
4.14.5.	Coolant Refill	Ltr	
4.14.6.	Voltage Drop Test	1	
4.14.7.	Charge Rate Test	1	
4.14.8.	V-Belts	1	
4.14.9.	Mains failure Test (on load)	1	
4.14.10. 0	Valves	1	
4.14.11.	Flexible Hoses	1	
4.14.12.	Battery Charger	1	
4.14.13.	Transformer (instrument)	1	
4.14.14.	Automatic Change-over relays	1	
4.14.15.	Water Drain	1	
4.14.16.	Water Jacket	1	
4.14.17.	Ammeter	1	
4.14.18.	Fuses	1	
4.14.19.	Main Circuit Breaker	1	
4.14.20.	Heater	1	
4.14.21.	Starter	1	
4.14.22.	Bulk Tank Pump	1	
4.14.23.	Set of Bearings	1	
4.14.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.15. 500 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.15.1.	Oil Filter Set	1	
4.15.2.	Engine Oil	Ltr	
4.15.3.	Air Filter	1	
4.15.4.	Diesel Filter	1	
4.15.5.	Coolant Refill	Ltr	
4.15.6.	Voltage Drop Test	1	
4.15.7.	Charge Rate Test	1	
4.15.8.	V-Belts	1	
4.15.9.	Mains failure Test (on load)	1	
4.15.10.	Valves	1	
4.15.11.	Flexible Hoses	1	
4.15.12.	Battery Charger	1	
4.15.13.	Transformer (instrument)	1	
4.15.14.	Automatic Change-over relays	1	
4.15.15.	Water Drain	1	
4.15.16.	Water Jacket	1	
4.15.17.	Ammeter	1	
4.15.18.	Fuses	1	
4.15.19.	Main Circuit Breaker	1	
4.15.20.	Heater	1	
4.15.21.	Starter	1	
4.15.22.	Bulk Tank Pump	1	
4.15.23.	Set of Bearings	1	
4.15.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.16. 550 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.16.1.	Oil Filter Set	1	
4.16.2.	Engine Oil	Ltr	
4.16.3.	Air Filter	1	
4.16.4.	Diesel Filter	1	
4.16.5.	Coolant Refill	Ltr	
4.16.6.	Voltage Drop Test	1	
4.16.7.	Charge Rate Test	1	
4.16.8.	V-Belts	1	
4.16.9.	Mains failure Test (on load)	1	
4.16.10.	Valves	1	
4.16.11.	Flexible Hoses	1	
4.16.12.	Battery Charger	1	
4.16.13.	Transformer (instrument)	1	
4.16.14.	Automatic Change-over relays	1	
4.16.15.	Water Drain	1	
4.16.16.	Water Jacket	1	
4.16.17.	Ammeter	1	
4.16.18.	Fuses	1	
4.16.19.	Main Circuit Breaker	1	
4.16.20.	Heater	1	
4.16.21.	Starter	1	
4.16.22.	Bulk Tank Pump	1	
4.16.23.	Set of Bearings	1	
4.16.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.17. 600 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.17.1.	Oil Filter Set	1	
4.17.2.	Engine Oil	Ltr	
4.17.3.	Air Filter	1	
4.17.4.	Diesel Filter	1	
4.17.5.	Coolant Refill	Ltr	
4.17.6.	Voltage Drop Test	1	
4.17.7.	Charge Rate Test	1	
4.17.8.	V-Belts	1	
4.17.9.	Mains failure Test (on load)	1	
4.17.10.	Valves	1	
4.17.11.	Flexible Hoses	1	
4.17.12.	Battery Charger	1	
4.17.13.	Transformer (instrument)	1	
4.17.14.	Automatic Change-over relays	1	
4.17.15.	Water Drain	1	
4.17.16.	Water Jacket	1	
4.17.17.	Ammeter	1	
4.17.18.	Fuses	1	
4.17.19.	Main Circuit Breaker	1	
4.17.20.	Heater	1	
4.17.21.	Starter	1	
4.17.22.	Bulk Tank Pump	1	
4.17.23.	Set of Bearings	1	
4.17.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.18. 650 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.18.1.	Oil Filter Set	1	
4.18.2.	Engine Oil	Ltr	
4.18.3.	Air Filter	1	
4.18.4.	Diesel Filter	1	
4.18.5.	Coolant Refill	Ltr	
4.18.6.	Voltage Drop Test	1	
4.18.7.	Charge Rate Test	1	
4.18.8.	V-Belts	1	
4.18.9.	Mains failure Test (on load)	1	
4.18.10.	Valves	1	
4.18.11.	Flexible Hoses	1	
4.18.12.	Battery Charger	1	
4.18.13.	Transformer (instrument)	1	
4.18.14.	Automatic Change-over relays	1	
4.18.15.	Water Drain	1	
4.18.16.	Water Jacket	1	
4.18.17.	Ammeter	1	
4.18.18.	Fuses	1	
4.18.19.	Main Circuit Breaker	1	
4.18.20.	Heater	1	
4.18.21.	Starter	1	
4.18.22.	Bulk Tank Pump	1	
4.18.23.	Set of Bearings	1	
4.18.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.19. 700 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.19.1.	Oil Filter Set	1	
4.19.2.	Engine Oil	Ltr	
4.19.3.	Air Filter	1	
4.19.4.	Diesel Filter	1	
4.19.5.	Coolant Refill	Ltr	
4.19.6.	Voltage Drop Test	1	
4.19.7.	Charge Rate Test	1	
4.19.8.	V-Belts	1	
4.19.9.	Mains failure Test (on load)	1	
4.19.10.	Valves	1	
4.19.11.	Flexible Hoses	1	
4.19.12.	Battery Charger	1	
4.19.13.	Transformer (instrument)	1	
4.19.14.	Automatic Change-over relays	1	
4.19.15.	Water Drain	1	
4.19.16.	Water Jacket	1	
4.19.17.	Ammeter	1	
4.19.18.	Fuses	1	
4.19.19.	Main Circuit Breaker	1	
4.19.20.	Heater	1	
4.19.21.	Starter	1	
4.19.22.	Bulk Tank Pump	1	
4.19.23.	Set of Bearings	1	
4.19.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.20. 750 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.20.1.	Oil Filter Set	1	
4.20.2.	Engine Oil	Ltr	
4.20.3.	Air Filter	1	
4.20.4.	Diesel Filter	1	
4.20.5.	Coolant Refill	Ltr	
4.20.6.	Voltage Drop Test	1	
4.20.7.	Charge Rate Test	1	
4.20.8.	V-Belts	1	
4.20.9.	Mains failure Test (on load)	1	
4.20.10.	Valves	1	
4.20.11.	Flexible Hoses	1	
4.20.12.	Battery Charger	1	
4.20.13.	Transformer (instrument)	1	
4.20.14.	Automatic Change-over relays	1	
4.20.15.	Water Drain	1	
4.20.16.	Water Jacket	1	
4.20.17.	Ammeter	1	
4.20.18.	Fuses	1	
4.20.19.	Main Circuit Breaker	1	
4.20.20.	Heater	1	
4.20.21.	Starter	1	
4.20.22.	Bulk Tank Pump	1	
4.20.23.	Set of Bearings	1	
4.20.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.21. 800 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.21.1.	Oil Filter Set	1	
4.21.2.	Engine Oil	Ltr	
4.21.3.	Air Filter	1	
4.21.4.	Diesel Filter	1	
4.21.5.	Coolant Refill	Ltr	
4.21.6.	Voltage Drop Test	1	
4.21.7.	Charge Rate Test	1	
4.21.8.	V-Belts	1	
4.21.9.	Mains failure Test (on load)	1	
4.21.10.	Valves	1	
4.21.11.	Flexible Hoses	1	
4.21.12.	Battery Charger	1	
4.21.13.	Transformer (instrument)	1	
4.21.14.	Automatic Change-over relays	1	
4.21.15.	Water Drain	1	
4.21.16.	Water Jacket	1	
4.21.17.	Ammeter	1	
4.21.18.	Fuses	1	
4.21.19.	Main Circuit Breaker	1	
4.21.20.	Heater	1	
4.21.21.	Starter	1	
4.21.22.	Bulk Tank Pump	1	
4.21.23.	Set of Bearings	1	
4.21.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.22. 850 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.22.1.	Oil Filter Set	1	
4.22.2.	Engine Oil	Ltr	
4.22.3.	Air Filter	1	
4.22.4.	Diesel Filter	1	
4.22.5.	Coolant Refill	Ltr	
4.22.6.	Voltage Drop Test	1	
4.22.7.	Charge Rate Test	1	
4.22.8.	V-Belts	1	
4.22.9.	Mains failure Test (on load)	1	
4.22.10.	Valves	1	
4.22.11.	Flexible Hoses	1	
4.22.12.	Battery Charger	1	
4.22.13.	Transformer (instrument)	1	
4.22.14.	Automatic Change-over relays	1	
4.22.15.	Water Drain	1	
4.22.16.	Water Jacket	1	
4.22.17.	Ammeter	1	
4.22.18.	Fuses	1	
4.22.19.	Main Circuit Breaker	1	
4.22.20.	Heater	1	
4.22.21.	Starter	1	
4.22.22.	Bulk Tank Pump	1	
4.22.23.	Set of Bearings	1	
4.22.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.23. 900 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.23.1.	Oil Filter Set	1	
4.23.2.	Engine Oil	Ltr	
4.23.3.	Air Filter	1	
4.23.4.	Diesel Filter	1	
4.23.5.	Coolant Refill	Ltr	
4.23.6.	Voltage Drop Test	1	
4.23.7.	Charge Rate Test	1	
4.23.8.	V-Belts	1	
4.23.9.	Mains failure Test (on load)	1	
4.23.10.	Valves	1	
4.23.11.	Flexible Hoses	1	
4.23.12.	Battery Charger	1	
4.23.13.	Transformer (instrument)	1	
4.23.14.	Automatic Change-over relays	1	
4.23.15.	Water Drain	1	
4.23.16.	Water Jacket	1	
4.23.17.	Ammeter	1	
4.23.18.	Fuses	1	
4.23.19.	Main Circuit Breaker	1	
4.23.20.	Heater	1	
4.23.21.	Starter	1	
4.23.22.	Bulk Tank Pump	1	
4.23.23.	Set of Bearings	1	
4.23.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.24. 950 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.24.1.	Oil Filter Set	1	
4.24.2.	Engine Oil	Ltr	
4.24.3.	Air Filter	1	
4.24.4.	Diesel Filter	1	
4.24.5.	Coolant Refill	Ltr	
4.24.6.	Voltage Drop Test	1	
4.24.7.	Charge Rate Test	1	
4.24.8.	V-Belts	1	
4.24.9.	Mains failure Test (on load)	1	
4.24.10.	Valves	1	
4.24.11.	Flexible Hoses	1	
4.24.12.	Battery Charger	1	
4.24.13.	Transformer (instrument)	1	
4.24.14.	Automatic Change-over relays	1	
4.24.15.	Water Drain	1	
4.24.16.	Water Jacket	1	
4.24.17.	Ammeter	1	
4.24.18.	Fuses	1	
4.24.19.	Main Circuit Breaker	1	
4.24.20.	Heater	1	
4.24.21.	Starter	1	
4.24.22.	Bulk Tank Pump	1	
4.24.23.	Set of Bearings	1	
4.24.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.25. 1000 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.25.1.	Oil Filter Set	1	
4.25.2.	Engine Oil	Ltr	
4.25.3.	Air Filter	1	
4.25.4.	Diesel Filter	1	
4.25.5.	Coolant Refill	Ltr	
4.25.6.	Voltage Drop Test	1	
4.25.7.	Charge Rate Test	1	
4.25.8.	V-Belts	1	
4.25.9.	Mains failure Test (on load)	1	
4.25.10.	Valves	1	
4.25.11.	Flexible Hoses	1	
4.25.12.	Battery Charger	1	
4.25.13.	Transformer (instrument)	1	
4.25.14.	Automatic Change-over relays	1	
4.25.15.	Water Drain	1	
4.25.16.	Water Jacket	1	
4.25.17.	Ammeter	1	
4.25.18.	Fuses	1	
4.25.19.	Main Circuit Breaker	1	
4.25.20.	Heater	1	
4.25.21.	Starter	1	
4.25.22.	Bulk Tank Pump	1	
4.25.23.	Set of Bearings	1	
4.25.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.26. 1125 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.26.1.	Oil Filter Set	1	
4.26.2.	Engine Oil	Ltr	
4.26.3.	Air Filter	1	
4.26.4.	Diesel Filter	1	
4.26.5.	Coolant Refill	Ltr	
4.26.6.	Voltage Drop Test	1	
4.26.7.	Charge Rate Test	1	
4.26.8.	V-Belts	1	
4.26.9.	Mains failure Test (on load)	1	
4.26.10.	Valves	1	
4.26.11.	Flexible Hoses	1	
4.26.12.	Battery Charger	1	
4.26.13.	Transformer (instrument)	1	
4.26.14.	Automatic Change-over relays	1	
4.26.15.	Water Drain	1	
4.26.16.	Water Jacket	1	
4.26.17.	Ammeter	1	
4.26.18.	Fuses	1	
4.26.19.	Main Circuit Breaker	1	
4.26.20.	Heater	1	
4.26.21.	Starter	1	
4.26.22.	Bulk Tank Pump	1	
4.26.23.	Set of Bearings	1	
4.26.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.27. 1250 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.27.1.	Oil Filter Set	1	
4.27.2.	Engine Oil	Ltr	
4.27.3.	Air Filter	1	
4.27.4.	Diesel Filter	1	
4.27.5.	Coolant Refill	Ltr	
4.27.6.	Voltage Drop Test	1	
4.27.7.	Charge Rate Test	1	
4.27.8.	V-Belts	1	
4.27.9.	Mains failure Test (on load)	1	
4.27.10.	Valves	1	
4.27.11.	Flexible Hoses	1	
4.27.12.	Battery Charger	1	
4.27.13.	Transformer (instrument)	1	
4.27.14.	Automatic Change-over relays	1	
4.27.15.	Water Drain	1	
4.27.16.	Water Jacket	1	
4.27.17.	Ammeter	1	
4.27.18.	Fuses	1	
4.27.19.	Main Circuit Breaker	1	
4.27.20.	Heater	1	
4.27.21.	Starter	1	
4.27.22.	Bulk Tank Pump	1	
4.27.23.	Set of Bearings	1	
4.27.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

4.28. 1500 kVA, 3 phase generator

ITEM No.	DESCRIPTION OF PART	QUANTITY	UNIT PRICE
4.28.1.	Oil Filter Set	1	
4.28.2.	Engine Oil	Ltr	
4.28.3.	Air Filter	1	
4.28.4.	Diesel Filter	1	
4.28.5.	Coolant Refill	Ltr	
4.28.6.	Voltage Drop Test	1	
4.28.7.	Charge Rate Test	1	
4.28.8.	V-Belts	1	
4.28.9.	Mains failure Test (on load)	1	
4.28.10.	Valves	1	
4.28.11.	Flexible Hoses	1	
4.28.12.	Battery Charger	1	
4.28.13.	Transformer (instrument)	1	
4.28.14.	Automatic Change-over relays	1	
4.28.15.	Water Drain	1	
4.28.16.	Water Jacket	1	
4.28.17.	Ammeter	1	
4.28.18.	Fuses	1	
4.28.19.	Main Circuit Breaker	1	
4.28.20.	Heater	1	
4.28.21.	Starter	1	
4.28.22.	Bulk Tank Pump	1	
4.28.23.	Set of Bearings	1	
4.28.24.	Sealed Lead acid maintenance free batteries (12 V, 120 Ah)	1	
TOTAL CARRIED TO SUMMARY R			

SCHEDULE 5: RATES FOR LABOUR RATE AND TRANSPORT

ITEM	DESCRIPTION	UNIT	QUANTITY	COST
	Transport The cost for transport will include the cost of labour during travelling time, all overheads, fuel costs, etc			
5.1.	1 Ton LDV	Rate/km	1	
	Labour:		1	
5.2.	Electrician / Technician	Rate/hour	1	
5.3.	Labourer	Rate/hour	1	
TOTAL CARRIED TO SUMMARY R				

SCHEDULE 6: RATES FOR STORAGE TANKS

Supply and installation of above-storage tanks for diesel, on a steel frame. The storage tanks should comply with SANS 10131:2004: Above-ground Storage Tanks for Petroleum Product and SANS 1200 HA: Structural steelwork (small works).

ITEM	DESCRIPTION	QUANTITY	RATE / UNIT	TOTAL COST (R)
6.1.	1 m ³ (1000 litres)	1		
6.2.	2.2 m ³ (2 200 litres)	1		
6.3.	4.5 m ³	1		
6.4.	5 m ³	1		
6.5.	8 m ³	1		
6.6.	10 m ³	1		
6.7.	12 m ³	1		
6.8.	15 m ³	1		
TOTAL	CARRIED	TO	SUMMARY	
	R			

SCHEDULE 7: RATES FOR SUPPLY OF ELECTRICAL

Supply and installation of the following electrical cables and accessories:

ITEM	Description	Quantity	Rate / unit	Total Cost (R)
	Supply and installation of 600/1000 V, PVC/SWA/PVC Cu cable			
7.1.	25 mm ² 4 core, 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
7.2.	35 mm ² 4 core 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
7.3.	50 mm ² 4 core, 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
7.4.	70 mm ² 4 core, 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
7.5.	95 mm ² 4 core, 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
7.6.	120 mm ² 4 core, 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
7.7.	150 mm ² 4 core, 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
7.8.	185 mm ² 4 core, 600/1000 V, PVC/SWA/PVC Cu cable	Per meter		
	Supply and installation of bare copper earth wire			
7.9.	70 - 95 mm ² Bare copper earth wire	Per meter		
7.10.	120 - 150 mm ² Bare copper earth wire + terminations	Per meter		
	Supply and installation of cable terminations complete with shroud, glands and lugs			
7.11.	25 mm ² 4-core Cu cable terminations	1		
7.12.	35 mm ² 4-core Cu cable terminations	1		
7.13.	50 mm ² 4-core Cu cable terminations	1		
7.14.	70 mm ² 4-core Cu cable terminations	1		
7.15.	95 mm ² 4-core Cu cable terminations	1		
7.16.	120 mm ² 4-core Cu cable terminations	1		
7.17.	150 mm ² 4-core Cu cable terminations	1		
7.18.	185 mm ² 4-core Cu cable terminations	1		
	Supply and installation of circuit breakers (similar of equivalent to CBI)			
7.19.	20 A, TP, 6 kA	1		
7.20.	30 A, TP, 6 kA MCB	1		
7.21.	80 A, TP, 10 kA MCB	1		
7.22.	100 A, TP, 10 kA MCB	1		
7.23.	100 A, TP, 10 kA MCCB	1		
7.24.	150 A, TP, 10 kA, MCCB	1		
7.25.	200 A, TP, 10 kA, MCCB	1		
7.26.	250 A, TP, 10 kA, MCCB	1		
7.27.	300 A, TP, 10 kA, MCCB	1		
7.28.	400 A, TP, 10 kA, MCCB	1		
7.29.	150 A, TP, 20 kA, MCCB	1		
7.30.	200 A, TP, 20 kA, MCCB	1		
7.31.	250 A, TP, 20 kA, MCCB	1		
7.32.	300 A, TP, 20 kA, MCCB	1		
7.33.	400 A, TP, 20 kA, MCCB	1		
TOTAL	CARRIED	TO	SUMMARY	
R				

SCHEDULE 8: OTHERS

ITEM	Description	Quantity	Rate / unit	Total Cost (R)
8.1.	Water/Oil separator	1		
8.2.	Generator controller as per specification attached in Section C.3.2	1		
8.3.	Pre-cast concrete slab for the generator – 30 MPA	1		
TOTAL CARRIED TO SUMMARY				

Note:

Not all the items are listed in the Bills of Quantities contained herein. In event that the service provider is required to supply and install such an items, a supplier's invoice must be obtained and submitted to LDPWR&I or an agent of state using this contract. The service provider shall claim for the cost of item(s) stipulated on the invoice plus a mark-up of not exceeding 25 % on such an invoice.

SUMMARY OF SCHEDULES OF QUANTITIES

SCHEDULE 1: RATES FOR SUPPLY AND INSTALLATION OF NEW GENERATORS (INDOOR UNITS)	R
SCHEDULE 2: RATES FOR SUPPLY AND INSTALLATION OF NEW GENERATORS (OUTDOOR UNITS)	R
SCHEDULE 3: RATES FOR SERVICING THE GENERATORS	R
SCHEDULE 4.1. – 4.28. : RATES FOR SUPPLY AND INSTALLATION OF MATERIAL (SCHEDULE 4.1 – 4.28)	R
SCHEDULE 5: RATES FOR LABOUR RATE AND TRANSPORT	R
SCHEDULE 6: RATES FOR STORAGE TANKS	R
SCHEDULE 7: ELECTRICAL INSTALLATIONS	R
SCHEDULE 8: OTHERS	
VAT	R
TOTAL (CARRIED TO FORM OF OFFER)	R

SERVICE SCHEDULE: ANNEXURE B1

CTY/TOWN _____

DEPARTMENT/BUILDING _____

INSTALLATION _____

1. Remove unit and check overall condition	9. Drain and flush cooling system, refill with clean water and coolant
2. Check and lubricate fan bearings	10. Tighten all bolts and nuts
3. Check operation of automatic controls	11. Clean unit
4. Check operation of hand controls	12. drain water from fuel tank
5. Replace filters	13. Drain exhaust condensate.
6. Replace engine oil	14. check hoses
7. Check condition of electrical connections, clean and reconnect	15. check drive belt tension
8. Check, adjust, replace worn out and v-belts	

Note:-

1. All minor and incidental repairs such as the replacement of nuts, bolts, washers, self-tapping screws, pop rivets etc, shall form part of the service. The Contractor shall allow for such repairs, (material and labour cost), in his price for servicing.
2. Report to officer in charge on arrival and departure.
3. Fill in service schedule and obtain signature of officer in charge.

REMARKS:

SERVICED BY _____

SIGNATURE _____

DATE _____

This portion must be completed by the complainant/designated officer of the Client Department

CLIENT DEPARTMENT (Please print) _____

THE CONTRACTOR LEFT THE SITE AT _____ ON _____

NAME: _____ DATE: _____

TEL. NO: _____

SIGNATURE: _____

Offices stamp

ANNEXURE B2: GENERAL CHECKS ON DIESEL GENERATOR PLANTS 3 MONTHLY – NO LOAD TEST.

- 1.1 Examine all equipment and check for wear in compliance with safety regulations.
 - 1.2 Check oil levels
 - 1.3 Check V-belt alignment and tension and adjust. Replace badly worn V-belts
 - 1.4 Check all electrical switchgear and clean switchboards internally. Check wiring and connections. Clean and re-connect loose wires.
 - 1.5 Report all defects on installation.
 - 1.6 Registered, competently trained personnel conversant with switchgear and controls shall carry out all electrical repairs.
 - 1.7 Check coolant level and leaks
 - 1.8 Check heater operation
 - 1.9 Check operation of voltmeters and ammeters
 - 2.0 Check and log operation of unit on 'TEST' mode, check and adjust
 - Start cut out function
 - Generator output voltage stability
 - Generator output frequency and stability
 - Engine water temperature
 - Engine oil pressure
 - Engine fuel pressure
 - Charging alternator output
-
- 2.1 Switch off engine and return plant selector switch to "AUTO" position
 - 2.2 Complete service log and record in plant logbook.

ANNEXURE B3: GENERAL CHECKS ON DIESEL GENERATOR PLANTS 6
MONTHLY – LOAD TEST.

- 1.1 Examine all equipment and check for wear in compliance with safety regulations.
- 1.2 Check oil levels
- 1.3 Check V-belt alignment and tension and adjust. Replace badly worn V-belts
- 1.4 Check all electrical switchgear and clean switchboards internally. Check wiring and connections. Clean and re-connect loose wires.
- 1.5 Report all defects on installation.
- 1.6 Registered, competently trained personnel conversant with switchgear and controls shall carry out all electrical repairs.
- 1.8 Check coolant level and leaks
- 1.8 Change oil (use only oil recommended by manufacturer)
- 1.9 Replace all air filters
- 2.0 Replace all oil filters
- 2.1 Check heater operation
- 2.2 Check operation of voltmeters and ammeters
 - 2.3 Check and log operation of unit on 'TEST' mode, check and adjust
 - Start cut out function
 - Generator output voltage stability
 - Generator output frequency and stability
 - Engine water temperature
 - Engine oil pressure
 - Engine fuel pressure
 - Charging alternator output
- 1.4 Switch off engine and return plant selector switch to 'AUTO' position
- 2.5 With plant selector switch in the "AUTO" position, trip and isolate the circuit breaker for the incoming power supply from the distribution board to the emergence board circuit breaker to simulate mains power failure
- 2.6 Observe start up and load acceptance of the set and satisfactory operation of the transfer switch
- 2.7 Run the set on load for up to 30 minutes then close the mains isolator and observe load shedding as well as the cooling down sequence until the set drops.
- 2.8 Complete service log and record in plant logbook.

ANNEXURE B4: ANNUAL OR 250 HOUR SERVICE CHECKS ON DIESEL GENERATOR

- 1.1 Examine all equipment and check for wear in compliance with safety regulations.
- 1.2 Check oil levels
- 1.3 Check V-belt alignment and tension and adjust. Replace badly worn V-belts
- 1.4 Check all electrical switchgear and clean switchboards internally. Check wiring and connections. Clean and re-connect loose wires.
- 1.5 Report all defects on installation.
- 1.6 Registered, competently trained personnel conversant with switchgear and controls shall carry out all electrical repairs.
- 1.9 Check coolant level and leaks
- 2.0 Check heater operation
- 2.1 Check operation of voltmeters and ammeters
 - 2.2 Check and log operation of unit on 'TEST' mode, check and adjust
 - Start cut out function
 - Generator output voltage stability
 - Generator output frequency and stability
 - Engine water temperature
 - Engine oil pressure
 - Engine fuel pressure
 - Charging alternator output
- 2.3 Switch off engine and return plant selector switch to "AUTO" position
- 2.4 With plant selector switch in the "AUTO" position, trip and isolate the circuit breaker for the incoming power supply from the distribution board to the emergence board circuit breaker to simulate mains power failure
- 2.5 Observe start up and load acceptance of the set and satisfactory operation of the transfer switch
- 2.6 Run the set on load for up to 30 minutes then close the mains isolator and observe load shedding as well as the cooling down sequence until the set drops.
- 2.7 Drain lubrication oil and replenish with the correct type and grade
- 2.8 Replace lubricating oil and fuel filters
- 2.9 Replace or clean air filters
- 2.10 Grease all points required
- 2.11 Drain and flush cooling system, refill with clean water and coolant
- 2.12 Rerun the set for 30 minutes.
- 2.13 Complete service log and record in plant logbook

COMPLAINT NO: _____

1. BUILDING: _____ DEPARTMENT: _____ ORDER NO: _____

COMPLAINT: _____

REPORTED BY: NAME: _____ TELEPHONE: _____ DATE: _____

CONTRACTOR: _____ AREA: _____

NB: UNUSED LINES MUST BE CANCELLED BEFORE CERTIFYING

LABOUR NON-SCHEDULE ITEMS		FROM	TO	HOURS	RATE		TOTAL
					R	c	R
ARTISAN							
LABOURER							
TRANSPORT COST		FROM ---TO		PAGE & SCHEDULE NO:	KILOMETRES		

ARTISAN'S NAME: _____

COMPLETION DATE: _____

SIGNATURE: _____

LABOUR & TRANSPORT TOTAL

SCHEDULE AND NON-SCHEDULE ITEMS TOTAL

TOTAL

VAT

GRAND TOTAL

REMARKS

3. THIS PORTION MUST BE COMPLETED BY THE COMPLAINANT/DESIGNATED OFFICER OF THE CLIENT DEPARTMENT

I CERTIFY THAT I PERSONALLY CHECKED AND AM SATISFIED THAT THE WORK HAS BEEN EXECUTED SATISFACTORILY. I HAVE RECEIVED THE SCRAP MATERIAL. (I DO NOT CERTIFY THE TECHNICAL CORRECTNESS)

NAME: _____ TELEPHONE NUMBER: _____

DESIGNATION: _____ SIGNATURE: _____ DATE: _____

RETAIN COPY FOR AUDIT PURPOSES

OFFICE STAMP

4.1 **FOR DEPARTMENTAL USE**

	State
	Hire
	Inspection

4.2 **FOR DEPARTMENTAL USE**

The work has been done

Signature: _____

	Telephonic confirmation by: _____
	Number: _____

Name: _____
Designation: _____
Date: _____



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
PUBLIC WORKS, ROADS
AND INFRASTRUCTURE

PART C3 SCOPE OF WORKS

C3.1 SCOPE OF WORKS

1. Employers Objectives

Limpopo Department of Public Works, Roads and Infrastructure invites tenders for the supply, delivery, installation preventative maintenance, repairs and servicing of standby diesel generator sets in Limpopo province. The department will enter into term contract with two successful tenderers for a period of 36 months *without a guarantee of the quantum of work*.

LDPWRR&I or any other department or organs of state including Municipalities and State Owned Entities may make use this contract and issue Task Orders for work falling within the scope of the contracts.

2. Extent of scope of works

2.1. Supply, delivery and installation of new generator sets

The scope involves the supply, delivery and installation of new generators include the commission and any works associated with the installations to ensure that the new generator unit is working. The generators will range from 25 kVA to 1500 kVA, 1 to 12 cylinders.

Unless otherwise specified, the contractor will be expected to make provision supply and installation of supply cables and first fill of the generator with diesel for testing and commissioning. Thereafter, the responsibility of filling the generators will remain the responsibility of the user.

2.2. Maintenance, repairs and servicing

Maintenance

The maintenance involves servicing, diagnosing, repairing, reporting, and testing of diesel generators. Servicing refers to performing routine preventive maintenance as prescribed by the original equipment manufacturer (OEM), LDPWR&I's planned maintenance routines, and applicable legal and design standards as outlined in the contract.

Repairs

Repairs refers to responding to breakdowns, callouts and restoring the equipment to safe working conditions within agreed timelines. The service provide will not be allowed to attend to repairs or maintenance without prior approval from the employer's agent.

All calls are to be attended to within 24 hours from the time the bidder receive the call from LDPWR&I agent.

Reporting involves diagnosing faults and breakdowns and providing failure analysis and recommendation reports on a timely basis.

3. Statutory requirements

- ✓ The Code of Practice for Wiring of Premises - SABS 0142-1
- ✓ The Occupational Health and Safety Act, Act 85 of 1993 – as amended.
- ✓ The municipal by-laws and any special requirements of the local supply authority
- ✓ **The local fire regulations**
- ✓ Department Standard Quality Specification for standby diesel alternator sets and ISO 9001:2000
- ✓ All relevant Departmental Quality specifications referred to in the standard specification.
- ✓ All low voltage switchgear and control gear assemblies are to comply to SABS 1473 Part 1 – 1989 /IEC 439 - 1 1985.



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
PUBLIC WORKS, ROADS
AND INFRASTRUCTURE

C.3.2 SPECIFICATIONS

GENERIC SPECIFICATION FOR SUPPLY, DELIVERY AND INSTALLATION OF INDOOR AND OUTDOOR DIESEL GENERATORS

SECTION 1: GENERAL SPECIFICATIONS

1. DESCRIPTION OF THE WORKS

The specification includes the design, supply, manufacture, testing, delivery and installation of diesel generator within the Limpopo Province. The generators should be used throughout the province, under the atmospheric conditions stated in this document.

The generating set shall be housed within an engine room or Container / Canopy on site identified by the Limpopo Department of Public Works, Roads and Infrastructure or any organ of state.

For new installations, service provider will also be responsible for civil works, such as Construction of a concrete plinth for the generator for outdoor units, trenches and installation of cables as necessary to bring the generator to operation. In such circumstances, the service provider will have to make provision of the first fill of the tank with diesel to allow for successful commissioning of the generator set.

Additionally, the service provider will be expected issue to electrical certificate of compliance, provide training of staff on the operation of the generator set and make provision of all handbooks, workshop manuals, drawings and circuit diagrams as necessary.

2. APPLICABLE STANDARDS, CODES AND REGULATIONS

- ✓ The Code of Practice for Wiring of Premises - SABS 0142-1
- ✓ The Occupational Health and Safety Act, Act 85 of 1993
- ✓ The municipal by-laws and any special requirements of the local supply authority
- ✓ **The local fire regulations**
- ✓ Department Standard Quality Specification for standby diesel alternator sets and ISO 9001:2000
- ✓ All relevant Departmental Quality specifications referred to in the standard specification.
- ✓ All low voltage switchgear and control gear assemblies are to comply to SABS 1473 Part 1 – 1989 /IEC 439 - 1 1985.

3. TEST CERTIFICATES AND INSPECTIONS

The following tests are to be carried out:

- (a) Factory test: At the supplier's premises, before the generating set will be delivered to site, Representatives of the Department may be present during the test to satisfy them that the generating set complies with the specification and delivers the specified output. The test must be carried out in accordance with ISO 3046, Part 2 and 3. The Department must receive proper notice of the date for the test.
- (b) Commissioning: After the generator has been installed and connected, and before hand-over back to the clinic, a full test will be carried out on the installation for a period of sufficient duration to confirm the satisfactory working of the installation. During this period, the installation will be inspected and the Contractor shall make good, to the satisfaction of the electrical engineer, any defects which may arise. The Department will issue the commissioning report template to be signed by the Contractor and Department's representative.
- (c) The Contractor shall provide all instruments and equipment required for commissioning. It shall also supply any water, power and fuel required for the construction works and commissioning of the installation at completion.
- (d) Test reports and all relevant statutory certificates for both the Factory Test and the Commissioning are to be submitted to the Client within 24 hours after the conclusion of each tests.
- (e) Training: The Contractor shall train assigned technical staff in the operation and maintenance of the generator installation.
- (f) The contractor shall issue an electrical certificate of compliance on conclusion of this project.

4. GUARANTEE AND MAINTENANCE

The Contractor shall guarantee the complete plant for a period of twelfth months after Commissioning has taken place (Defects liability period).

If during this period the plant is not in working order, or not working satisfactorily owing to faulty material, design or workmanship, the Contractor will be notified and immediate steps shall be taken by him to rectify the defects and/or replace the affected parts on site at his own expense.

The Contractor shall also be available on a call-out basis during the Defects Liability Period, to do repairs on any cabling, switchgear or any other mechanical or electrical equipment that affects the operation of the backup power supply.

The Contractor shall service and maintain the generator set for the full twelve (12) month period to the final delivery of the installation. However, should the Contractor fail to hand-over the generator set in good working order on the expiry of the Defects Liability Period, the Contractor shall be responsible for further monthly maintenance until the generator set is in good working condition.

During this period the Contractor will undertake to arrange that the generator set is inspected at

least once every three (3) months by a qualified member of his staff who shall:

- (a) Report to the Officer-in-charge, keeping the maintenance records, and enter into a log book the date of the visit, the tests carried out, the adjustments made, and any further details that may be required.
- (b) Grease and oil moving parts, where necessary.
- (c) Check the air filter and, when necessary, clean the filter and replace filter oil.
- (d) Check the lubricating oil and top-up when necessary.
- (e) After the generator set has run one oil change for the number of hours stipulated by the manufacturers, drain the sump and refill with fresh lubricating oil. The reading of the hour meter on the switchboard will be taken to establish the number of hours run by the plant. Only the cost of the actual oil used, shall be charged as an extra on the monthly account.
- (f) Clean the lubricating oil filter and/or replace the filter element at intervals recommended by the engine manufacturer, the cost of a new filter element to be charged as an extra on the monthly account.
- (g) Check and when necessary adjust the valve settings and the fuel injection equipment.
- (h) Check the battery and top-up the electrolyte when necessary.
- (i) Test-run the plant for 0,5 hour and check the automatic starting with simulated faults on the mains, the proper working of all parts, including the electrical gear the protective devices with fault indicators, the changeover equipment and the battery charger. Make the necessary adjustments.
- (j) Report to the Department and to the Contractor on any parts that become unserviceable through fair wear and tear, or damaged by causes beyond the control of the Contractor. The Contractor on receiving the report, shall immediately submit a detailed quotation for the repair or replacement of such parts to the Department.
- (k) Advise the Department when it has become necessary to de-carbonise the engine and submit a quotation for this service.
- (l) Top up the water of the radiator, if applicable.
- (m) Clean the generator set and its components.

5. MATERIALS AND WORKMANSHIP

- (a) The work throughout shall be executed to the highest standards (**SABS approved**) and to the satisfaction of the Department of Public Works, Roads and Infrastructure's representative. The Engineer shall apply the standards and specifications in the contract document and have the authority to reject any work and materials, which, in his judgement, are not in full accordance therewith. All condemned material and workmanship shall be replaced and removed from site, or rectified as directed and approved by the Engineer.
- (b) All work shall be executed by qualified tradesman.
- (c) The Contractor shall warrant that the materials and workmanship shall be of the highest grade and to specification.
- (d) The cost of all sundry material and consumables required for the proper installation of equipment, switchgear and cabling, will be included in the cost of said equipment, switchgear and cabling.
- (e) The Contractor shall thoroughly acquaint himself with the work involved and shall verify on site all measurements necessary for proper installation work. The Contractor shall also be prepared to promptly furnish any information relating to his own work as may be necessary for the proper installation work and shall co-operate with and co-ordinate the work of others as may be applicable.
- (f) All components and their respective adjustment, which do not form part of the equipment installation work, but influence the optimum and safe operation of the equipment shall be considered to form part of, and shall be included in the Contractor's scope of works.

- (g) All control equipment and serviceable items shall be installed and positioned such that they will be accessible and maintainable.
- (h) The Contractor shall make sure that all safety regulations and measures are applied and enforced during the installation and guarantee periods to ensure the safety of the public and the User Client.
- (i) The Contractor is to include for all scaffolding required to complete the work required.

6. BROCHURES

Detailed brochures of all equipment offered shall be presented together with the tender documents, if possible.

7. SUBMITTALS

The following information must accompany the quotation:

- (a) Full particulars, performance curves and illustrations of the equipment offered, must be submitted with the quotation.
- (b) The design of the control system to comply with the requirements for automatic starting, stopping, interlocking and isolation as specified.
- (c) Curves furnished by the engine makers, showing the output of the engine offered against the speed, for both intermittent and continuous operation as well as fuel consumption curves when the engine is used for electric generation

The contractor shall issue a set of drawings and wiring diagrams upon receipt of the order. One diagram shall be contained in a metal pouch on the side of the control panel.

SECTION 2 – TECHNICAL SPECIFICATIONS

i. SERVICE CONDITIONS

All plant and equipment to operate satisfactory within the province. The design satisfy the following operating conditions:

Nominal supply voltage	: 230 / 420 V \pm 5 %
Nominal supply frequency	: 50 Hz
Altitude	: ~ 1500 m above sea level
Ambient temperature	: 0 – 45 °C
Relative humidity	: 45% - 75%
Average annual rainfall	: 350 mm
Pollution	: Light pollution
Lightning ground flash density	: >1,0 flashes/km ² /year

ii. DETAILED SPECIFICATION

2.1 ENGINE

The engine shall be multi-cylinder diesel engine running at 1500 revolutions per minute (rpm) and rated for continuous duty in accordance with BS 5514. The department prefers water cooled and turbo-charge engines.

The engine shall be governed to a tolerance ± 5 rpm for all loads. Recovery for transient speed variations shall be within 5 seconds.

The engine should be able to deliver maximum alternator output power continuously at a unity power factor (PF = 1). In addition, the engine shall be capable of delivering 110 % load for one hour, after the set has been running at full load for a period of six hours and shall, after the overload period of one hour it must be capable of maintaining the rated output continuously without any undue mechanical strain, overheating, incomplete fuel combustion or other ill effects.

The engines should be operating under the environmental conditions stated above.

The engine shall be equipped with the following facilities (at minimum):

- Cooling Radiator if water cooled engine is offered.
- Engine starter motor.
- Automatic Radiator Louver arranged to close when engine is stationary – ONLY in some instances when required.
- Engine heater system for cold starting. The generator set should connect to the load within 3 minutes of mains power failure.
- Fuel pump solenoid arranged to be energized to run.
- Fuel lift pump.
- Fuel filters.
- By-pass type lubricating oil filter.
- Lubricating oil level dipstick. Easy facilities for draining lubricating oil sump.
- Dry type replaceable cartridge air filter.
- Engine driven battery charging alternator.
- Low oil pressure switch arranged to shut down plant on low oil pressure.
- Low coolant level switch arranged to shut down plant on low coolant level.
- Electrical sensors for remote indication of oil pressure and water temperature.
- Fixed overload stop set at 10%.
- High engine temperature switch fixed in a suitable position on the engine and arranged to shut down the plant on high engine temperature.

- Over speed shut-down device to protect against run-away.
- The engine shall be capable of satisfactory performance on a commercial grade of distilled petroleum fuel oil such as (Commercial grade diesel fuel 50ppm sulphur content).
- The diesel base tank should allow the generator to run 24 hours continuously at full load without the need for re-fill. In exceptional cases, a larger base tank may be specified by LDPWR&I.

The engine shall be controlled by a governor to maintain governed speed for 50 Hz operation. Class A1 governing in accordance with B.S. 5514 as amended is required.

2.2 EXHAUST SYSTEM

The engine shall be fitted with an efficient Stainless-Steel exhaust system. Flexible bellows shall be fitted between the exhaust outlet and the silencer. The flexible piping must on no account be used to form a bend or compensate for misalignment.

The super residential silencer shall be located on the canopy roof and shall be of the highly efficient type suitable for use in medical areas and shall be capable of providing 30 to 40 decibels of suppression.

The silencer and discharge piping shall be suitably supported. Internal (inside the canopy) exhaust pipe shall be suitably lagged then clad in polished stainless-steel sheet.

2.3 STARTER

The engine shall be equipped with a 12 Volt starting system of sufficient capacity to crank the engine at a speed, which will allow starting of the engine. The starting equipment shall include a 12 Volt D.C. starter motor engaging directly on the flywheel ring gear.

The battery shall be maintained in a fully charged state by an engine driven battery charging alternator with automatic charge rate control. The battery shall stand in an acid spillage tray treated with acid resistant paint, positioned in such that adequate ventilation is provided. Adequate natural ventilation shall be provided between and around the batteries.

The batteries shall be connected to the engine with suitably rated PVC insulated flexible leads. The batteries shall have sufficient capacity to provide three automatic attempts to start immediately followed by three manual attempts without any appreciable drop in voltage.

The battery shall be date stamped with the year and month of manufacturing

2.4 ALTERNATOR

The alternator shall be of the two bearing type coupled to the engine through a suitable flexible coupling. All the alternators shall be of the brushless, self-excited screen protected drip proof type, and shall comply with the following conditions:

- The ratings of the alternators shall be
 - 25 kVA, 415/230 V AC
 - 50 kVA, 415/230 V AC
 - 80 kVA, 415/230 V AC
 - 100 kVA, 415/230 V AC
 - 125 kVA, 415/230 V AC
 - 150 kVA, 415/230 V AC

- 200 kVA, 415/230 V AC
- 250 kVA, 415/230 V AC
- 300 kVA, 415/230 V AC
- 315 kVA, 415/230 V AC
- 350 kVA, 415/230 V AC
- 400 kVA, 415/230 V AC
- 415 kVA, 415/230 V AC
- 450 kVA, 415/230 V AC
- 500 kVA, 415/230 V AC
- 550 kVA, 415/230 V AC
- 600 kVA, 415/230 V AC
- 650 kVA, 415/230 V AC
- 700 kVA, 415/230 V AC
- 750 kVA, 415/230 V AC
- 800 kVA, 415/230 V AC
- 850 kVA, 415/230 V AC
- 900 kVA, 415/230 V AC
- 950 kVA, 415/230 V AC
- 1000 kVA, 415/230 V AC
- 1125 kVA, 415/230 V AC
- 1250 kVA, 415/230 V AC
- 1500 kVA, 415/230 V AC

- The generator set shall be 3 phase with four wires (all the three phases and neutral).
- The generator shall be of heavy duty compact design. Insulation shall be Class H as recognised by B.S.5514.

The voltage regulation shall not exceed 2.5 %, from no load to full load, including cold to hot variations at any power factor between 0,8 lagging or higher (unity) and inclusive of speed variations within the limits. Upon application of full load at a power factor of 0,8 lagging, the alternator voltage shall recover to within 2.5 % of the steady state value within approximately 300 milliseconds.

The maximum voltage dip shall not exceed 20 % of the nominal voltage during transients when measured at the alternator terminals.

2.5. CONTROL SYSTEM

The control panel shall be controlled by a dedicated generator controller, which shall be suitable for 12 Volt/24 Volt DC power supply. It shall have suitable amount of inputs and outputs for the control of a standby diesel generator plant with all the related indications and alarms required in the specification.

The panel shall be a front panel graphic user interface and it must be remotely configurable (via IP network) with separate access levels (operator, programmer). This must be via a Network All Control Circuits to be protected with Circuit Breakers. The control panel shall be fitted with a suitable Circuit Breaker sized to the set output and in some instances change-over equipment is required

The control panel shall be supplied and due consideration shall be given to protecting it from ingress of moisture. Adequate working space shall be provided in front of the panel and it shall be complete with the following instruments and facilities:

- Stop/start buttons where applicable.
- Frequency
- Alternator output available" LED indicating lamps
- "Mains available" LED indicating lamps
- Auto/manual/test selector switch
- Over speed alarm indication
- Engine temperature high alarm indication
- Engine oil pressure low alarm indication
- Engine low coolant indication
- Mains contactor or Motorized breaker failure
- Alternator overload alarm indication
- Start failure alarm indication
- Low and high voltage alarm indication
- Battery charger warning alarm indication.

The operation of any alarm condition should cause the engine to stop. Should the engine stop due to the operation of any of the protection circuits, a light shall indicate why the engine has stopped. This indication shall remain on until cancelled.

2.6. ELECTRICAL

2.6.1 Cable Feeders

The main supply cable and the control cables to and from the diesel generator set AMF panel will be supplied and installed by the Contractor.

2.6.2. Terminations

The cables are to be made off with suitable cable glands as C.C.G., Pratley or other approved. The cable glands at the control panel shall be secured to the gland plate in the base section of the panel and at the generator end to the terminal box. The cable conductors shall be terminated with suitably rated pressure crimped cable lugs.

2.6.3 Earthing

All metal parts shall be solidly bonded and electrically connected to each other and to a common earth point.

The neutral point shall be solidly earthed to that point through appropriate size of insulated earth conductors.

All plant, ancillary equipment and steel work in the stand-by plant canopy shall be suitably bonded together with an appropriate size of bare copper tape which shall also be connected to the earthbar.

The contractor shall also test the integrity of the earthing at the kiosk, low voltage panels, etc. as appropriate.

2.7. CANOPY OR ENCLOSURE

Where outdoor generators is required, the unit will complete with control panel and change-over panel shall be supplied and installed in weather proof enclosure (container). The enclosure shall be made of minimum 2 mm

sheet mild steel and properly treated against rust and powder coated.

The canopy shall be provided with lugs to enable it to be lifted with ease. Appropriate danger signs shall be mounted on the enclosure.

2.8. GENERATOR SELF-TEST

The generator set shall be set to run a self-test at no-load for 15 minutes. The dates and times vary from one facility to the other and thus will be communicated during actual installation of the works.

SCHEDULES OF EQUIPMENT

The tenderer must complete the following schedule of equipment and submit as part of the tender

1 **ENGINE**

1.1 **COMMERCIAL**

Name of Manufacturer

Country of Origin

Manufacture Type No.

Make of fuel injection system

Make of governor

Governor type no.

1.2 **MECHANICAL DATA**

Nominal speed (rpm)

Number of cylinders

Strokes per working cycle

_____ N/A

Bore (mm)

_____ N/A

Stroke (mm)

_____ N/A

Swept volume (litres)

_____ N/A

Mean piston speed (m/s)

1.3 RATING

N/A

N/A

N/A

N/A

N/A

N/A

N/A

1.4

2001.2 2001.1 2000.4 2000.3 2000.2 2000.1 1999.4 1999.3 1999.2 1999.1 1998.4 1998.3 1998.2 1998.1 1997.4 1997.3 1997.2 1997.1 1996.4 1996.3 1996.2 1996.1 1995.4 1995.3 1995.2 1995.1 1994.4 1994.3 1994.2 1994.1 1993.4 1993.3 1993.2 1993.1 1992.4 1992.3 1992.2 1992.1 1991.4 1991.3 1991.2 1991.1 1990.4 1990.3 1990.2 1990.1 1989.4 1989.3 1989.2 1989.1 1988.4 1988.3 1988.2 1988.1 1987.4 1987.3 1987.2 1987.1 1986.4 1986.3 1986.2 1986.1 1985.4 1985.3 1985.2 1985.1 1984.4 1984.3 1984.2 1984.1 1983.4 1983.3 1983.2 1983.1 1982.4 1982.3 1982.2 1982.1 1981.4 1981.3 1981.2 1981.1 1980.4 1980.3 1980.2 1980.1 1979.4 1979.3 1979.2 1979.1 1978.4 1978.3 1978.2 1978.1 1977.4 1977.3 1977.2 1977.1 1976.4 1976.3 1976.2 1976.1 1975.4 1975.3 1975.2 1975.1 1974.4 1974.3 1974.2 1974.1 1973.4 1973.3 1973.2 1973.1 1972.4 1972.3 1972.2 1972.1 1971.4 1971.3 1971.2 1971.1 1970.4 1970.3 1970.2 1970.1 1969.4 1969.3 1969.2 1969.1 1968.4 1968.3 1968.2 1968.1 1967.4 1967.3 1967.2 1967.1 1966.4 1966.3 1966.2 1966.1 1965.4 1965.3 1965.2 1965.1 1964.4 1964.3 1964.2 1964.1 1963.4 1963.3 1963.2 1963.1 1962.4 1962.3 1962.2 1962.1 1961.4 1961.3 1961.2 1961.1 1960.4 1960.3 1960.2 1960.1 1959.4 1959.3 1959.2 1959.1 1958.4 1958.3 1958.2 1958.1 1957.4 1957.3 1957.2 1957.1 1956.4 1956.3 1956.2 1956.1 1955.4 1955.3 1955.2 1955.1 1954.4 1954.3 1954.2 1954.1 1953.4 1953.3 1953.2 1953.1 1952.4 1952.3 1952.2 1952.1 1951.4 1951.3 1951.2 1951.1 1950.4 1950.3 1950.2 1950.1 1949.4 1949.3 1949.2 1949.1 1948.4 1948.3 1948.2 1948.1 1947.4 1947.3 1947.2 1947.1 1946.4 1946.3 1946.2 1946.1 1945.4 1945.3 1945.2 1945.1 1944.4 1944.3 1944.2 1944.1 1943.4 1943.3 1943.2 1943.1 1942.4 1942.3 1942.2 1942.1 1941.4 1941.3 1941.2 1941.1 1940.4 1940.3 1940.2 1940.1 1939.4 1939.3 1939.2 1939.1 1938.4 1938.3 1938.2 1938.1 1937.4 1937.3 1937.2 1937.1 1936.4 1936.3 1936.2 1936.1 1935.4 1935.3 1935.2 1935.1 1934.4 1934.3 1934.2 1934.1 1933.4 1933.3 1933.2 1933.1 1932.4 1932.3 1932.2 1932.1 1931.4 1931.3 1931.2 1931.1 1930.4 1930.3 1930.2 1930.1 1929.4 1929.3 1929.2 1929.1 1928.4 1928.3 1928.2 1928.1 1927.4 1927.3 1927.2 1927.1 1926.4 1926.3 1926.2 1926.1 1925.4 1925.3 1925.2 1925.1 1924.4 1924.3 1924.2 1924.1 1923.4 1923.3 1923.2 1923.1 1922.4 1922.3 1922.2 1922.1 1921.4 1921.3 1921.2 1921.1 1920.4 1920.3 1920.2 1920.1 1919.4 1919.3 1919.2 1919.1 1918.4 1918.3 1918.2 1918.1 1917.4 1917.3 1917.2 1917.1 1916.4 1916.3 1916.2 1916.1 1915.4 1915.3 1915.2 1915.1 1914.4 1914.3 1914.2 1914.1 1913.4 1913.3 1913.2 1913.1 1912.4 1912.3 1912.2 1912.1 1911.4 1911.3 1911.2 1911.1 1910.4 1910.3 1910.2 1910.1 1909.4 1909.3 1909.2 1909.1 1908.4 1908.3 1908.2 1908.1 1907.4 1907.3 1907.2 1907.1 1906.4 1906.3 1906.2 1906.1 1905.4 1905.3 1905.2 1905.1 1904.4 1904.3 1904.2 1904.1 1903.4 1903.3 1903.2 1903.1 1902.4 1902.3 1902.2 1902.1 1901.4 1901.3 1901.2 1901.1 1900.4 1900.3 1900.2 1900.1 1899.4 1899.3 1899.2 1899.1 1898.4 1898.3 1898.2 1898.1 1897.4 1897.3 1897.2 1897.1 1896.4 1896.3 1896.2 1896.1 1895.4 1895.3 1895.2 1895.1 1894.4 1894.3 1894.2 1894.1 1893.4 1893.3 1893.2 1893.1 1892.4 1892.3 1892.2 1892.1 1891.4 1891.3 1891.2 1891.1 1890.4 1890.3 1890.2 1890.1 1889.4 1889.3 1889.2 1889.1 1888.4 1888.3 1888.2 1888.1 1887.4 1887.3 1887.2 1887.1 1886.4 1886.3 1886.2 1886.1 1885.4 1885.3 1885.2 1885.1 1884.4 1884.3 1884.2 1884.1 1883.4 1883.3 1883.2 1883.1 1882.4 1882.3 1882.2 1882.1 1881.4 1881.3 1881.2 1881.1 1880.4 1880.3 1880.2 1880.1 1879.4 1879.3 1879.2 1879.1 1878.4 1878.3 1878.2 1878.1 1877.4 1877.3 1877.2 1877.1 1876.4 1876.3 1876.2 1876.1 1875.4 1875.3 1875.2 1875.1 1874.4 1874.3 1874.2 1874.1 1873.4 1873.3 1873.2 1873.1 1872.4 1872.3 1872.2 1872.1 1871.4 1871.3 1871.2 1871.1 1870.4 1870.3 1870.2 1870.1 1869.4 1869.3 1869.2 1869.1 1868.4 1868.3 1868.2 1868.1 1867.4 1867.3 1867.2 1867.1 1866.4 1866.3 1866.2 1866.1 1865.4 1865.3 1865.2 1865.1 1864.4 1864.3 1864.2 1864.1 1863.4 1863.3 1863.2 1863.1 1862.4 1862.3 1862.2 1862.1 1861.4 1861.3 1861.2 1861.1 1860.4 1860.3 1860.2 1860.1 1859.4 1859.3 1859.2 1859.1 1858.4 1858.3 1858.2 1858.1 1857.4 1857.3 1857.2 1857.1 1856.4 1856.3 1856.2 1856.1 1855.4 1855.3 1855.2

116

(hours)

Air filter element change after
(hours)

1.5 PERFORMANCE (Attach typical performance curves)

Fuel consumption of the complete
set at site in litres of
electrical output:

Full load

70% load

50% load

2 ALTERNATOR

2.1 COMMERCIAL

Name of Manufacturer

Country of origin

Manufacturer's type No.

2.2 ELECTRICAL DATA

Terminal voltage

Method of excitation

Transient voltage dip after
instantaneous application of
full load

Voltage recovery (ms)

Steady state voltage
regulation

Class of winding insulation
(F/H/200)

Is the alternator brushless?
(yes/no)

Is the insulation tropicalized?
(yes/no)

2.3 MECHANICAL DATA

Nominal speed (rpm)

Maximum percentage overspeed

Number of bearings

Type of bearings

Mass of alternator (kg)

Type of enclosure

2.4 PERFORMANCE

Derating for site conditions (%)

Efficiency @ Cos Phi (lagging)

Full load (%)

75% Load

50% Load

3 CONSTRUCTION

3.1 GENERAL DETAILS

Type of base

Type of coupling

Type of battery

Voltage of battery (V)

Capacity of battery (Ah)

Capacity of fuel service
Tank (litres)

Are electric fuel pumps
provided (yes/no)

Type of silencer
